

Limekiln Creek Bridge Replacement

On State Route 1 in Monterey County

05-MON-1-PM 20.9-21.3

EA 05-1F510/Project ID 0514000004

State Clearinghouse Number 2018091017

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



Prepared by the
State of California Department of Transportation

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

December 2023



General Information About This Document

What's in this document:

The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration, has prepared this Environmental Impact Report/Environmental Assessment, which examines the potential environmental impacts of the alternatives being considered for the proposed project in Monterey County in California. Caltrans is the lead agency under the National Environmental Policy Act (NEPA). Caltrans is the lead agency under the California Environmental Quality Act (CEQA). The document explains why the project is being proposed, the alternatives being considered for the project, the existing environment that could be affected by the project, the potential impacts of each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures.

What you should do:

- Please read the document. The document is available online at <https://dot.ca.gov/caltrans-near-me/district-5/>. Additional copies of the document and the related technical studies are available for review at the Caltrans district office at 50 Higuera Street, San Luis Obispo, California 93401, during business hours. The document and the related technical studies are also available upon request. If you would like to receive a printed version of this document, please contact Matt Fowler at 805-779-0793 or by email at matt.c.fowler@dot.ca.gov
- We'd like to hear what you think. If you have any comments regarding the proposed project, please attend the virtual public meeting on January 17, 2024, and/or send your written comments via postal mail or email to Caltrans by the deadline.
- Send comments via postal mail to:
Matt Fowler, Environmental Branch Chief, District 5 Environmental Division,
California Department of Transportation, 50 Higuera Street, San Luis Obispo,
California 93401.
- Send comments via email to: matt.c.fowler@dot.ca.gov
- Be sure to submit comments by the deadline: February 5, 2024.

What happens next:

After comments are received from the public and reviewing agencies, Caltrans, as assigned by the Federal Highway Administration, may: (1) give environmental approval to the proposed project, (2) do additional environmental studies, or (3) abandon the project. If the project is given environmental approval and funding is appropriated, Caltrans could design and construct all or part of the project.

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State Clearinghouse Number 2018091017
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Replace Limekiln Creek Bridge and construct viaducts on State Route 1 from
post miles 20.9 to 21.3 in Monterey County

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

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

THE STATE OF CALIFORNIA
Department of Transportation
Responsible Agencies: California Transportation Commission



Scott Eades
District Director
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12/21/2023

Date

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Summary

S-1 NEPA ASSIGNMENT

California participated in the “Surface Transportation Project Delivery Pilot Program” (Pilot Program) pursuant to 23 U.S. Code 327, for more than five years, beginning July 1, 2007, and ending September 30, 2012. MAP-21 (Public Law 112-141), signed by President Barack Obama on July 6, 2012, amended 23 U.S. Code 327 to establish a permanent Surface Transportation Project Delivery Program. As a result, Caltrans entered into a Memorandum of Understanding pursuant to 23 U.S. Code 327 (NEPA Assignment MOU) with the Federal Highway Administration. The NEPA Assignment MOU became effective October 1, 2012, and was renewed on May 27, 2022, for a term of 10 years. In summary, Caltrans continues to assume Federal Highway Administration responsibilities under NEPA and other federal environmental laws in the same manner as was assigned under the Pilot Program, with minor changes. With NEPA Assignment, the Federal Highway Administration assigned and Caltrans assumed all of the U.S. Department of Transportation (USDOT) Secretary's responsibilities under NEPA. This assignment includes projects on the State Highway System and Local Assistance projects off of the State Highway System within the State of California, except for certain categorical exclusions that Federal Highway Administration assigned to Caltrans under the 23 USC 326 CE Assignment MOU, projects excluded by definition, and specific project exclusions.

S-2 PROJECT OVERVIEW

The proposed project is located on State Route 1, about 21 miles north of the San Luis Obispo/Monterey County line. The existing bridge was rebuilt in 1957, replacing a 1936 timber trestle. The existing bridge is 578 feet long, features nine spans, and carries an average of 2,600 vehicles a day, of which 1 percent are trucks. Within the limits of the proposed project, State Route 1 is a two-lane undivided highway with two 10- to 12-foot lanes and 0- to 4-foot non-standard shoulders. The bridge deck is approximately 90 feet above the creek at its highest point.

After crossing Limekiln Creek Bridge, the highway continues north along very steep slopes until it reaches the Rain Rocks Sidehill Viaduct and Rain Rocks Rock Shed. Rockfall is a common occurrence in this portion of the highway, which has been stabilized by four retaining walls built between 1957 and 1960.

Irreversible damage caused by chloride intrusion from pervasive salt-laden fog has accelerated the deterioration of both the superstructure and substructure of Limekiln Creek Bridge, resulting in frequent spalling, cracking, and corrosion of reinforcing steel. In July 2011, the District 5 Bridge Preservation Program Advisor initiated a project to perform bridge maintenance on six bridges along State Route 1 in Monterey County, including the Limekiln Creek Bridge. In June 2012, a detailed inspection of the bridge was performed to determine the scope of work

for a maintenance contract. The inspection found cracks in the deck and active corrosion in the concrete girders.

Slope stability at the north abutment of the bridge has been a recurring maintenance issue since the original construction because it is susceptible to erosion from storm events and wave action. Concrete crib walls were constructed in 1974 and 1988 on the beach to stabilize the slope; however, wave action continued to deteriorate this revetment, and large rock slope protection was repeatedly placed to deter erosion. A rock slope protection and ring system was placed in front of the crib wall in 2010, which also failed. There is an existing Coastal Development Permit (Coastal Development Permit 3-09-020, December 2009), which states a long-term solution to coastal erosion should be implemented by removing all shoreline armoring and restoring the slope and beach to their natural condition. This permit requires all shoreline armoring to be removed by the expiration of the permit, which would be in 2019 or upon completion of the identified long-term highway protection measures, whichever occurs first.

S-2.1 Lead Agencies and NEPA/CEQA Documentation

The proposed project is a joint project by the California Department of Transportation (Caltrans) and the Federal Highway Administration 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. Caltrans is the lead agency under CEQA. In addition, the Federal Highway Administration's responsibility for environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 U.S. Code Section 327 (23 USC 327) and the Memorandum of Understanding dated May 27, 2022, and executed by the Federal Highway Administration and Caltrans.

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

After receiving comments from the public and reviewing agencies, a Final EIR/EA will be prepared. 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.

S-2.2 Project Area

The project is in Monterey County on State Route 1 on the Big Sur Coast. This is a mostly rural area with a scenic coast that attracts travelers worldwide. It features steep cliffs with scenic ocean views and natural vegetation. The entire project location is surrounded by Limekiln State Park, which provides campsites and access to the beach and trails in the nearby coastal mountains.

S-2.3 Purpose and Need

The purpose of this project is to ensure the reliability of State Route 1 for the traveling public, support the movement of essential goods and services, and maintain coastal access along this section of the Big Sur Coast by addressing chloride intrusion in Limekiln Creek Bridge and slope stability problems.

The project is needed due to chloride intrusion in the concrete of Limekiln Creek Bridge, which was confirmed with concrete core testing and inspections by Caltrans' Structure Maintenance and Investigations Team in 2012. There has been irreversible damage to the superstructure and substructure elements caused by chloride intrusion from pervasive salt-laden fog. This has resulted in frequent concrete cracking and reinforced steel and cable corrosion. There have also been recurring slope stability problems at the north abutment caused by powerful waves. There have been attempts to stabilize this slope; however, it is not possible to permanently stabilize it. There is a permit requirement (Coastal Development Permit 3-09-020) from the California Coastal Commission to remove the existing slope armoring. As a result of these issues, the need for replacing the existing bridge was identified by the Structure Maintenance and Investigations peer review committee in its October 2012 meeting.

S-2.4 Proposed Action

The proposed project is in Monterey County on State Route 1 from post miles 20.9 to 21.3. In the project area, State Route 1 is a two-lane conventional highway. Lanes are 10 to 12 feet wide with 0-to-4-foot-wide shoulders. Caltrans proposes to replace the existing concrete Limekiln Creek Bridge. Two alternatives are proposed: Alternative 4B and Alternative 6. Several alternatives have been considered and rejected, which are discussed in Section 1.7.

Alternative 4B would move the bridge approximately 65 feet west. This alignment is proposed to avoid the main landslide area north of the bridge and would conform to the surrounding existing highway. Traffic flow would remain open on the existing bridge during construction. Alternative 6 would begin at the existing southern abutment and follow the existing alignment as closely as feasible without needing excessive excavation near the landslide area. This alternative would

require the construction of a temporary, one-lane bridge to the east of the existing bridge to maintain traffic flow.

Both alternatives would also include two viaducts north between the existing bridge and Rain Rocks Sidehill Viaduct.

S-3 PROJECT IMPACTS

Summary Table 1: Summary of Major Potential Impacts From Alternatives

Potential Impact	Alternative 4B	Alternative 6	No-Build Alternative
Consistency with State, Regional, and Local Plans and Programs	No impact	No impact	No impact
Coastal Zone	This project is fully within California Coastal Commission jurisdiction and would require a Coastal Development Permit. The proposed project is in compliance with applicable policies.	Same as Alternative 4B	No impact
Wild and Scenic Rivers	No impact	No impact	No impact
Parks and Recreational Facilities	Limekiln State Park would be closed for approximately four years, the duration of construction. This would require a temporary construction easement of 1.462 acres. Approximately 1.464 acres of acquisition would be required.	Limekiln State Park would be closed for approximately four and a half years, the duration of construction. This would require a temporary construction easement of 1.992 acres. Approximately 0.002 acre of acquisition would be required.	No impact
Farmland and Timberland	No impact	No impact	No impact
Growth	No impact	No impact	No impact
Community Character and Cohesion	No impact	No impact	No impact
Relocations and Real Property Acquisition	Approximately 1.464 acres of acquisition would be required.	Approximately 0.002 acre of acquisition would be required.	No impact
Environmental Justice	No impact	No impact	No impact
Equity	No impact	No impact	No impact
Utilities and Emergency Services	An American Telephone and Telegraph (AT&T) telecommunication line will need to be moved.	Same as Alternative 4B	No impact
Traffic and Transportation/ Pedestrian and Bicycle Facilities	No impact	No impact	No impact

Potential Impact	Alternative 4B	Alternative 6	No-Build Alternative
Visual/Aesthetics	The proposed project would alter the visual environment. The bigger structure and alignment change would affect the character of the project setting as well as the highway corridor.	Same as Alternative 4B	No impact
Cultural Resources	Adverse effect on archeological sites and an associated district. There would be a direct impact on a site at the southern abutment.	Adverse effect on archeological sites and an associated district.	No impact
Hydrology and Floodplain	No impact	No impact	No impact
Water Quality and Stormwater Runoff	No permanent impacts are anticipated on stormwater, groundwater, or water resources. Minor sedimentation is anticipated over time due to the newly exposed cliff. There would be an increase of 0.612 acre of impervious surface.	Same as Alternative 4B except there would be an increase of 0.478 acre of impervious surface.	No impact
Geology, Soils, Seismicity and Topography	Geotechnical drilling studies would be used, and the proposed project would be constructed in conformity with Caltrans Design Standards to avoid impacts.	Same as Alternative 4B	No impact
Paleontology	Low probability of encountering paleontological resources.	Same as Alternative 4B	No impact
Hazardous Waste and Materials	Asbestos-containing bridge materials are likely to be encountered and would be handled with appropriate Standard Special Provisions.	Same as Alternative 4B	No impact
Air Quality	Slightly better air quality due to the increased distance between the bridge and campsites.	No impact	No impact
Noise and Vibration	Noise levels would be reduced by about 1.2 decibels compared to existing noise levels.	No impact	No impact
Energy	No impact	No impact	No impact

Potential Impact	Alternative 4B	Alternative 6	No-Build Alternative
Natural Communities	There would be 0.295 acre of temporary impacts on Sitka willow thicket from temporary construction access and work areas. There would be a net increase of 0.002 acre of Sitka willow thicket after construction.	Same as Alternative 4B	No impact
Wetlands and Other Waters	Total temporary impacts to jurisdictional areas would be approximately 0.511 acre. There would be a net benefit of 0.007 acre due to the removal of the existing bridge pier. A stream diversion would be required for one season (June 1 to October 31).	Temporary and permanent impacts would be the same as in Alternative 4B, but Alternative 6 would require additional seasons of stream diversion. This would be required to construct the temporary bridge and would require up to three seasons.	No impact
Plant Species	No impact	No impact	No impact
Animal Species	There would be temporary impacts to groundfish essential fish habitat and the Monterey Bay National Marine Sanctuary due to partial rock slope protection and crib wall removal. The temporary impacts on the Monterey Bay National Marine Sanctuary are anticipated to be 0.03 acre. Once partial removal is complete, a net benefit is anticipated due to restoring the natural ecosystem.	Same as Alternative 4B	No impact
Threatened and Endangered Species	The proposed project may affect and is likely to adversely affect black abalone and its critical habitat, South-Central California Coast steelhead and its critical habitat, Smith's blue butterfly, and California red-legged frog. The proposed project may affect, but is not likely to adversely affect, the southern sea otter. Concerning South-Central California Coast steelhead, stream diversion would be required for one season (June 1 to October 31).	Findings for threatened and endangered species would be the same as in Alternative 4B, but stream diversion would be required for up to two additional seasons for the temporary bridge.	No impact

Potential Impact	Alternative 4B	Alternative 6	No-Build Alternative
Invasive Species	Measures would be included to remove and replace invasive plant species with California native plants. Any nonnative animals would be removed from the project area.	Same as Alternative 4B	No impact
Cumulative Impacts	No impact	No impact	No impact
Wildfire	The project is located in a very high fire hazard severity zone. Fire prevention procedures would be used to avoid accidental fire starts during construction. Existing wooden posts would be replaced with steel guardrail posts to reduce wildfire risks.	Same as Alternative 4B	No impact
Senate Bill 743/Induced Demand Analysis	No impact	No impact	No impact
Climate Change	There are no major impacts, but the project is in a very high fire hazard severity zone, which could affect wildfire impacts.	Same as Alternative 4B	No impact

S-4 COORDINATION WITH PUBLIC AND OTHER AGENCIES

Early coordination efforts with the public were conducted for this project. More detailed information can be found in Chapter 4.

- A Notice of Preparation (Appendix D) was published on September 10, 2018.
- An open house was held on January 15, 2019, at the Big Sur Lodge.
- Coordination between the California Native American Heritage Commission and Native American tribes, groups, and individuals was established before the extended phase 1 study in January and February 2017.
- Communication with the California Coastal Commission and California State Parks has been ongoing since August 2021. Both agencies brought up concerns with the visual impacts and shadowing effects of the new bridge, the configuration of the bridge, and the removal of the rock revetment at the northern abutment. Multiagency meetings were held to inform agencies of proposed project alternatives and allow input, which has led to the current proposed alternatives.

The following list includes necessary permits, licenses, agreements, and certifications (PLACs) and their status:

- Section 401 Certification from the Central Coast Regional Water Quality Control Board for impacts on waters of the U.S. would be obtained before construction starts.

- A Section 404 Permit from the U.S. Army Corps of Engineers for impacts on wetlands and waters of the U.S. would be obtained before construction starts.
- A Section 1602 Agreement from the California Department of Fish and Wildlife Service for streambed alteration impacts on Limekiln Creek would be obtained before construction starts.
- A Biological Opinion from the National Marine Fisheries Service for black abalone and the South-Central California Coast Steelhead and associated critical habitats would be obtained before construction starts.
- A Programmatic Biological Opinion from the U.S. Fish and Wildlife Service for Smith's blue butterfly and California red-legged frog would be obtained before construction starts.
- Informal consultation with the U.S. Fish and Wildlife Service for a letter of concurrence regarding the southern sea otter would be obtained before construction starts.
- A Coastal Development Permit from the California Coastal Commission would be obtained before construction starts.
- Section 4(f) agreement with California State Parks would be obtained before approval of the final environmental document.

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Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration, is the lead agency under the National Environmental Policy Act, known as NEPA. Caltrans is the lead agency under the California Environmental Quality Act, known as CEQA.

The Department of Transportation Caltrans proposes to replace the existing Limekiln Creek Bridge on State Route 1 in Monterey County. The project site is approximately 21 miles north of the San Luis Obispo County line, near the community of Lucia. Figure 1 and Figure 2 show the project's location and vicinity maps, respectively.

The existing bridge was built in 1957 and consists of eight piers, two abutments, and is approximately 580 feet long. Within the limits of the proposed project, State Route 1 is a two-lane undivided highway with two 10- to 12-foot lanes and 0- to 4-foot non-standard shoulders. The northern slope of the bridge has experienced storm events and wave action that have led to erosion and the need for continued maintenance. Concrete retaining walls were constructed in 1974 and 1988 at the base of the slope as a stabilization method. After continued erosion, rock slope protection was installed. A ring net system and additional rock slope protection were installed in 2010 but failed. A Coastal Development Permit, which allowed the work to occur in 2010, required a future project that would remove the installed wall and rock slope protection to restore the beach to its natural condition.

The proposed project is included in the 2022 State Highway Operation and Protection Program (SHOPP) Bridge Preservation Program. The project is not individually listed but is included with the Transportation Agency for Monterey County's 2022 Regional Transportation Project. The project is listed in the 2023 Federal Transportation Improvement Program.

Figure 1 Project Vicinity Map

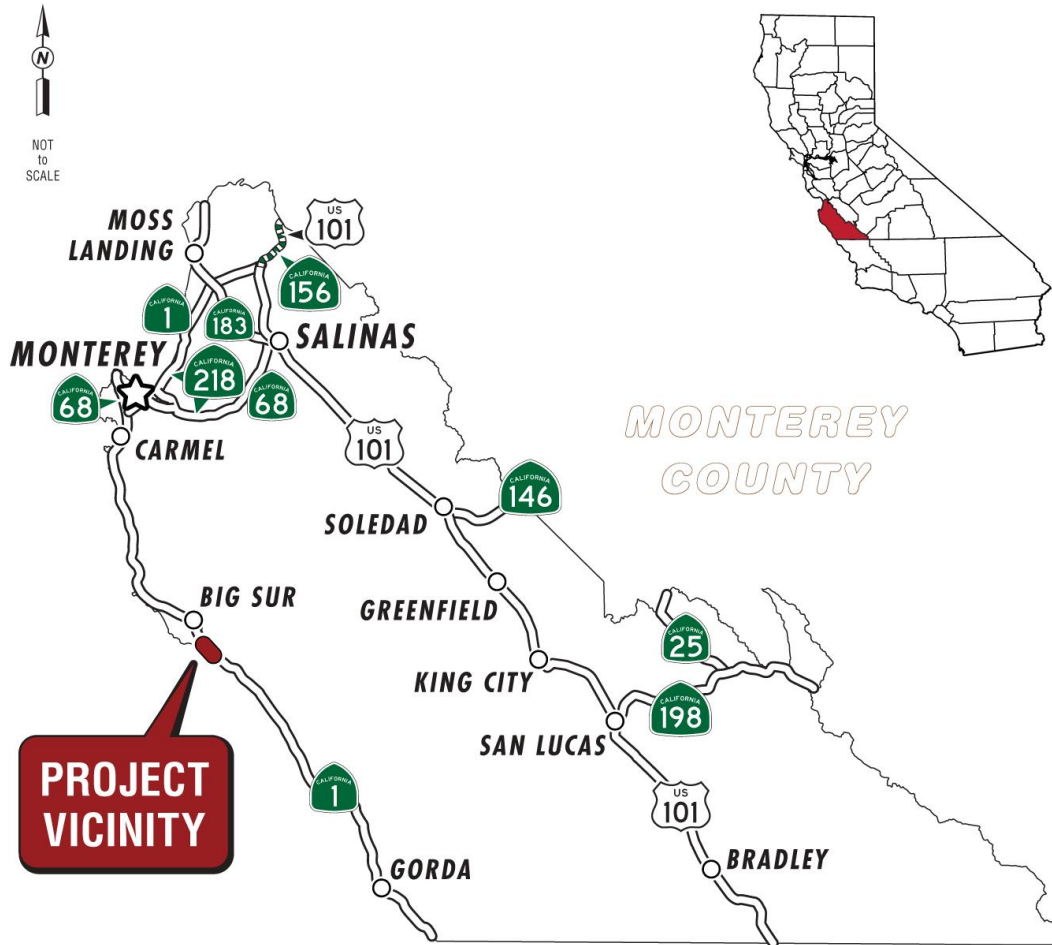
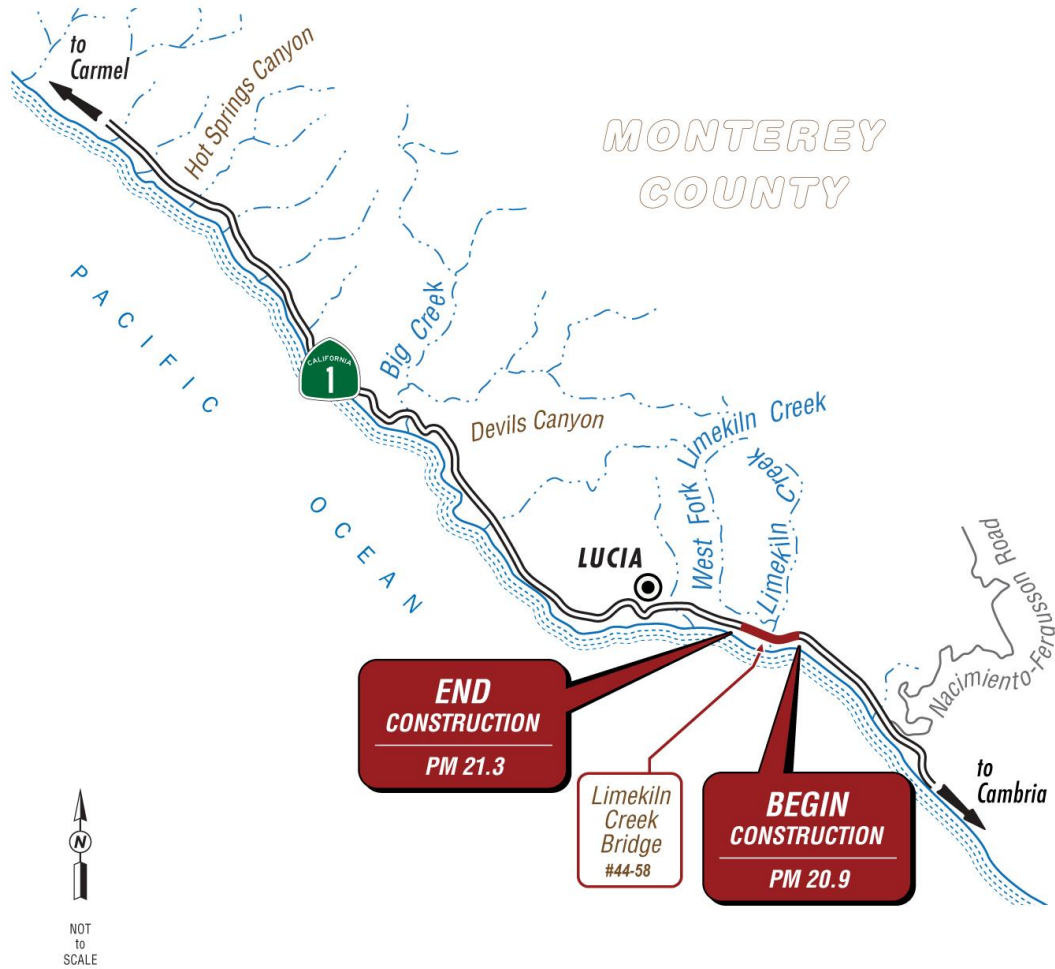


Figure 2 Project Location Map



1.2 Purpose And Need

1.2.1 Purpose

The purpose of this project is to ensure the reliability of State Route 1 for the traveling public, support the movement of essential goods and services, and maintain coastal access along this section of the Big Sur Coast by addressing chloride intrusion in Limekiln Creek Bridge and slope stability problems.

1.2.2 Need

The project is needed due to chloride intrusion in the concrete of Limekiln Creek Bridge, which was confirmed with concrete core testing and

inspections by Caltrans' Structure Maintenance and Investigations Team in 2012. There has been irreversible damage to the superstructure and substructure elements caused by chloride intrusion from pervasive salt-laden fog. This has resulted in frequent concrete cracking and reinforced steel and cable corrosion. There have also been recurring slope stability problems at the north abutment caused by powerful waves. There have been attempts to stabilize this slope; however, it is not possible to permanently stabilize it. There is a permit requirement (Coastal Development Permit 3-09-020) from the California Coastal Commission to remove the existing slope armoring. As a result of these issues, the need for replacing the existing bridge was identified by the Structure Maintenance and Investigations peer review committee in its October 2012 meeting.

1.3 Independent Utility and Logical Termini

Independent utility is the requirement that any proposed project has independent functionality, even if no additional transportation improvements in the area are made. Logical termini require rational end points for transportation improvement and for a review of environmental impacts. This prevents the problem of "segmentation." A problem of segmentation may occur where a transportation need extends throughout an entire corridor but environmental issues and transportation needs are inappropriately discussed for only a segment of the corridor.

This project meets both requirements. The limits were determined based on the purpose. The viaducts and bridge require upgrades to maintain State Route 1 in this area. If no other projects in this area were built, the proposed project would still be able to function independently.

1.4 Project Description

This section describes the proposed action and the project alternatives developed to meet the purpose and need of the project while avoiding or minimizing environmental impacts. There are three feasible alternatives: "Alternative 4B," "Alternative 6," and the "No Build Alternative."

Caltrans proposes to replace the existing concrete Limekiln Creek Bridge, located in Monterey County on State Route 1 near Lucia. Within the limits of the proposed project, State Route 1 is a two-lane undivided highway with two 10- to 12-foot lanes and 0- to 4-foot non-standard shoulders. The proposed project lies exclusively within the Limekiln State Park property. The entrance to Limekiln State Park is directly off the highway at the southern abutment. There is also access to the beach from Limekiln State Park underneath the Limekiln Creek Bridge. The existing bridge consists of eight piers and two abutments and is approximately 580 feet long and experiencing deterioration.

1.5 Project Alternatives

The alternatives under consideration for the project were developed by a project development team to adequately address the project's purpose and need. Many factors, such as minimizing environmental impacts, feasibility, and coordination with other agencies, have led to a range of alternatives.

Two build alternatives and a No-Build Alternative are being evaluated for this project to meet the project's purpose and need. The build alternatives (Alternative 4B and Alternative 6) include two-span bridges with different alignments. Figure 3 and Figure 4 show the aerial alignments for both proposed alternatives. Figure 5 and Figure 6 are simulations of the proposed bridge alternatives. Several different alignments have been reviewed over the years to avoid unstable slopes, riparian areas, and impacts on other resources. These are discussed in Section 1.7. Under the No-Build Alternative, no action would be taken. The alternatives are discussed in greater detail below.

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

The following acronyms are used in Figure 3 and Figure 4:

- ETW: edge of travel way
- ES: electrical system

Figure 3 Alignment for Alternative 4B



Figure 4 Alignment for Alternative 6



Figure 5 Alternative 4B Simulation



Figure 6 Alternative 6 Simulation



1.5.1 No-Build (No-Action) Alternative

The No-Build Alternative would leave the bridge and revetment in their existing condition. This alternative is used as the baseline for comparing environmental impacts.

Without any improvements, the bridge would continue to deteriorate. Chloride intrusion of the bridge, corrosion of steel, cracking of the bridge deck, and slope stability issues would continue.

Alternative 4B

Alternative 4B proposes an approximately 900-foot-long, two-span cast-in-place post-tensioned box girder bridge with 12-foot lanes and 4-foot shoulders. This alternative would have one pier and two abutments. The alignment would shift approximately 65 feet west of the existing bridge and conform to the existing highway at both ends. The new alignment has been designed to stay west of the steep slopes above the roadway to avoid cutting into unstable soils and potential ground slipping. This would allow most of the new bridge to be constructed while leaving the existing bridge intact to allow traffic flow. Due to the shift in alignment west, the rocky outcropping to the west of the southern bridge abutment would need to be partially graded to serve as the location of the new bridge's southern abutment. Right-of-way acquisition would be required.

The slope above and below the existing north abutment is an active landslide. At the base of the slope, along Limekiln Beach, is a revetment consisting of crib walls and large rock slope protection. The revetment is continuously eroding from wave action, causing Caltrans Maintenance to add additional rock slope protection, concrete slurry, and other treatments. An existing Coastal Development Permit from 2010 included a condition to restore the beach to its natural condition. The project proposes removing part of this revetment once the new bridge is complete. Full removal would be unsafe for the workers and could expose Limekiln Beach to unstable slopes. If all of the revetment was removed at once, it would likely cause a landslide, which could impact Limekiln Beach. Crib walls would be removed to the extent that is safe for both the workers and the public. Discussion with both California State Parks and the California Coastal Commission is ongoing regarding future maintenance of the residual revetment.

Some, or all, of the distressed retaining walls between Limekiln Creek Bridge and Rain Rocks Sidehill Viaduct would be replaced to support the highway. Drainage improvements are anticipated to accommodate the new retaining walls. Throughout the project, including along the new bridge, all roadway runoff would be directed to adjacent soils and would not flow directly to open water.

Two viaducts are proposed north of the bridge to replace distressed retaining walls. The first would be a 360-foot, half-width viaduct beginning north of the new bridge with 12-foot lanes and 4-foot shoulders. The second viaduct is proposed north of the first and would be a 185-foot viaduct due to alignment and steep terrain. To prevent the landslide from moving under the viaducts, a 160-foot-long soldier pile wall would be constructed below the highway along the east side of the first viaduct. The escalated capital cost estimate, including construction and right-of-way, is \$99,200,000.

Construction Staging

The project would require staged construction with one-way traffic control that uses temporary traffic signalization. Traffic control would be implemented with flaggers, temporary traffic lights, and K-rails to define lanes through work zones.

In the first stage of construction, the new bridge would be built to the west of the old bridge without the existing highway being impeded. Traffic would continue to flow on the existing roadway. First, equipment and materials would be mobilized to staging and construction areas. A batch plant would be required to create concrete for the new bridge. This temporary plant would be constructed to the north of the Rain Rocks Sidehill Viaduct at a large existing pullout along State Route 1.

A work trestle would be used for existing bridge demolition and construction of the new bridge and viaducts. It would be approximately 50 feet west of the existing bridge and span across the riparian area and creek. The trestle would be approximately 50 feet wide and would likely require H-piles to be driven or vibrated into the ground approximately every 10 feet. Wooden platforms and/or a debris containment system would ensure that no debris is dropped into the creek.

The new bridge pier would be installed using cast-in-place reinforced concrete for the foundations. It is anticipated that approximately 11 60-inch cast-in-drilled-hole concrete piles would be required to form the pier, which has an approximate 36-by-48-foot footprint. Seal course, a concrete slab poured to stop water, would be used to control groundwater so that the concrete for the piles can set. With 5 feet of seal course, the pier would require approximately 36 feet of excavation. In addition to the required excavation at the pier, the 14-foot minimum superstructure would require excavation, shoring, and a retaining wall along 200 feet of the northern span.

Falsework for the bridge would then be built, as would the forms for the cast-in-place box girder. Falsework would also require being driven or vibrated into H-piles. The box girder's reinforcing steel would be constructed, and the concrete would be poured. The bridge deck would then be constructed, and the bridge barriers would be constructed once the deck is completed.

Concurrent with bridge construction, the access road would be excavated and constructed on the south side of the bridge.

After the bridge is built, the second stage of construction would include building half the width of the viaduct north of the bridge. The viaduct construction would begin and follow the same pattern as the bridge construction. Piles would be driven or vibrated into place. Bent caps would be formed with rebar and poured with concrete to finish the pier. The viaduct deck and bridge rails would then be built. During this stage, one-way reversing traffic would continue on the existing highway with temporary traffic control. The proposed viaduct is to be built where existing crib walls and retaining walls currently exist. Portions of these crib walls and retaining walls would be removed to accommodate the new viaduct piles.

The third stage would begin by switching the one-way reversing traffic control to the newly built half-width viaduct structure. The same procedure as mentioned above in stage two would be used to construct the second half of the viaduct structure, which would then finish the structure and conform the new roadway to the existing road alignment.

Bridge demolition would begin once the new bridge and viaduct are complete. The bridge deck would then be dismantled by equipment working from the top of the structure. Once the bridge deck is removed, the piers will be dismantled. All debris would be captured by the wooden structure. The existing piers would be removed to 3 feet below the existing grade. A coffer dam or stream diversion would be required to remove the existing pier that is currently located in Limekiln Creek. The diversion would ensure that no debris from the pier is dropped into the wetted creek. Once the pier is removed, the diversion will be deconstructed. The creek would be diverted during the dry season with pipes and buried with soil to allow for pier removal and equipment access. A trestle would be used to access this pier and reduce impacts on sensitive resources.

Partial removal and modification of the crib wall and removal of rock slope protection that is currently protecting the northern abutment of the existing bridge would occur from the beach. The rock slope protection boulders would be removed using a loader and excavator. Once the rock slope protection is removed, the sea wall will be partially removed and modified from the beach. Equipment would hammer into the sea wall concrete and remove pieces of concrete with loaders and excavators. The work to remove the sea wall may require equipment to move on the beach, lower than the high tide line, and would thus need to be timed to occur when low tide occurs.

After work is complete, all natural areas will be restored to their original grade and contour and revegetated as appropriate.

Figure 7 and Figure 8 show the preliminary layouts for Alternative 4B. The following acronyms are used:

- APN: assessor's parcel number
- Beg: begin
- R/W: right-of-way

Figure 7 Alternative 4B Preliminary Layout Sheet 1

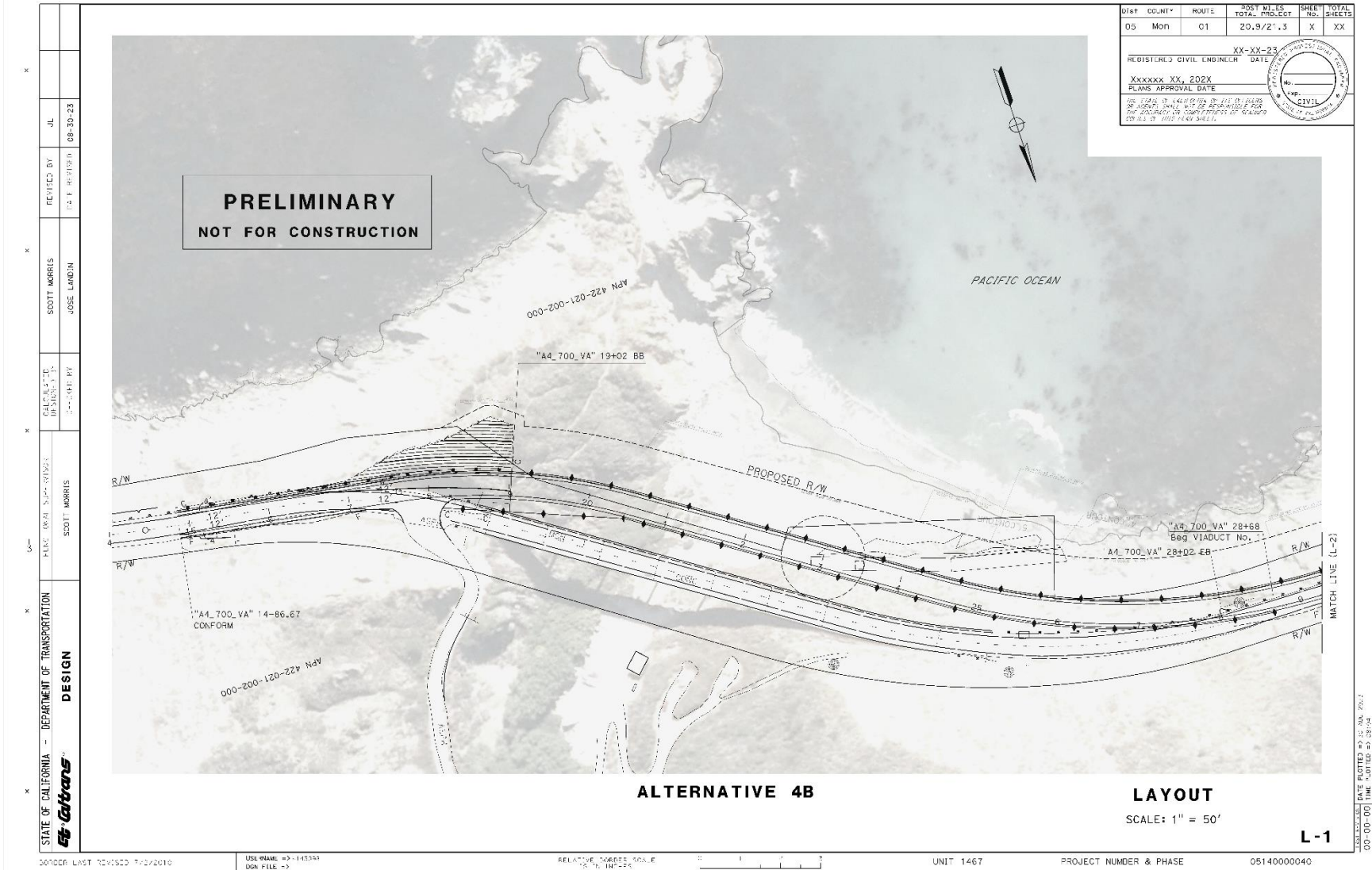
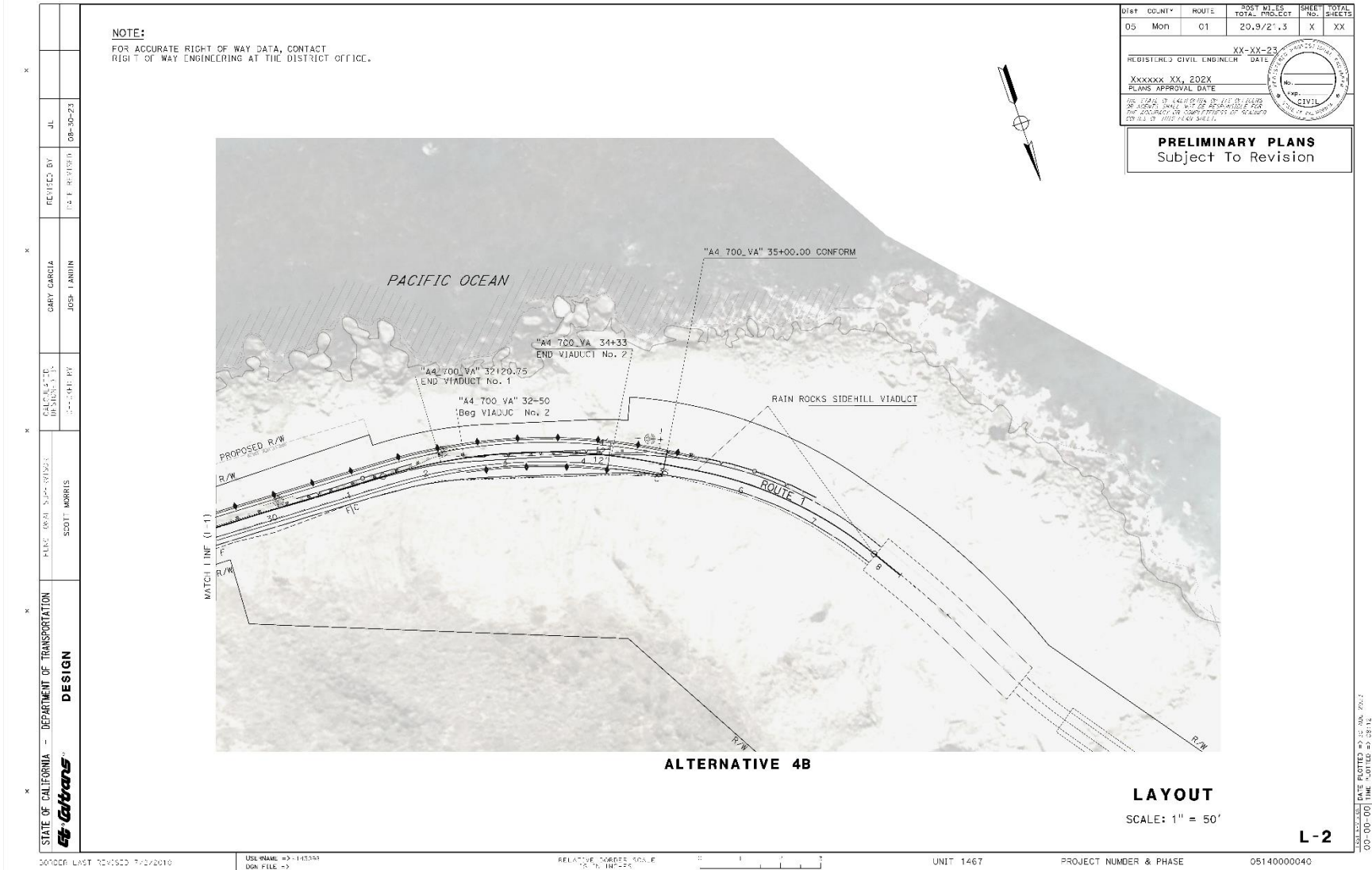


Figure 8 Alternative 4B Preliminary Layout Sheet 2



Alternative 6

Alternative 6 proposes an approximately 900-foot-long, two-span cast-in-place post-tensioned box girder bridge with 12-foot lanes and 4-foot shoulders. This alternative would have one pier and two abutments. This proposed structure is like Alternative 4B, but the proposed bridge would begin at the existing southern abutment and follow the existing alignment as closely as feasible without needing excessive excavation in the landslide area north of the bridge. The bridge would be approximately 50 feet west of the existing alignment at the furthest point. The northern abutment would be shifted approximately 80 feet northwest. A temporary 200-foot-long retaining wall would be required along the new northern abutment. Right-of-way acquisition would be required.

To accommodate traffic during construction, a one-lane temporary bridge would be constructed to the east of the existing bridge. The temporary bridge is anticipated to be a three-span, 400-foot-long, 20-foot-wide structure, allowing for one-way reversing traffic. The temporary bridge abutments would conform to Limekiln State Park access roads, directly next to the highway. This would allow traffic to be detoured while the existing bridge is demolished; the new bridge would be built partially on the same alignment.

As described for Alternative 4B, Alternative 6 would also partially remove the revetment along Limekiln Beach, replace retaining walls between Limekiln Creek Bridge and Rain Rocks Sidehill Viaduct, and install drainage improvements. Two viaducts and a soldier pile wall are also proposed north of the bridge to replace distressed retaining walls, as described for Alternative 4B. The escalated capital cost estimate, including construction and right-of-way, is \$107,000,000.

Construction Staging

The project would require staged construction with one-way reversing traffic control on the temporary bridge that uses temporary traffic signalization. Traffic control would be implemented with flaggers, temporary traffic lights, and K-rails to define lanes through work zones.

In the first stage of construction, the temporary bridge would be constructed to divert traffic from the existing bridge. The three-span temporary bridge would require two piers, which would be located within the campground area. Piers and abutments would likely be installed using 24-inch cast-in-drilled-hole piles. One of these temporary piers may be positioned within Limekiln Creek; however, the exact configuration and alignment are not final. If a temporary pier is required within the creek, a stream diversion would be required for its installation and removal.

The existing bridge would then be demolished. The bridge deck would then be dismantled by equipment working from the top of the structure. Once the bridge deck is removed, the piers will be dismantled. The existing piers would

be removed to 3 feet below the existing grade. A coffer dam or stream diversion would be required to remove the existing pier that is currently located in Limekiln Creek. The diversion would ensure that no debris from the pier is dropped into creek waters. Once the pier is removed, the diversion would be deconstructed. The creek would be diverted during the dry season with pipes and buried with soil to allow for pier removal and equipment access. An approximately 50-foot-wide work trestle would be used to access this pier and reduce impacts on sensitive resources. It would be approximately 50 feet west of the existing bridge and span across the riparian area and creek. The trestle would require H-piles to be driven or vibrated into the ground approximately every 10 feet. Wooden platforms and/or a debris containment system would ensure that no debris is dropped into creek waters.

Partial removal and modification of the crib wall and removal of rock slope protection that is currently protecting the northern abutment of the existing bridge would occur from the beach. The boulders would be removed using a loader and excavator. Once the rock slope protection is removed, the sea wall would be partially removed and modified from the beach. Equipment would hammer into the sea wall concrete and remove pieces of concrete with loaders and excavators. The work to remove the sea wall may require equipment to move on the beach lower than the high tide line and would thus need to be timed to occur during low tides.

The new bridge pier would be installed using cast-in-place reinforced concrete for the foundations. It is anticipated that approximately 11 60-inch cast-in-drilled-hole concrete piles would be required to form the pier, which has an approximate 36-by-48-foot footprint. A seal course would be used to control groundwater so that the concrete for the piles could set. With 4 feet of seal course, the pier would require approximately 38 feet of excavation. In addition to the required excavation at the pier, the 14-foot minimum-depth superstructure would require excavation, shoring, and a retaining wall along 200 feet of the northern span.

Falsework for the bridge would then be built, as would the forms for the cast-in-place box girder. Falsework would also require being driven or vibrated into H-piles. The box girder's reinforcing steel would be constructed, and the concrete would be poured. The bridge deck would then be constructed, and the bridge barriers would be constructed once the deck is completed. A batch plant would be required to create concrete for the new bridge. This plant would be constructed to the north of the Rain Rocks Sidehill Viaduct at a large existing pullout along State Route 1.

After the bridge is built, the second stage of construction would include building half the width of the viaduct north of the bridge. The viaduct and associated soldier pile wall construction would begin and follow the same pattern as the bridge construction. Piles would be required for the soldier pile

wall and viaducts and would be driven or vibrated into place. Bent caps would be formed with rebar and poured with concrete to finish the pier. The viaduct deck and bridge rails would then be built. During this stage, one-way reversing traffic would continue on the existing highway with temporary traffic control. The proposed viaduct is to be built where existing crib walls and retaining walls currently exist. Portions of these crib walls and retaining walls would be removed to accommodate the new viaduct piles.

The third stage would begin by switching the one-way reversing traffic control to the newly built half-width viaduct structure. The same procedure as mentioned above in stage two would be used to construct the second half of the viaduct structure, which would then finish the structure and conform the new roadway to the existing road alignment.

After work is complete, all natural areas would be restored to their original grade and contour and revegetated as appropriate.

Figure 9 and Figure 10 show the preliminary layouts for Alternative 6. The following acronyms are used:

- APN: assessor's parcel number
- Beg: begin
- Br No.: bridge number
- ES: edge of shoulder
- ETW: edge of travel way
- R/W: right-of-way
- Temp: temporary

Figure 9 Alternative 6 Preliminary Layout Sheet 1

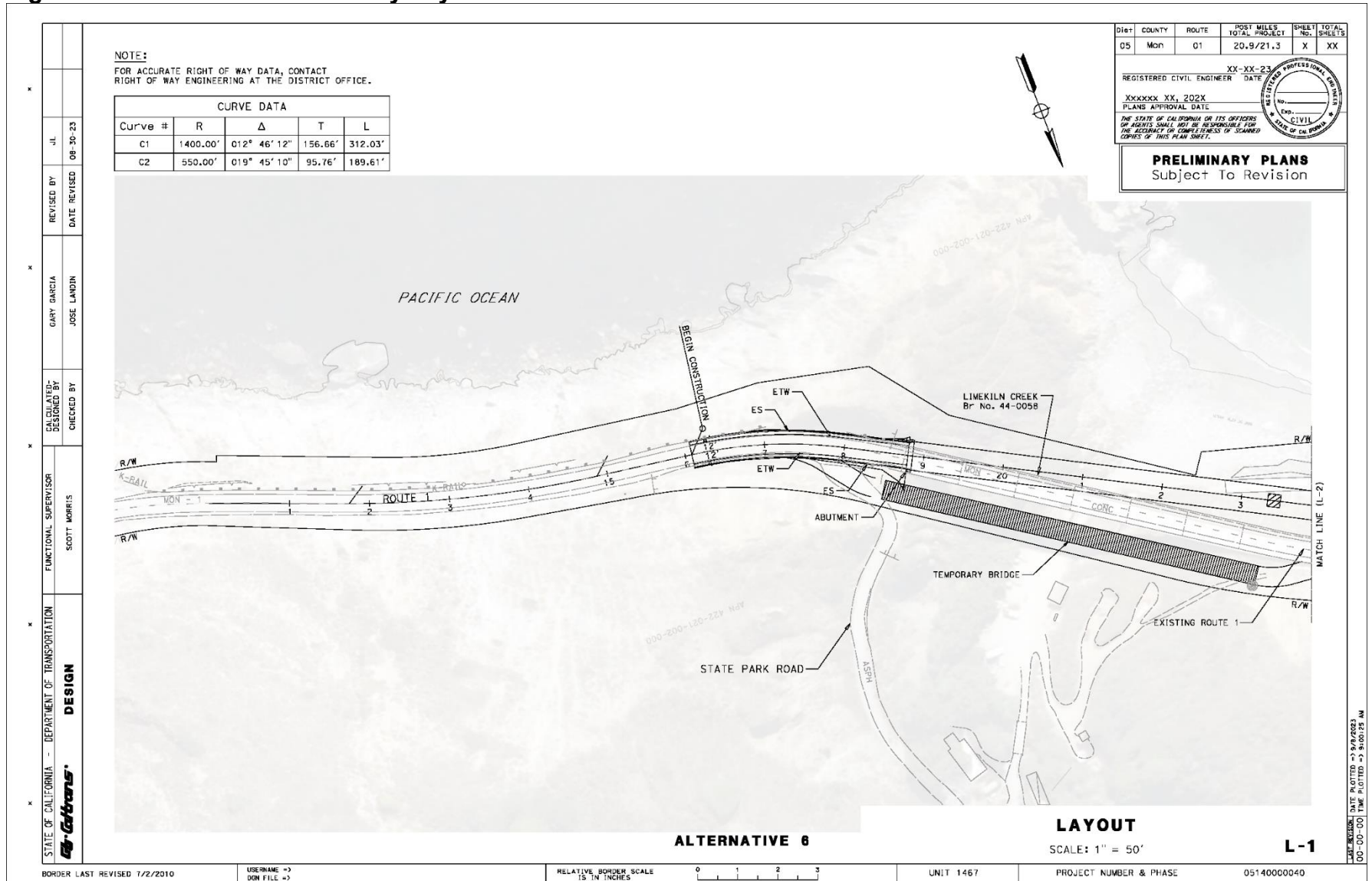
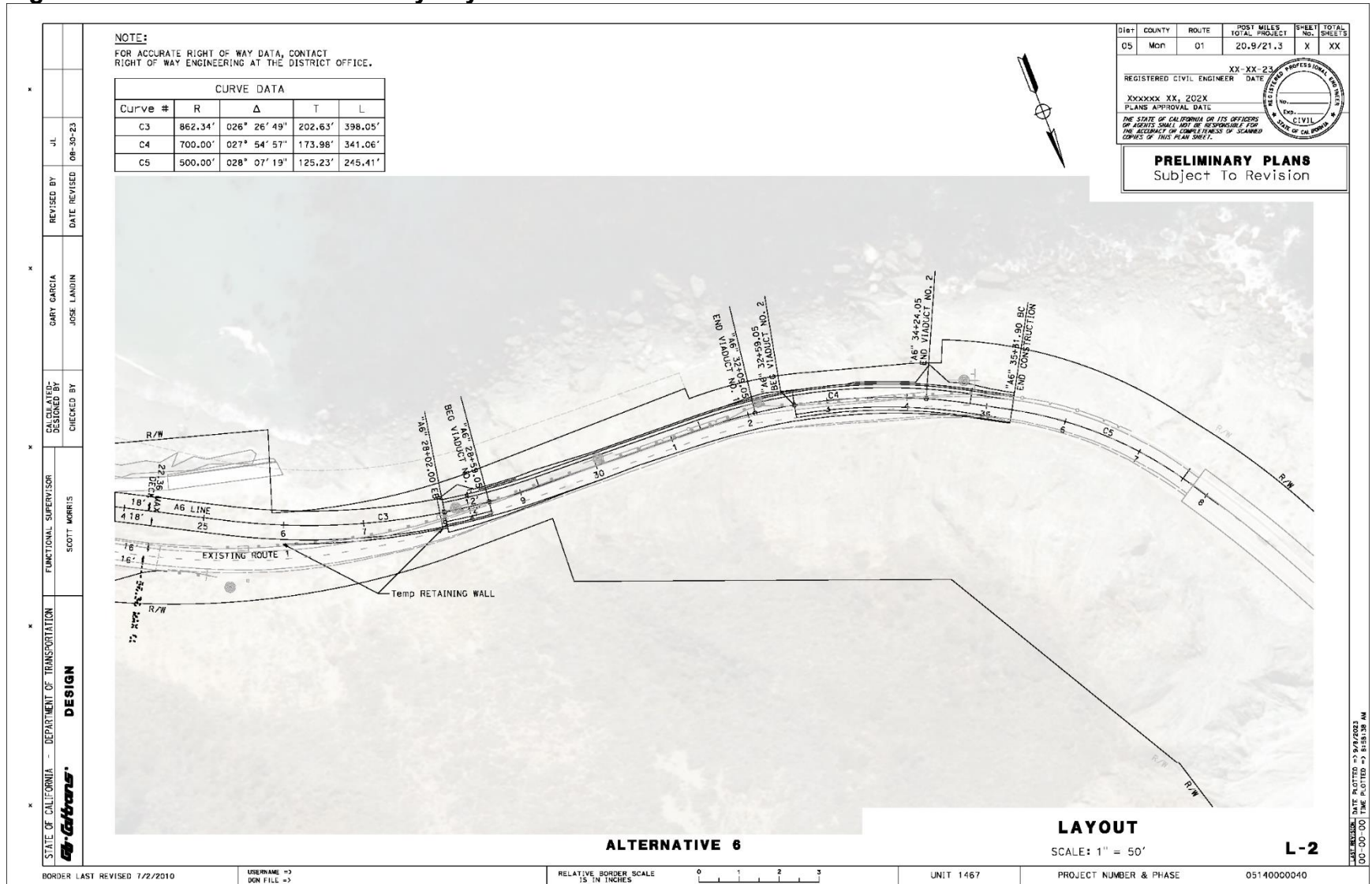


Figure 10 Alternative 6 Preliminary Layout Sheet 2



1.6 Comparison of Alternatives

Common Design Features of the Build Alternatives

Both alternatives include a bridge replacement designed to avoid the riparian area of Limekiln Creek, though the bridges differ in alignment. Both bridges would have two 12-foot lanes with 4-foot shoulders. Both alternatives include the same viaduct improvements north of the existing bridge and the partial removal of the existing rock slope protection and revetment near the northern abutment of the existing bridge.

Each project alternative includes the following standardized measures that are included as part of the project description (shown in Table 1).

Standardized measures (such as Best Management Practices) are those measures that are generally applied to most or all Caltrans projects. These standardized or preexisting measures allow little discretion regarding their implementation and are not specific to the circumstances of a particular project. More information on each measure can be found in the applicable sections of Chapter 2.

Table 1 Standard Measures/Best Management Practices

Topic	Standard Measure
Air quality	14-9.02 Air Pollution Control: The project would comply with all air pollution control rules, regulations, ordinances, and statutes.
Archeological resources	14-2.03 Archeological Resources: If archeological resources are discovered within or near the construction limits, the resources would not be further disturbed, and all work near the discovery would stop immediately. The area would be secured, and the resident engineer would be notified.
Biological resources	14-6.03 Species Protection: Instructions for the protection of regulated species and their associated habitat. If a protected species is discovered in a project work area, work would stop near the discovery, and the resident engineer would be notified.
Construction	13-4 Job Site Management: Specifications for performing job site management work such as spill prevention and control, material management, waste management, non-stormwater management, and dewatering activities.
Environmentally sensitive areas	14-1.02 Environmentally Sensitive Areas: Caltrans would mark areas that are environmentally sensitive. These areas cannot be entered unless authorized. If the environmentally sensitive area is breached, work would stop, and the resident engineer would be notified.
Hazardous waste	14-11.16 Asbestos-containing construction materials in bridges will be properly handled and disposed of.
Paleontological resources	14-7.03 Discovery of Unanticipated Paleontological Resources: If unanticipated paleontological resources are discovered, the resources would not be further disturbed, and all work near the discovery would stop immediately. The area would be secured, and the resident engineer would be notified.
Stormwater	A Stormwater Pollution Prevention Program will be prepared.
Traffic management	A Transportation Management Plan will be prepared for the project.
Utilities	Overhead utility lines in conflict with project improvements shall be undergrounded by the responsible utility entity in accordance with Public Utilities Code 320, as required by the California Public Utilities Commission.
Water Quality	Water Pollution Control Program: Includes specifications for the development and implementation of a Water Pollution Control Program.
Water Quality	13-5 Temporary Soil Stabilization: Includes specifications for placing temporary soil stabilization materials on stockpiles or disturbed soil areas.
Water Quality	13-6 Temporary Sediment Control: Includes specifications for installing temporary sediment controls, such as check dams and drainage inlet protections.
Water Quality	13-9 Temporary Concrete Washouts: Includes specifications for installing temporary concrete washouts to receive and dispose of concrete waste.
Water Quality	13-10 Temporary Linear Sediment Barriers: Includes specifications for installing temporary linear barriers to control sediment, like high-visibility fencing, fiber rolls, and temporary large sediment barriers.

14-11.16 Asbestos-containing construction materials in bridges will be properly handled and disposed of.

A Transportation Management Plan will be prepared for the project.

SM-2: Standard provisions dealing with the discovery of unanticipated cultural materials or human remains will be included in the project plans and specifications:

SM-3: The construction contractor must comply with Caltrans' Standard Specifications in Section 14.

SM-4: A Stormwater Pollution Prevention Program will be prepared.

SM-5: Standard Specifications for asbestos-containing materials will be used.

Unique Features of the Build Alternatives

Alternative 6 has an alignment that is closer to the existing bridge. This was the result of a series of meetings with the California Coastal Commission and California State Parks. The proposed alignment would begin in the same place as the southern abutment but would have a different northern abutment placement due to geotechnical concerns. This would eliminate grading on the southern knoll.

Preferred Alternative

A preferred alternative will be identified in the final environmental document.

1.7 Alternatives Considered but Eliminated from Further Discussion

Several alternatives have been considered and rejected throughout the scope of this project. The first two proposed alternatives included bridge replacements that aligned the bridge 25 feet and 40 feet west of the existing bridge. These were ultimately rejected because it would have been infeasible to remove half of the bridge to leave the northbound lane open for traffic. Both alignments would have required the southbound existing bridge lane and shoulder to be removed to construct the new bridge. This would have required additional supports to counteract the uneven weight distribution of the existing bridge.

In 2004, a project study report examined building a structure east of the existing bridge to avoid the eroding slope near the north abutment. This alternative was rejected due to the environmental impact of high-cut slopes and the geotechnical risk of stabilizing large cuts above a roadway.

Alternative 1

In June 2015, a project study report was completed with two alternatives. Alternative 1 proposed a 900-foot, five-span box girder bridge and a half-width viaduct beginning north of the new bridge. The viaduct would have

begun approximately 360 feet north of the bridge to an outcropping approximately 200 feet south of the Rain Rocks Sidehill Viaduct.

Alternative 2

Alternative 2 also included a 900-foot, five-span box girder bridge, but with a full-width viaduct like Alternative 4.

Alternative 3

Alternative 3 was proposed after a value analysis study in the fall of 2019. The study's recommendation was a longer bridge with fewer spans to avoid pier columns in the beach and permanent impacts to the riparian area and viewshed. The result was a three-span, 900-foot-long cast-in-place bridge. Alternative 3's alignment was farther away from the existing bridge than Alternative 2 and shifted one pier column away from the slide area above the rock slope protection and retaining wall.

After a series of internal meetings in the summer of 2021, Caltrans geotechnical engineers expressed concerns about the location of the support columns. The slope above and below the existing north abutment is a known landslide. Alternatives 1-3 were deemed unfeasible due to column location and potential landslides.

Alternative 4

Alternative 4, the same as Alternative 4B but with 8-foot shoulders, was proposed following this. Alternative 4 was rejected due to conflict with the Coast Highway Management Plan and the Monterey County Land Use Plan.

A series of meetings were held with Caltrans, California State Parks, and California Coastal Commission staff to discuss Alternative 4/4B in the summer through the fall of 2022. The California State Parks and California Coastal Commission expressed concern regarding permanent impacts on the beachgoing experience. Three options were discussed as a compromise to meet the California State Parks and California Coastal Commission's goals, which included locating the bridge 34 feet west of the existing bridge, replacing the bridge in its existing alignment while rerouting traffic through the park, and replacing the bridge in its existing alignment and building a temporary bridge east to allow traffic flow (Alternative 5).

The 34-foot alternative was considered unfeasible because it would have required demolishing half of the existing bridge to keep traffic flowing. There was no way of anticipating the safety of the bridge with one lane. The alternative that involved rerouting traffic through the park was considered unfeasible and would not have been approved by Traffic Operations due to steep grading and a curve radius.

Alternative 5

Alternative 5, which involved replacing the bridge on the same alignment with a temporary bridge, was considered not feasible by Geotech. Any impact on the active landslide near the northern abutment would increase the chances of an active landslide, either during construction or after the bridge was built. If a landslide occurred after the bridge was constructed, the rockslide would cause irreversible damage to the bridge.

1.8 Permits and Approvals Needed

The following permits, licenses, agreements, and certifications (PLACs) are required for project construction:

Table 2 Permits and Approvals

Agency	Permits, Licenses, Agreements, and Certifications	Status
Central Coast Regional Water Quality Control Board	Section 401 Certification for impacts to Waters of the U.S.	To be obtained before construction
U.S. Army Corps of Engineers	Section 404 Permit for impacts to wetlands and Waters of the U.S.	To be obtained before construction
California Department of Fish and Wildlife	Section 1602 Agreement for Streambed Alteration impacts to Limekiln Creek	To be obtained before construction
National Marine Fisheries Service	Biological Opinion for black abalone and the South-Central California Coast Steelhead and associated critical habitat	To be obtained before construction
U.S. Fish and Wildlife Service	Programmatic Biological Opinion for Smith's blue butterfly and California red-legged frog	To be obtained before construction
U.S. Fish and Wildlife Service	Letter of concurrence for the southern sea otter	To be obtained before construction
California Coastal Commission	Coastal Development Permit	To be obtained before construction
National Oceanic and Atmospheric Administration	National Marine Sanctuaries Permit	To be obtained before construction
California State Parks	Section 4(f) agreement	To be obtained before the approval of the final environmental document

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

2.1 Topics Considered but Determined Not To Be Relevant

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

2.1.1 Existing and Future Land Use

The project includes a bridge replacement and would not change existing or future land use.

2.1.2 Community Character and Cohesion

The project does not include new features that would impact the existing character and cohesion but would, instead, restore part of the project area to its more natural state. The nearest community is Lucia, which is about 2 miles north. The project proposes to replace an existing bridge, which would maintain access along this stretch of State Route 1 for the community.

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

The Transportation Agency for Monterey County (known as TAMC) is the regional planning agency for Monterey County. This agency is responsible for developing a Regional Transportation Plan to allocate state and federal transportation funds to transportation projects within the county. This project is consistent with the Transportation Agency for Monterey County's mission statement to develop and maintain a multimodal transportation system that enhances mobility, safety, access, environmental quality, and economic activities in Monterey County. The project is also consistent with the Big Sur Coast Highway Management Plan and the Big Sur Highway 1 Sustainable Transportation Demand Management Plan. The project is listed in the 2023 Federal Transportation Improvement Program.

2.1.4 Traffic and Transportation/Pedestrian and Bicycle Facilities

Traffic would remain open under both alternatives. For Alternative 4B, traffic would remain on the existing bridge during the construction of the new bridge. For Alternative 6, a temporary bridge would be constructed to maintain traffic flow during construction. The proposed bridge would have 4-foot shoulders to accommodate bicycle facilities.

2.1.5 Growth

This project would not induce growth because it would only replace an existing bridge, and no additional lanes would be added.

2.1.6 Hydrology and Floodplain

The proposed bridge would not affect the watershed, and piers would avoid the creek bed. There is no floodplain associated with this project, according to FEMA flood insurance mapping.

2.1.7 Hazardous Waste/Materials

Other than asbestos-containing bridge materials, aerially deposited lead and other routine hazardous materials issues are not anticipated to be encountered during construction. Asbestos-containing bridge materials would be appropriately handled, treated, and disposed of with the implementation of Caltrans Standard Specifications. An asbestos-containing materials study would be conducted during the final design, and proper Standard Special Provisions would be added to the plans and expenses once the study is completed (Hazardous Waste Initial Site Assessment, June 19, 2023).

2.1.8 Wild and Scenic Rivers

Limekiln Creek is not designated as a wild or scenic river. No wild or scenic rivers are located within the vicinity of the project, according to the National Wild and Scenic Rivers System.

2.1.9 Farmland

The project area is not designated farmland, and there is no designated farmland in the vicinity, according to the California Department of Conservation's California Important Farmland Finder.

2.1.10 Timberland

There are no Timber Production Zone contracts in the project area, according to the County of Monterey Zoning Map. Additionally, no tree removal is anticipated for this project.

2.1.11 Relocations and Real Property Acquisitions

There would be no relocations because of this project; see Section 1.4 Project Description. A small amount of land would be required, which would be a transfer of jurisdiction from California State Parks to Caltrans. Approximately 1.464 acres and 0.002 acre would be required for Alternative 4B and Alternative 6, respectively.

2.1.12 Utilities/Emergency Services

Telecommunication utilities would need to be relocated to construct the project. The owner of the telecommunications line is AT&T. It is anticipated that it can be buried within the project limits to remove the visual impact of the poles and line. No relocation plans have been established at this point; this would take place in the next phase of the project. There are no other utilities in the area that would be impacted by this project.

A Traffic Management Plan would be implemented during construction, and the highway would remain open for the duration of construction.

2.1.13 Paleontology

There is a low probability of encountering or impacting paleontological resources during project construction because project-related earthwork would take place in areas that have been previously disturbed, according to the Paleontological Initial Identification Report, June 16, 2023.

2.1.14 Plant Species

Floristic botanical surveys were conducted on July 18, 2018, and on April 24, May 9, June 12, and June 25 in 2019. Suitable habitat for 12 special-status plant species occurs in the project area, but no plants were seen. The proposed project is expected to have no impacts on special-status plant species. Additional botanical surveys would be conducted before the start of construction to confirm that no special-status plant species have established in impact areas. If special-status plants are identified, coordination with resource agencies would be initiated to avoid or reduce impacts.

2.1.15 Invasive Species

Invasive plant species and noxious weeds were seen within the proposed project study area. Avoidance and minimization measures would be implemented to avoid the spread of invasive plants, noxious weeds, and nonnative animals, including aquatic species. Noxious weeds would be removed and replaced by California native plants. Any nonnative animals discovered during stream diversion activities would be removed from the project area.

2.1.16 Energy

The project is not capacity-increasing, and therefore, the operation would not increase energy usage. Energy usage would be required during construction but would be minimized whenever possible through the implementation of greenhouse gas reduction strategies (Section 2.3.3).

2.1.17 Environmental Justice

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 Executive Order 12898.

2.2 Human Environment

2.2.1 Coastal Zone

Regulatory Setting

This project has the potential to affect resources protected by the Coastal Zone Management Act of 1972. The Coastal Zone Management Act is the primary federal law enacted to preserve and protect coastal resources. The Coastal Zone Management Act sets up a program under which coastal states are encouraged to develop coastal management programs. States with an approved coastal management plan are able to review federal permits and activities to determine if they are consistent with the state's management plan.

California has developed a coastal zone management plan and has enacted its own law, the California Coastal Act of 1976, to protect the coastline. The policies established by the California Coastal Act are similar to those for the Coastal Zone Management Act: they include the protection and expansion of public access and recreation; the protection, enhancement, and restoration of environmentally sensitive areas; the protection of agricultural lands; the protection of scenic beauty; and the protection of property and life from

coastal hazards. The California Coastal Commission is responsible for implementation and oversight under the California Coastal Act.

Just as the federal Coastal Zone Management Act delegates power to coastal states to develop their own coastal management plans, the California Coastal Act delegates power to local governments to enact their own local coastal programs. This project is subject to Monterey County's local coastal program. Local coastal programs contain the ground rules for the development and protection of coastal resources in their jurisdiction consistent with the California Coastal Act goals. A Federal Consistency Certification will be needed as well. The Federal Consistency Certification process will be initiated before the final environmental document and will be completed to the maximum extent possible during the NEPA process.

Local Coastal Program

The California Coastal Act requires each community in the coastal zone to prepare a local coastal program, including a coastal land use plan, to protect, maintain, and, where feasible, enhance and restore the overall quality of the coastal zone environment and its natural resources. A local coastal program consists of land use plans, zoning ordinances, and zoning district maps. Local coastal programs must contain a specific public access component to ensure maximum public access to the coast and ensure that public recreation areas are provided.

Affected Environment

This project is fully located within California Coastal Commission jurisdiction. Additionally, the project area falls under the Big Sur Coast Land Use Plan, which is the Monterey County local coastal program. This plan was adopted by the Monterey County Planning Commission and the Monterey County Board of Supervisors in 1981 and 1985, respectively. The Big Sur Coast stretches over 70 miles from Carmel down to the San Luis Obispo County line.

The plan follows five basic objectives and policies defined to guide future public and private use of the coast, which include: natural resources, coastal scenic resources, State Route 1, land use and development, and shoreline access. Known significant resources in the area that may be affected by the project include biological, cultural, and visual resources.

There are two environmentally sensitive habitat areas within the project area. The first is the perennial stream habitat of Limekiln Creek. The second is a sensitive natural community surrounding the stream habitat, the Sitka willow thicket.

Environmental Consequences

The following discussion compares consistency between Chapter 3 of the California Coastal Act, associated local coastal program plans, and the proposed project.

Public Access and Recreation

- Coastal Act Section 30210: In carrying out the requirement of Section 4 of Article 10 of the California Constitution, maximum access, which shall be clearly posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.
 - Coastal Act Section 30211: Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.
 - Coastal Act Section 30214: (a) The public access policies of this article shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case, including, but not limited to, the following:
 1. Topographic and geologic site characteristics.
 2. The capacity of the site to sustain use and at what level of intensity.
 3. The appropriateness of limiting public access to the right to pass and repass depends on such factors as the fragility of the natural resources in the area and the proximity of the access area to nearby residential uses.
 4. The need to provide for the management of access areas to protect the privacy of nearby property owners and to protect the aesthetic values of the area by providing for the collection of litter.
- (b) It is the intent of the Legislature that the public access policies of this article be carried out in a reasonable manner that considers the equities and that balances the rights of the individual property owner with the public's constitutional right of access pursuant to Section 4 of Article 10 of the California Constitution. Nothing in this section or any amendment thereto shall be construed as a limitation on the rights guaranteed to the public under Section 4 of Article 10 of the California Constitution.
- (c) In carrying out the public access policies of this article, the commission and any other responsible public agency shall consider and encourage the utilization of innovative access management techniques, including, but not limited to, agreements with private organizations that would minimize management costs and encourage the use of volunteer programs.

- Coastal Act Section 30221: Oceanfront land suitable for recreational use shall be protected for recreational use and development unless there is a present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property.
- Big Sur Coast Land Use Plan 6.1.3: The rights of access to the shoreline, public lands, and along the coast, as well as opportunities for recreational hiking access, shall be protected, encouraged, and enhanced.

Consistency Analysis

The project would not conflict with the Coastal Act or Big Sur Coast Land Use Plan policies relating to public access and recreation. The project would improve coastal access by increasing roadway reliability, efficiency, and safety. The completed project would ensure access to Limekiln State Park. Additionally, there would be enhanced coastal access because of the 4-foot shoulders on the proposed bridge.

Public access through the project area during construction would be temporarily impacted because the park would be closed for both alternatives. This decision was made in coordination with California State Parks to ensure public safety and is discussed in more detail in Appendix A. Caltrans' Division of Right of Way and Land Surveys would coordinate with California State Parks to provide the compensation required under the Public Park Preservation Act.

Marine Environment

- Coastal Act Section 30230: Marine resources shall be maintained, enhanced, and, where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.
- Coastal Act Section 30235: Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply. Existing marine structures causing water stagnation and contributing to pollution problems and fish kills should be phased out or upgraded where feasible.
- Big Sur Land Use Plan Section 3.3.3: Alteration of the shoreline, including diking, dredging, and filling, shall not be permitted except for work essential for the maintenance of State Route 1.

Consistency Analysis

Limekiln Creek supports fish passage to and from the Pacific Ocean. The existing bridge does not act as a fish passage barrier. Both alternatives would remove the bridge pier that currently exists in the channel. This would allow the proposed bridge to fully span the creek, restoring the natural channel and providing a wider stream passage.

Work below the high tide line of the Pacific Ocean would be required to remove the existing seawall and other rock slope protection on the beach. All proposed project work is considered essential to the maintenance of State Route 1. Through the use of measures outlined in Section 2.4 of this document, the project would remain consistent with coastal policies related to the marine environment.

Terrestrial Plant, Riparian, and Wildlife Habitats

- Big Sur Land Use Plan Section 3.3.3: Development or land use activities shall be sited to protect riparian habitat values. Development next to stream courses shall be restricted to low intensities and constructed to minimize erosion, runoff, and water pollution. To protect riparian habitats, land use development activities will not be permitted that will have the effect of diminishing surface flows in coastal streams to levels that will result in the loss of plant or wildlife habitat.

Consistency Analysis

The proposed project would require temporary construction access and work areas through the riparian area and streambed to reach the existing and new pier locations on the south side of Limekiln Creek. The proposed measures described in Section 2.4 of this document would keep the project consistent with coastal policies related to habitat areas.

An approved mitigation and monitoring plan would be used to ensure the restoration of the disturbed riparian corridor. Replacement plants, erosion control material, native seed mixtures, and invasive weed treatment would be described in detail in the plan. The final mitigation and monitoring plan would be consistent with the agency requirements, as written in the 404, 401, 1602, and coastal permits, and would be reviewed and approved through the regulatory review process.

Rivers and Streams

- Big Sur Land Use Plan Section 3.4.3: Water quality, adequate year-round flows, and streambed gravel conditions shall be protected in streams supporting rainbow and steelhead trout. These streams include Garrapata Creek, Rocky Creek, Bixby Creek, Little Sur River, Big Sur River, Partington Creek, Anderson Creek, Hot Springs Creek, Vicente Creek, Big Creek, and Limekiln Creek.

Channelizations, dams, and other substantial alterations of natural streams will be considered generally inappropriate in the Big Sur Coast area. Minor alterations may be considered, but only if: a) consistent with the protection of environmentally sensitive habitats; b) no substantial interference with surface water flows, beach sand supply, and anadromous fish runs will result; c) the type of use is consistent with Policy 3.7.3.B-2 regarding floodplains; and d) the project incorporates the best mitigation measures feasible.

Monterey County encourages the restoration of streams and their immediate natural environment, both on public and private lands. Restoration projects may include improvements to water supply and quality, enhancement of water flows or water retained for in-stream uses, improvement of fish habitat, installation of fish ladders, stream restocking, reestablishment, or irrigation of riparian vegetation, etc.

Consistency Analysis

Limekiln Creek supports fish passage to and from the Pacific Ocean. The existing bridge does not act as a fish passage barrier. Both alternatives would remove the bridge pier that currently exists in the channel. This would allow the proposed bridge to fully span the creek, restoring the natural channel and providing a wider stream passage.

A stream diversion would be required to remove the existing pier within the streambed. To limit impacts on the creek and avoid a creek diversion after pier removal, a trestle would be built over the creek. Temporary impacts would include vegetation removal, clearing and grubbing, ground compaction, and disturbance. Wooden platforms would be placed to ensure no debris from the pier is dropped into the creek. The creek diversion would be deconstructed once the pier is removed, and new piers would be placed outside the jurisdictional areas. It is possible that Alternative 6's temporary bridge would have a pier in the creek, but at this point, it is anticipated that this can be avoided.

The proposed measures described in Section 2.4 of this document would ensure that the project impacts would remain consistent with coastal policies related to biological habitats. Those measures would provide details for replanting and restoration. An approved mitigation and monitoring plan would be used to ensure the restoration of the disturbed riparian corridor.

Land Resources/Environmentally Sensitive Habitat Areas

- Coastal Act Section 30240: (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.
- (b) Development in areas next to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts

that would significantly degrade those areas and shall be compatible with the continuation of those habitat and recreation areas.

- Big Sur Land Use Plan Section 3.3.2: Development, including vegetation removal, excavation, grading, filling, and the construction of roads and structures, shall not be permitted in the environmentally sensitive habitat areas if it results in any potential disruption of habitat value. To approve development within any of these habitats, Monterey County must find that the disruption of a habitat caused by the development is not significant.

Where private or public development is proposed in documented or expected locations of environmentally sensitive habitats, field surveys by qualified individuals or agencies shall be made to determine the precise locations of the habitat and to recommend mitigating measures to ensure its protection.

For developments approved within environmentally sensitive habitats, the removal of indigenous vegetation and land disturbance (grading, excavation, paving, etc.) associated with the development shall be limited to that needed for the structural improvements themselves. The guiding philosophy shall be to limit the area of disturbance, maximize the maintenance of the natural topography of the site, and favor structural designs that achieve these goals.

Consistency Analysis

The measures outlined in Section 2.4 of this document would ensure that the project would be consistent with coastal policies related to environmentally sensitive habitat areas. An approved mitigation and monitoring plan would be used to ensure the restoration of the disturbed riparian corridor. Replacement plants, erosion control material, native seed mixtures, and invasive weed treatment would be described in detail in the plan. The final mitigation and monitoring plan would be consistent with the agency requirements, as written in the 404, 401, 1602, and coastal permits, and would be reviewed and approved through the regulatory review process.

Geologic Hazards

- Big Sur Land Use Plan Section 3.7.3: All development shall be sited and designed to conform to site topography and to minimize grading and other site preparation activities. Applications for grading and building permits and applications for subdivisions shall be reviewed for potential impacts on on-site and off-site development arising from geologic and seismic hazards and erosion. Mitigation measures shall be required as necessary. Any proposed development within 50 feet of the face of a cliff or bluff or within the area of a 20-degree angle from the toe of a cliff, whichever is greater, shall require the preparation of a geologic report before consideration of the proposed project. The report shall demonstrate that (a) the area is stable for development, and (b) the development will not create a geologic hazard or diminish the stability of the area.

Consistency Analysis

Geologic hazards would be fully analyzed by Caltrans engineers once an alternative has been selected. A Structure Preliminary Geotechnical Report Memorandum was filed on August 13, 2014, which reviewed existing conditions and discussed challenges such as the tide, right-of-way restrictions, access, land sliding, and falling rock. More information can be found in Section 2.3.2.

Any necessary construction methods and/or measures would be used to minimize risk from geologic hazards to the greatest extent possible. The proposed project would ensure the reliability of State Route 1.

Cultural and Paleontological Resources

- Coastal Act Section 30244: Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.
- Big Sur Coast Land Use Plan 3.10: Designated historical sites shall be protected through zoning and other suitable regulatory means to ensure that new development shall be compatible with existing historical resources to maintain the special values and unique character of the historic properties.

Consistency Analysis

All earthwork is anticipated to occur where the probability of encountering paleontological resources is unlikely. There is a low probability of encountering or impacting paleontological resources during project construction because project-related earthwork would take place in areas that have been previously disturbed (Paleontological Initial Identification Report, June 16, 2023).

Within the project Area of Potential Effect, there are three recommended eligible sites, archeological sites, and one historic district. The proposed project is anticipated to have a Finding of Adverse Effects. The project would be consistent with coastal policies with the use of measures outlined in Section 2.2.4 of this document.

Scenic Resources

- Coastal Act Section 30251: The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural landforms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas, such as those designated in the California Coastline Preservation

and Recreation Plan prepared by the Department of Parks and Recreation and by local government, shall be subordinate to the character of its setting.

- Big Sur Land Use Plan Section 3.2.3: New roads, grading, or excavations will not be allowed to damage or intrude upon the critical viewshed. Such road construction or other work shall not start until the entire project has completed the permit and appeal process. Grading or excavation shall include all alterations of natural landforms by earthmoving equipment. These restrictions shall not be interpreted as prohibiting the restoration of severely eroded watercourse channels or gulying, provided a plan is submitted and approved before starting work.
- Big Sur Coast Land Use Plan 4.1.3: Monterey County requests that an overall design theme for the construction and appearance of improvements within the State Route 1 right-of-way be developed by Caltrans in cooperation with the State Department of Parks and Recreation, the U.S. Forest Service, and local citizens. Design criteria shall apply to roadway signs, fences, railings, access area improvements, bridges, restrooms, trash receptacles, etc. The objective of such criteria shall be to ensure that all improvements are unnoticeable and are in harmony with the rustic natural setting of the Big Sur Coast. The special report by local citizens entitled Design Standards for the Big Sur Highway on file at the County Planning Department should serve as a guide and point of departure for Caltrans and other public agencies in developing a design theme for State Route 1 and in making improvements within the State right-of-way.
- The Guidelines for Corridor Aesthetics element of the Coast Highway Management Plan (prepared by Caltrans) specifically addresses the construction of new bridges as follows:

Any new bridges along this coast must complement the architecturally significant historic bridges in the corridor. These bridges are internationally recognized for their architectural style and engineering excellence and for the continuity established by the use of a common design theme: the concrete arch spandrel. The character of these bridges is a major contributor to the historic character of the highway corridor. The intent of these guidelines is to ensure that new bridges complement this character by balancing respect for historic design themes with the best of contemporary structural expression.

1. Any new bridges should be authentic in design rather than emulate something they are not, i.e., historic bridges. At the same time, structural designers should recognize historic bridges for the quality of aesthetic and engineering excellence they represent and strive to match or exceed this quality in contemporary terms. 2. In the interests of overall continuity, designers should first consider bridge types that are in the same visual family as the historic bridges: arched or arch-like main span structures below deck level and the use of concrete.

2. In designing the alignment of a new bridge, designers should allow the roadway's geometry (plan and profile) to flow smoothly over the bridge, not necessarily limiting the alignment to a tangent (or straight) geometry.
 3. To maintain the visual continuity of the existing roadway, the width of new bridges should match the width of the approaching roadways, including shoulders, as closely as possible. As with roadway shoulder widths, the desired aesthetic for structures would support the concept for a 32-foot roadbed, subject to site-specific considerations and with consideration for appropriate exceptions from the 40-foot standard.
 4. New bridges must include an appropriate rail for the safety of motorists, cyclists, and pedestrians; the rail type should be visually compatible with the open concrete balustrade rail seen on historic bridges.
- The Roadway Protection Systems section of the Guidelines for Corridor Aesthetics states that "preference for type and material selection on protective systems (e.g., rockfall protection) will be given to those that are visually subordinate to the landscape, to the extent possible. Field installation details and the industrial design of system components will also emphasize visual compatibility (as above). For larger protective structures such as rock sheds, recommendations on aesthetic design for bridges should feature aesthetic and engineering design excellence."
 - The Big Sur Highway 1 Sustainable Transportation Demand Management Plan: As one of the core values, iconic visual access is of primary importance and states "The aesthetic value of the ocean viewshed sets Highway 1 apart from many scenic drives. Rugged and rural views should be conserved, and visual clutter, such as signage, should be minimized. Design elements should reflect the visual character of the corridor."

Consistency Analysis

Both proposed project alternatives would contribute to a cumulative increase in the overall built character of the Big Sur corridor. The measures proposed in Section 2.2.3 would reduce the noticeability of these visual changes and decrease the negative visual impacts caused by the project.

Maintenance and Public Access

- Coastal Act Section 30252: The location and amount of new development should maintain and enhance public access to the coast by (1) facilitating the provision or extension of transit service, (2) providing commercial facilities within or adjoining residential development or in other areas that will minimize the use of coastal access roads, (3) providing non automobile circulation within the development, (4) providing adequate parking facilities or providing substitute means of serving the development with public transportation, (5) assuring the potential for public transit for high intensity uses such as high-rise office buildings, and by (6) assuring that the recreational needs of new residents will not overload nearby coastal recreation areas by correlating the amount of development with

local park acquisition and development plans with the provision of on-site recreational facilities to serve the new development.

Consistency Analysis

Both alternatives would maintain and enhance public access to the coast by maintaining access on State Route 1. Both alternatives would replace the deteriorating bridge and include four-foot shoulders for bicycle access.

A series of multiagency meetings were held with Caltrans, California State Parks, and the California Coastal Commission beginning January 18, 2022. At this meeting, California State Parks expressed concerns about coastal access, safe recreation activities along the beach area, and responsibilities for future maintenance of the revetment. The California Coastal Commission had concerns about the monitoring and maintenance of the revetment as well. The California Coastal Commission also inquired if there would be reduced cultural and biological impacts by locating the southern abutment in its existing alignment. Alternative 4B would acquire 1.464 acres of Limekiln State Park to accommodate the alignment. This area would be part of the knoll where the southern abutment would be placed. It would not directly impact recreation areas in Limekiln State Park, but there would be cultural impacts. Measures are discussed in Section 2.2.4 for both alternatives.

Project Alternative 6 was designed and shared at a multiagency meeting with Caltrans, the California Coastal Commission, and California State Parks on July 17, 2023. Alternative 6 was met with support from relevant agencies and is consistent with applicable coastal policies.

Environmentally Sensitive Habitat Areas

- Coastal Act Section 30107.5 labels ESHA [Environmentally Sensitive Habitat Area] as "any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments."
- Coastal Act Section 30121 identifies wetlands, which often qualify as ESHA, as "lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens."

Consistency Analysis

There are two environmentally sensitive habitat areas within the project area, which include the perennial stream habitat of Limekiln Creek and a sensitive natural community surrounding the stream habitat, Sitka willow thicket. There would be a total of 0.458 acre of temporary impacts on these areas during construction. However, there would be a total 0.007-acre net increase in habitat due to the removal of an existing bridge pier. This is discussed in further detail in Sections 2.4.1 and 2.4.2.

Avoidance, Minimization, and/or Mitigation Measures

Though the goals of the proposed project are consistent with Coastal Act policies, project construction would create temporary and permanent impacts on protected resources within the coastal zone. Implementation of measures would reduce impacts to the maximum extent feasible to ensure the project would remain consistent with coastal resource protection goals.

2.2.2 Parks and Recreational Facilities

Regulatory Setting

The Public Park Preservation Act (California Public Resources Code [PRC] Sections 5400–5409) prohibits local and state agencies from acquiring any property that 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.

Affected Environment

The project area is within Limekiln State Park. Limekiln State Park has a generally mild climate due to its location on the central coast; however, its geography allows for several microclimates that offer a variety of habitats and wildlife. For more information, see Section 2.3. There are 29 campsites within the state park for activities such as fishing and hiking. Both hiking trails are short and include views of scenic bridges, waterfalls, and historic lime kilns. The furnaces are from the 1880s and were used to extract, process, and export thousands of barrels of limestone as well as lumber from the redwoods. Additionally, there is beach access with views of the Pacific Ocean and picnic tables.

Environmental Consequences

The proposed project would temporarily impact the existing facilities. This includes full park closure for the duration of construction for both alternatives, which would be four years for Alternative 4B and four and a half years for Alternative 6. Alternative 4B would require a temporary construction easement of 1.462 acres and an acquisition of 1.464 acres. Alternative 6 would require a temporary construction easement of 1.992 acres and an acquisition of 0.002 acre.

Caltrans' Division of Right of Way and Land Surveys would coordinate with California State Parks to provide the compensation required under the Public Park Preservation Act.

There are parks and recreational facilities within the project vicinity that are protected by Section 4(f) of the Department of Transportation Act of 1966. This project would result in the “use” of those facilities as defined by Section 4(f). Please see Appendix A, Section 4(f), for additional details.

Avoidance, Minimization, and/or Mitigation Measures

The following avoidance and minimization measures would be included in the proposed project:

- SP-1: No California State Parks structures will be removed, including the kiosk, bathrooms, and bridge, without prior approval from California State Parks.
- SP-2: Any vegetation removed will be replanted in coordination with California State Parks.
- SP-3: All campsites affected by temporary construction activities will be restored to match existing conditions and configurations after the completion of construction.
- SP-4: Any damage to pavement or structures due to heavy equipment access will be restored to their previous condition or better.

2.2.3 Visual/Aesthetics

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, 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]).

California Streets and Highways Code Section 92.3 directs Caltrans to use drought-resistant landscaping and recycled water when feasible and incorporate native wildflowers and native and climate-appropriate vegetation into the planting design when appropriate.

Affected Environment

A Visual Impact Assessment was completed in August 2023 and is the primary resource for this section. Throughout the project area, State Route 1 is a two-lane road with 12-foot lanes and 4-foot-wide shoulders. The proposed project is located within the southern region of the Big Sur Coast. The visual character of the project vicinity includes steep, rugged slopes

alternating with well-vegetated ravines and natural drainages. The Big Sur Coast has high visual quality, as recognized in local, state, and federal scenic designations.

Throughout the project area, the highway traverses the side of a steep slope rising above the Pacific Ocean. The slope north of the creek where the highway is located is steep, irregular, and covered with a rock net drapery to reduce rock fall on the highway. The existing highway is supported below with crib walls that were constructed about 50 years ago. The Limekiln Creek Bridge deck is approximately 90 feet above Limekiln Creek at its highest point. After crossing the canyon, the highway continues north along steep slopes where rockfall is common, and the highway is supported by four retaining walls built from 1957–1960 until it reaches the Rain Rocks Sidehill Viaduct and Rain Rocks Rock Shed. The Rain Rocks Sidehill Viaduct and rock shed are within proximity of the northern end of the project. The existing road alignment limits the side views of these two structures, and as a result, most viewers know them only by their bridge railing and deck surfaces.

The existing bridge has eight pier footings above the ground, measuring approximately 15 by 6 feet. The third and fourth piers, in the middle of the canyon, have been retrofitted with wingwalls, making them wider than the other piers. One of the piers is in the flow channel of Limekiln Creek.

The entire project is surrounded by Limekiln State Park, which provides campsites, access to the beach, and trails in the nearby coastal mountains. Coastal chaparral is the primary vegetative cover in the project vicinity. Medium to small shrubs and grasses are found throughout the project limits; however, the most unstable and rocky slopes are relatively barren and lack vegetative cover. Trees can be seen on the upper elevations of slopes adjacent to the project. Riparian vegetation and trees are more dominant in the Limekiln Creek corridor, visible to the east while crossing the bridge.

State Route 1 is an important tourism route that serves both local and interregional traffic. Recreational travelers, local commuters, service vehicles, and commercial vehicles are common along the route. State Route 1, also referred to as the “Coast Highway,” is designated an Official State Scenic Highway and a federally designated All-American Road, one of only twenty such designations in the nation.

The visual quality of the project site itself is high. From this location, the view quality is due mostly to the elevated viewing position above the ocean and the views of the steep topography as it descends to the shoreline to the north and south. This site is one of the more rugged-appearing locations on the highway because of its history of landslides and rockfalls. Within the northern and southern project limits, vegetation is sparse and doesn’t contribute greatly to the visual quality. The combination of towering rock cliffs, sheer drop-offs to the crashing surf line, and vast Pacific Ocean views make the viewshed

visually strong. The quality of the view at the project site is somewhat reduced by the landslide scarring and required ongoing maintenance efforts of the retaining walls.

The project can be seen from both the north and southbound lanes of State Route 1. Traveling southbound, the project is first visible as the viewer leaves the Rain Rocks Sidehill Viaduct. The roadway slightly curves, but visibility is only slightly interrupted. Traveling northbound, views are limited because of the curvature of the roadway. The project features are visible as the viewer rounds the curve just south of the Limekiln State Park entrance.

Viewers along State Route 1 are primarily in motor vehicles due to recreation, tourism, local commuting, limited service, and commercial travel. Bike touring is also common because State Route 1 is classified as the California Coastal Trail bicycle route. Bicyclists have greater visual exposure compared to vehicles due to their slower pace of travel.

Off-roadway pedestrian viewers are visitors to Limekiln State Park. Viewers throughout the project area generally have high expectations regarding scenic quality, especially considering state and federal scenic designations in the area. Limekiln State Park viewers have greater visual exposure to the bridge structure over the beach.

There are no private residences with views of the project. The other potential viewer group is commercial and recreational boaters. This would be a small percentage of the total number of project viewers, though they are expected to have a moderately high degree of sensitivity to the visual setting. The project would be easily recognizable against the coastal cliffs.

There is no single design style throughout the Big Sur corridor. The style and variety of bridges, rails, barriers, walls, drainage inlets and down drains, signage, and other elements appear to be influenced by current engineering standards and funding availability rather than a uniform aesthetic theme. The corridor has a tendency toward natural material construction and finishes such as wood and stone, which is a result of local preference or planning policy.

Environmental Consequences

Five observer viewpoints were selected that best show the typical visual character of the project, unique project components, affected resources, and affected viewer groups. The viewpoints are shown in Table 3 below. They are also shown in an aerial map in Figure 11 as well.

Table 3 Observer Viewpoint Locations

Observer Viewpoint (OV) Number	Location
1	From State Route 1, looking southbound near Limekiln campground.
2	From State Route 1, looking northbound near Limekiln campground.
3	From Limekiln campground entrance road, looking west.
4	From Limekiln campground, looking west.
5	From Limekiln Beach, looking north.

Figure 11 Observer Viewpoint Map



Photo simulations were created for each observer viewpoint and provide an overview of the visual setting of the project area. The “existing” image shows how the view looked at the time of the study, and the “proposed” simulation shows how that location would appear with the associated alternative.

Computer modeling and known dimensions of existing features were used to scale references to increase the accuracy of the simulations.

Three visual rating criteria will be used throughout this section, which include vividness, intactness, and unity.

1. Vividness is the visual power or memorability of landscape features as they combine striking and distinctive visual patterns.
2. Intactness is the visual integrity of the landscape and its freedom from non-typical elements. For example, if all elements of a landscape “belong” together, there would be a high level of intactness.
3. Unity is the visual harmony of the landscape as a whole. Unity represents the degree to which potentially diverse visual elements maintain a coherent visual pattern.

A numerical number was assigned for each of the three rating criteria between 1 and 7. Vividness, intactness, and unity were rated and then averaged to find the rating. The numerical difference between the existing view and the simulation quantifies the resource change that may occur as a result of the proposed project. This number helps determine and understand potential levels of visual impact.

Observer Viewpoint 1-From State Route 1 Looking Southbound Near Limekiln Campground

Figure 12 Existing Condition Looking Southbound



The existing view looking southbound from State Route 1 is considered high in visual quality because of the rocky outcropping, proximity to Limekiln Beach, and views of the Pacific Ocean and distant coastline. There is evidence of human influence due to the beach revetment, but the visual

intactness is still slightly above average. The visual unity is moderately high because of the harmony of the ocean and topography. The rating of this view would be 5.6.

Figure 13 Alternative 4B Simulation Looking Southbound



At this location, State Route 1 would be realigned 65 feet to the ocean side; this would require grading the rocky outcropping for the proposed bridge's southern abutment. Visual access to the beach would be decreased while the ocean view would remain. This would have a negative effect on both visual unity and intactness ratings. The combination of the bridge and viaduct would add a noticeable amount of built presence. The ratings indicate that the grading would be somewhat visually inconsistent and would reduce the visual integrity of the rural setting. The rating for this alternative would be 4.7, which would be a resource change reduction of 0.9.

Figure 14 Alternative 6 Simulation Looking Southbound



Here, the southern abutment would remain on the existing alignment, and the rocky outcropping would not be affected. Visual access to the beach would be reduced, and the built presence would be increased, similar to Alternative 4B. The rating for this alternative would be 5.2, a resource change reduction of 0.4.

Observer Viewpoint 2-From State Route 1 Looking Northbound Near Limekiln Campground

Figure 15 Existing View Looking Northbound



The existing view quality looking northbound from the southern abutment is somewhat compromised by the bridge and landslide to the north. The existing

vividness rating is lower because of the close visibility of the bridge, slide, and landform scarring. This view is rated as 5.

Figure 16 Alternative 4B Simulation Looking Northbound



The view here would begin south at the rocky outcropping, approximately 65 feet west of the existing view. The increased bridge width would reduce the intactness and unity of the view. However, the alignment shift would create a more memorable view of the ocean. The bridge rail would appear more unified if the same style was used as the Pitkins curve, but it could also decrease memorability since the Limekiln Bridge and viaduct would be experienced as one continuous element. The rating for this location would be 4.6, which would be a resource change reduction of 0.4.

Figure 17 Alternative 6 Simulation Looking Northbound



At this location, the bridge would be realigned west, like Alternative 4B, but the placement of abutments would be different. The northern abutment would shift 80 feet northwest of the existing abutment, and the southern abutment would remain, resulting in a more linear alignment. The alignment west would create a more memorable view of the ocean, but the more linear alignment would have less of a connection to the surrounding landscape, slightly reducing intactness and unity. Just like Alternative 4B, the bridge rail would appear more unified but could decrease memorability. The visual rating for this alternative is 4.3, a resource change reduction of 0.7.

Observer Viewpoint 3-From Limekiln State Park Entrance Road Looking West

Figure 18 Existing Condition From Entrance Road



The existing view from the entrance road of Limekiln State Park looking west is somewhat compromised because of the number of columns obscuring the view of the ocean. Limekiln Bridge dominates the existing side view from this location, increasing its memorability. The number of columns and varying widths are somewhat negative characteristics, reducing the intactness and unity ratings. The rating here is 5.3.

Figure 19 Alternative 4B Simulation From Entrance Road



The proposed bridge would be located approximately 65 feet farther west from the viewer. The reduction in the number of columns allows a larger view of the ocean and increases its intactness and unity. The increase in height of the bridge girder reduces the view of the ocean and horizon, reducing intactness and unity. The rating here would also be 5.3, the same as the existing viewpoint.

Figure 20 Alternative 6 Simulation From Entrance Road



This viewpoint is very similar to Alternative 4B. The new bridge would be located farther west and have a larger view of the ocean, but the height of the bridge girder would reduce this view. The rating for this view is also 5.3, the same as for Alternative 4B and the existing viewpoint.

Observer Viewpoint 4-From Limekiln Campground Looking West

Figure 21 Existing Condition Looking West From Campground



The existing view looking west from the campground has a lower vividness rating because the view is defined by vehicles, restrooms, and the bridge. The visual integrity and continuity qualities are somewhat compromised

because of the variety of competing developed and natural visual elements. The rating at this location is 3.6.

Figure 22 Alternative 4B Simulation Looking West From Campground



The new bridge would be located approximately 65 feet farther from the viewer, and the number of columns would be reduced to one. Fewer columns would open views to the ocean, slightly increasing memorability. The wider bridge deck and taller girder would dominate the natural elements of the beach and vegetation, negatively affecting its unity and intactness value. The parking area elements would remain and contribute to a lower intactness rating. The rating of this alternative is 3.4, which is a reduction of 0.2.

Figure 23 Alternative 6 Simulation Looking West From Campground



This view is very similar to Alternative 4B with the reduction of columns, a larger bridge, and parking area elements. The rating would also be 3.4, a reduction of 0.2.

Observer Viewpoint 5-From Limekiln Beach Looking North

Figure 24 Existing Condition From Limekiln Beach



The existing view from Limekiln Beach includes the revetment of rock slope protection, concrete, crib walls, and drainage components. Views of the ocean, beach, and rising hill make the unity slightly higher. The existing memorability of the view has a lower vividness rating because of the somewhat negative characteristics of these elements. The rating at this location is 4.0.

Figure 25 Alternative 4B Simulation From Limekiln Beach



The revetments on the beach would be partially removed, to the extent that is safe. It is assumed that the southern half of the revetment would be removed. This would result in a slight increase in intactness and unity. However, the new bridge alignment would be directly over the beach, causing shadows and limiting the view of the coastline and hillside to the north. This would reduce memorability, intactness, and unity. The rating at this location would be 3.1, a reduction of 0.9.

Figure 26 Alternative 6 Simulation from Limekiln Beach



Just like Alternative 4B, the revetment would be partially removed, increasing intactness and unity, but the alignment shift would cause shadows and a limited view, reducing memorability, intactness, and unity. The northern abutment would also be shifted 80 feet northwest of the existing abutment, which may slightly increase the visibility of the northern portion of the structure, further reducing its intactness and unity. The rating for this alternative is 2.9, a reduction of 1.1.

Summary of Project Impacts

Table 4 below shows the numerical visual impact rating from each observer viewpoint.

Table 4 Average Viewpoint Ratings

Observer Viewpoint	Alternative 4B Impact Rating	Alternative 6 Impact Rating
1	Negative 0.9	Negative 0.4
2	Negative 0.4	Negative 0.7
3	0.0	0.0
4	Negative 0.2	Negative 0.2
5	Negative 0.9	Negative 1.1
Average rating from all viewpoints	Negative 2.4	Negative 2.4

Both proposed alternatives would result in a substantial alteration of the visual environment due to the large structure replacement. Though the project site is somewhat visually degraded because of landslides and human activity, the route’s federal and state scenic designations and high level of local concern

regarding visual resource preservation make the project area one of the most sensitive sites in the state. The visual impact associated with the bridge and viaducts would depend on how well the form of the structures and the design details complement the aesthetic character of the Big Sur community and visitors' expectations of the highway.

Construction Impacts

During construction, vehicles and equipment would be visible within and near the project limits. Storage of construction materials, temporary K-rail, signage, orange cones, orange fencing, and other devices would be present. Workers would be visible throughout the construction phase. Views of stopped and slowed vehicles on the highway may also increase.

Alternative 4B would keep traffic on the existing bridge while the new bridge is constructed. Alternative 6 would require a temporary 200-foot retaining wall along the northern abutment as well as a temporary bridge to allow traffic flow. Both alternatives would have visual impacts due to construction, but Alternative 6 would have larger impacts.

Cumulative Impacts

Both alternatives would result in a visual alteration of the project area. The highway traveler would experience Limekiln Bridge and Viaduct in conjunction with Pitkins Curve Bridge and Rain Rocks Rock Shed and Rain Rocks Sidehill Viaduct, which would likely feel like one continuous built element. The cumulative visual impact would increase the “man-made” presence in the area. The visual transition between the proposed bridge and its surroundings would affect whether the project looks like a cohesive design or a collection of unrelated elements. If the Limekiln Bridge was not compatible with the surrounding built structures, it would increase the noticeability of the project and degrade the visual quality.

Avoidance, Minimization, and/or Mitigation Measures

With the implementation of the following avoidance and minimization measures, visual impacts would be minimized:

- VIS-1: Design the bridge and viaduct structures with the highest quality architectural and engineering practices and considerations, acknowledging the existing historic bridges of the Big Sur Coast, local policies, and considering the adjacent Rain Rocks and Pitkins Curve structures. The design shall be done in coordination with District 5 Landscape Architecture.
- VIS-2: Involve the community in the aesthetic design of all structures.
- VIS-3: The design of all structures shall consider including a high level of architectural detailing, including the shape of columns and other structural

elements that are visible to pedestrians under the structures. The design shall be done in coordination with District 5 Landscape Architecture.

- VIS-4: Use an open-style bridge rail that maximizes views. Bridge rail selection shall be done in coordination with District 5 Landscape Architecture.
- VIS-5: Use finish, colors, and textures that minimize reflectivity and glare, and they shall be selected in coordination with District 5 Landscape Architecture.
- VIS-6: Preserve as much existing vegetation as possible. Prescriptive clearing and grubbing and grading techniques that save the most existing vegetation and trees possible shall be used.
- VIS-7: Recontour all disturbed areas and construction access roads to a natural appearance.
- VIS-8: All excavation slopes shall include slope-rounding and landform-grading as appropriate to reduce their engineered appearance and to visually blend with the natural topography of the region.
- VIS-9: Revegetate all areas disturbed by the project, including but not limited to temporary access roads, staging, and other areas with native plant species appropriate to each specific work location.
- VIS-10: Replacement planting shall include aesthetic considerations as well as the inherent biological goals. Revegetation shall include native species as determined by the Caltrans Biologist and Caltrans District 5 Landscape Architecture. Revegetation shall occur to the maximum extent horticulturally viable and be maintained until established.
- VIS-11: Minimize the use of signage and reflectors to the minimum required by the American Association of State Highway and Transportation Officials.
- VIS-12: All overhead utility lines affected by the project shall be placed underground per the California Public Utilities Commission requirement under Public Utilities Code 320.
- VIS-13: All concrete drainage elements, including but not limited to headwalls, drain inlet aprons, etc., should be colored to blend with the surroundings and reduce reflectivity. The specific colors of these concrete elements shall be determined by Caltrans District 5 Landscape Architecture.
- VIS-14: All metal drainage components related to down drains and inlets, including but not limited to flared end sections, connectors, anchorage systems, safety cable systems, etc., should be darkened or colored to blend with the surroundings and reduce reflectivity. The specific color shall be determined by Caltrans District 5 Landscape Architecture.

- VIS-15: All visible rock slope protection should be placed in natural-appearing shapes rather than in geometric patterns to the greatest extent possible to reduce its engineered appearance.
- VIS-16: Following the placement of rock slope protection, the visible rock should be colored to blend with the surroundings and reduce reflectivity. The specific color shall be determined by Caltrans District 5 Landscape Architecture.
- VIS-17: Metal roadside elements, including but not limited to guardrails, guardrail transitions, and end treatments, should be stained or darkened to be visually compatible with the rural setting. The color shall be determined and approved by Caltrans District 5 Landscape Architecture.
- VIS-18: Pedestrian or bicycle railing shall not be included on top of a bridge or viaduct rail unless required by traffic safety standards. If pedestrian or bicycle railing is required, it shall be designed with materials, form, and colors to minimize noticeability and ocean-view blockage and to complement the bridge architecture.

2.2.4 Cultural Resources

Regulatory Setting

The term “cultural resources,” as used in this document, refers to the “built environment” (e.g., structures, bridges, railroads, water conveyance systems, etc.), places of traditional or cultural importance, and archaeological sites (both prehistoric and historic), regardless of significance. Under federal and state laws, cultural resources that meet certain criteria of significance are referred to by various terms, including “historic properties,” “historic sites,” “historical resources,” and “tribal cultural resources.” Laws and regulations dealing with cultural resources include:

The National Historic Preservation Act (NHPA) of 1966, as amended, sets forth national policy and procedures for historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for listing in the National Register of Historic Places (NRHP). Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic properties and to allow the Advisory Council on Historic Preservation (ACHP) the opportunity to comment on those undertakings, following regulations issued by the Advisory Council on Historic Preservation (36 Code of Federal Regulations [CFR] 800). On January 1, 2014, the First Amended Section 106 Programmatic Agreement (PA) among the Federal Highway Administration, the Advisory Council of Historic Places, the California State Historic Preservation Officer (SHPO), and Caltrans went into effect for Department projects, both state and local, with Federal Highway Administration involvement. The PA implements the Advisory Council of Historic Place’s regulations, 36 Code of Federal Regulations 800, streamlining the Section 106 process and delegating certain

responsibilities to Caltrans. The Federal Highway Administration'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).

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

Public Resources Code Section 5024 requires state agencies to identify and protect state-owned historical resources that meet the National Register of Historic Places listing criteria. It further 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 of Historic Places or are registered or eligible for registration as California Historical Landmarks. Procedures for compliance with PRC Section 5024 are outlined in a Memorandum of Understanding (MOU) between Caltrans and the State Historic Preservation Office, effective January 1, 2015. For most Federal-aid projects on the State Highway System, compliance with Section 106 Programmatic Agreement will satisfy the requirements of Public Resources Code Section 5024.

Affected Environment

A Historic Property Survey Report was completed for the project in May 2021, and an Archaeological Survey Report was completed by Far Western Anthropological Research Group, Incorporated in February 2021.

Before any fieldwork, a records search in the Caltrans Cultural Resources Database was performed to search for any relevant excavation reports for the Big Sur Coast in the past ten years. Additional records and reports were provided by California State Parks. An extended Phase I and Phase II

Archaeological Evaluation was conducted at archaeological site CA-MNT-1892, located on State Route 1 within the project area. Native American consultation began in 2017 and is ongoing.

The Area of Potential Effects is the area within which the proposed project has the potential to affect, either directly or indirectly, significant prehistoric or historic archaeological resources or historic-period (pre-1970) built environment resources.

Four resources—two precontact archaeological sites (MNT-620 and MNT-1892), one historic-era landing site associated with the Rockland Lime and Lumber Company (MNT-2452H), and a built environment resource that includes a section of the National Register of Historic Places-eligible Carmel-San Simeon Highway Historic District (following the alignment of State Route 1)—are present within the study area. There is an overall low sensitivity for buried archeological deposits within the study area. Test excavations by Hildebrant and Jones (1998) found archeological deposits that appear to be disturbed by construction activities and limestone processing. Due to the geology of the area and likely landslides and other movements, it is possible other buried deposits have been shifted that were not previously destroyed by construction activities.

Additionally, a potential district was evaluated: the Rockland Lime and Lumber Company Historic Landscape District.

MNT-620

No archeological testing was conducted at this site because it was determined to be outside of the project's affected area.

MNT-1892

Phase 2 testing was conducted at site MNT-1892 in February 2020. This site is a small midden deposit. The materials give insight into the use of manufactured goods based on available resources. This site has been disturbed by a variety of activities over the years, such as mining from the Rockland Cement Company, development of the Rockland Landing, and construction of State Route 1. This site was first discovered in 1998 during a seismic retrofit project.

Site MNT-1892 is determined to be eligible for listing on the National Register under Criterion D with concurrence from the State Historic Preservation Office on July 8, 2021.

MNT-2452H

This site is historically known as the Rockland Landing site and is associated with the Rockland Lime and Lumber Company doghole port (small ports that operated between the mid-1800s and 1930s). This site was first identified and

mapped in 2001 and later updated in 2016. Far Western visited this site in July 2020 and found the site similar to what was previously recorded.

This site is determined to be eligible as a contributing resource to the Rockland Lime and Lumber Company Historic Landscape District with concurrence from the State Historic Preservation Office on July 8, 2021.

Carmel-San Simeon Highway Historic District

This National Register-eligible highway follows State Route 1 through the study area; however, the only contributing element is a battlement-style parapet wall (Feature DM-343).

The Highway Historic District is significant under Criterion A and Criterion C.

Rockland Lime and Lumber Historic Landscape District

Historic districts are geographical areas that contain contributing and noncontributing properties. A contributing property is any element that adds to its historical integrity or significance.

Far Western conducted an inventory and evaluation of the potential district. The Rockland Lime and Lumber Company operated between 1887 and 1890. Sixteen contributing elements of the potential district were identified within the study area. These include lime kilns and associated quarries, a townsite, landing, wagon road, and various structure flats and foundations, as well as four historic vegetation elements, all associated with the historic Rockland Lime and Lumber Company. Another seven archaeological resources were identified and recorded but do not contribute to the district's historical character or eligibility.

In addition, the Carmel-San Simeon Highway Historic District (P-27-002775) follows the alignment of State Route 1 but does not contribute to the potential Rockland Lime and Lumber Company Historic Landscape District. The existing Limekiln Bridge was determined not to be historic and is also not a contributor to the Carmel-San Simeon Highway Historic District. The Landscape District is located within the Limekiln Creek drainage and entirely within Limekiln State Park.

Caltrans determined the Rockland Lime and Lumber Historic Landscape District to be eligible for the National Register under Criteria A and C, with concurrence from the State Historic Preservation Office, on July 8, 2021. Caltrans considers the district to be eligible under Criterion D, and per the 106 Programmatic Agreement, it obtained Cultural Studies Office approval on June 1, 2021. It is significant at the state and local levels, with a period of significance from 1887 to 1890, reflecting the total duration of lime processing activities at the Rockland Lime and Lumber Company operation.

Environmental Consequences

One precontact site (MNT-1892) and one historic-era site (MNT-2452/H) would be impacted. Both sites are individually eligible for listing in the National Register, and MNT-2452/H is eligible as a contributing element to the Rockland Lime and Lumber Company Historic Landscape District, which would also be directly impacted. Both alternatives would affect the western portion of MNT-2452/H and likely all remaining deposits at MNT-1892. The proposed project is anticipated to have a Finding of Adverse Effects.

CA-MNT-1892

Demolition of the existing bridge would impact the entire site; therefore, impacts would be the same for both alternatives. It is likely that the entire site deposit would be removed as a result of project activities for both alternatives.

Caltrans received concurrence from the State Historic Preservation Office that this site is eligible under Criterion D on July 8, 2021. Caltrans anticipates an adverse effect on these properties.

Rockland Landing Site MNT-2452/H

Alternative 4B

One feature of MNT-2452/H would be directly impacted due to the property acquisition and westerly movement of the southern abutment. This, along with the western movement of the bridge itself, would require the right-of-way acquisition of about 1.464 acres within and around the area of the doghole port. This would have an impact on the resource as a whole and on the Rockland Lime and Lumber Company Historic Landscape District.

Alternative 6

No archeological artifacts or features are anticipated to be directly impacted. The acquisition of 0.002 acre and the construction of a new bridge west of the existing bridge would alter the integrity of the Rockland Landing site in the area of the doghole port. This would have an impact on the resource as a whole and on the Rockland Lime and Lumber Company Historic Landscape District.

Section 4(f) of the Department of Transportation Act of 1966 provides protection for historic properties. To qualify for protection under Section 4(f), a historic site must be of national state or local significance or must be on or eligible for listing on the National Register of Historic Places. The Rockland Lime and Lumber Company Historic Landscape District is a Section 4(f) resource that would be impacted by the proposed project. This is discussed in more detail in Appendix A.

Applicable coastal policies relative to cultural resources are discussed in Section 2.2.1.

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

If human remains are discovered, California Health and Safety Code Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the County Coroner contacted. If the remains are thought by the coroner to be Native American, the coroner will notify the California Native American Heritage Commission, who, pursuant to PRC Section 5097.98, will then notify the Most Likely Descendent. At this time, the person who discovered the remains will contact the consultant project manager 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.

Cumulative Impacts

MNT-1892 had previous data recovery and evaluation excavations, which left the site with a limited deposit. As a result, both alternatives would likely demolish the remaining deposits. Site MNT-2452/H would also have an impact on a small portion of the overall existing district. The only planned and existing projects within the area are limited to emergency repairs, drainage work, and bridge rails. Based on the health of these two resources and the narrow range of proposed projects in the area, cumulative impacts are not anticipated for cultural resources.

Avoidance, Minimization, and/or Mitigation Measures

An approved, signed Memorandum of Agreement is required before the final environmental document can be circulated. This stipulates the responsibilities of the Federal Highway Administration, the State Historic Preservation Office, Caltrans, and other consulting parties on measures that would be taken to avoid, minimize, and/or mitigate the effects of the undertaking on historic properties. As of now, these are the current proposed measures. Consultation is not complete, which could result in different or additional measures.

Rockland Landing Site MNT-2452/H

- ARC-1: Marine survey of the intertidal related to the Rockland Landing Doghole Port. This would determine whether any additional features of the doghole port are present in the intertidal waters off Limekiln Beach. Resource locations would be recorded with Global Positioning System (also known as GPS), photography, and measurements. Archaeologists will use snorkels or self-contained underwater breathing apparatus (known as SCUBA) diving visual surveys to locate resources underwater. The results will be documented in the Marine Survey Inventory Report, and any resources would be added to the site record for MNT-2452/H and to

the district record for the Rockland Lime and Lumber Company Historic Landscape District.

- ARC-2: Preparation of a District Nomination Form for the Rockland Lime and Lumber Company Historic Landscape District. An archeological district record for the Rockland Lime and Lumber Company Historic Landscape District has been prepared and recommended for listing in the National Register. This would be compiled into a formal district nomination that would consider nominating the doghole port as part of a Maritime Cultural Landscape.
- ARC-3: Preparation of Public Outreach Materials Related to the Rockland Lime and Lumber Company. California State Parks has developed a cell phone application that features various park-specific cultural content to create an immersive experience for hikers along a park trail. Caltrans would work with California State Parks to develop content specific to the Rockville Landing site and the broader Rockland Lime and Lumber Company Historic Landscape District.

MNT-1892

- ARC-4: Data recovery excavations targeting specific datasets. A limited deposit is present at MNT-1892. A targeted approach of a single one-by-one meter excavation is proposed. The unit would be excavated in 10-centimeter levels with a 50-by-50-centimeter quadrant from each level collected to obtain plant macrofossils, small fish bones, and shells. The remainder of the unit will be screened on-site to collect any larger tools or faunal remains. The proposed methods and resulting laboratory efforts and reporting will be detailed in an Archaeological Data Recovery Plan, which will be developed before project implementation.
- ARC-5: Stable isotope seasonality studies. These studies require sampling the margins of whole mussel shells from the site. Shells for analysis will be obtained from the large bulk soil samples obtained from the proposed control unit. A sample of up to 50 shells will be sampled, with up to 200 isotope measurements read (up to four per shell).
- ARC-6: Academic manuscript preparation. As the archaeological community constitutes a large part of the interested public, the proposed mitigation studies will result in the preparation of a manuscript for publication in an academic journal. This manuscript will address either the seasonality studies or the analysis of fish remains at the site.

In addition, Caltrans would implement a program to ensure impacts on other archeological resources would be avoided. This would include an Environmentally Sensitive Area Action and Monitoring Plan in consultation with the Memorandum of Agreement parties.

2.3 Physical Environment

2.3.1 Water Quality and Stormwater Runoff

Regulatory Setting

Federal Requirements: Clean Water Act

In 1972, Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the waters of the United States (U.S.) from any point source unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System permit. This act and its amendments are known today as the Clean Water Act. Congress has amended the act several times. In the 1987 amendments, Congress directed dischargers of stormwater from municipal and industrial/construction point sources to comply with the National Pollutant Discharge Elimination System permit scheme. The following are important Clean Water Act 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 National Pollutant Discharge Elimination System, 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 administer this permitting program in California. Section 402(p) requires permits for discharges of stormwater from industrial/construction and municipal separate storm sewer systems (MS4s).
- Section 404 establishes a permit program for the discharge of dredged or fill material into waters of the U.S. This permit program is administered by the U.S. Army Corps of Engineers.

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

The U.S. Army Corps of Engineers issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effects. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of the U.S. Army Corps of Engineers Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the U.S. Army Corps of Engineers' decision to approve is based on compliance with U.S.

Environmental Protection Agency's Section 404 (b)(1) Guidelines (40 Code of Federal Regulations [CFR] Part 230), and whether the permit approval is in the public interest. The Section 404(b)(1) Guidelines (Guidelines) were developed by the U.S. Environmental Protection Agency in conjunction with the U.S. Army Corps of Engineers 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 that would have less adverse effects. The Guidelines state that the U.S. Army Corps of Engineers may not issue a permit if there is a least environmentally damaging practicable alternative 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 to ensure 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 U.S. Army Corps of Engineers, even if not subject to the Section 404(b)(1) Guidelines, must meet general requirements. See 33 CFR 320.4. A discussion of the least environmentally damaging practicable alternative 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 Clean Water Act and regulates discharges into the waters of the state. Waters of the State include more than just waters of the U.S., like groundwater and surface waters not considered waters of the U.S. Additionally, it prohibits discharges of "waste" as defined, and this definition is broader than the Clean Water Act definition of "pollutant." Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements and may be required even when the discharge is already permitted or exempt under the Clean Water Act.

The State Water Resources Control Board and Regional Water Quality Control Boards are responsible for establishing the water quality standards (objectives and beneficial uses) required by the Clean Water Act 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 Regional Water Quality Control Board Basin Plan. In California, Regional Water Quality Control Boards designate beneficial uses for all water body segments in their jurisdictions and then set criteria necessary to protect those uses. As a result, the water quality standards developed for particular water segments are based on the designated use and vary depending on that use. In addition, the State Water Resources Control Board identifies waters failing to meet standards for specific pollutants. These waters are then state-listed in accordance with Clean Water Act 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 (National Pollutant Discharge Elimination System permits or Waste Discharge Requirements), the Clean Water Act requires the establishment of Total Maximum Daily Loads. Total Maximum Daily Loads 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 State Water Resources Control Board administers water rights, sets water pollution control policy, issues water board orders on matters of statewide application, and oversees water quality functions throughout the state by approving Basin Plans, Total Maximum Daily Loads, and National Pollutant Discharge Elimination System permits. Regional Water Quality Control Boards 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 Program

Municipal Separate Storm Sewer Systems (MS4)

Section 402(p) of the Clean Water Act requires the issuance of National Pollutant Discharge Elimination System permits for five categories of stormwater 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 stormwater that is designed or used for collecting or conveying stormwater.” The State Water Resources Control Board has identified Caltrans as the owner and operator of an MS4 under federal regulations. Caltrans' MS4 permit covers all of its rights-of-way, properties, facilities, and activities in the state. The State Water Resources Control Board or the Regional Water Quality Control Board issues National Pollutant Discharge Elimination System permits for five years, and permit requirements remain active until a new permit has been adopted.

Caltrans' MS4 Permit, Order Number 2012-0011-DWQ (adopted on September 19, 2012, and effective on July 1, 2013), as amended by Order Number 2014-0006-EXEC (effective January 17, 2014), Order Number 2014-0077-DWQ (effective May 20, 2014), and Order Number 2015-0036-EXEC (conformed and effective April 7, 2015), 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 stormwater and non-stormwater discharges; and
3. Caltrans stormwater discharges must meet water quality standards through the implementation of permanent and temporary (construction) Best Management Practices, to the maximum extent practicable, and other measures as the State Water Resources Control Board determines to be necessary to meet the water quality standards.

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

Construction General Permit

Construction General Permit, Order Number 2009-0009-DWQ (adopted on September 2, 2009, and effective on July 1, 2010), as amended by Order Number 2010-0014-DWQ (effective February 14, 2011) and Order Number 2012-0006-DWQ (effective on July 17, 2012). The permit regulates stormwater discharges from construction sites that result in a disturbed soil area of 1 acre or greater and/or are smaller sites that are part of a larger common plan of development. By law, all stormwater 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 Regional Water Quality Control Board. Operators of regulated construction sites are required to develop Stormwater

Pollution Prevention Plans, implement sediment, erosion, and pollution prevention control measures, and obtain coverage under the Construction General Permit.

The Construction General Permit separates projects into Risk Level 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 stormwater 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 Stormwater Pollution Prevention Plan. In accordance with Caltrans' Stormwater Management Plan and Standard Specifications, a Water Pollution Control Program is necessary for projects with disturbed soil areas less than 1 acre.

Section 401 Permitting

Under Section 401 of the Clean Water Act, 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 Clean Water Act Section 404 permits issued by the U.S. Army Corps of Engineers. The 401 permit certifications are obtained from the appropriate Regional Water Quality Control Board, dependent on the project location, and are required before the U.S. Army Corps of Engineers issues a 404 permit.

In some cases, the Regional Water Quality Control Board may have specific concerns with discharges associated with a project. As a result, the Regional Water Quality Control Board may issue a set of requirements known as Waste Discharge Requirements 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. Waste Discharge Requirements can be issued to address both permanent and temporary discharges from a project.

Affected Environment

A Water Quality Assessment Report was prepared in June 2023. The project is within the Santa Lucia Hydrologic Unit and classified as an undefined Hydrologic Sub-Area. There are two receiving water bodies, which are Limekiln Creek and the Pacific Ocean. Neither Limekiln Creek nor the Pacific Ocean are listed as impaired water bodies, and there is no floodplain associated with the project area.

Environmental Consequences

Disturbed soil area is generally used to quantify water quality impacts. The disturbed soil area for this project is estimated to be 3.647 acres for Alternative 4B and 3.458 acres for Alternative 6. This includes all cut-and-fill and vegetation removal areas. Construction staging is not included. Partial revetment removal is also not included because the purpose of the removal is to allow the area to return closer to its natural condition.

Calculations were made to identify the difference in impervious (water cannot flow through) areas before and after the project. The existing impervious area is 1.240 acres, and the impervious area after the project would be 1.852 acres for Alternative 4B and 1.718 acres for Alternative 6. Both alternatives would result in an increase in the impervious area: 0.612 acre and 0.478 acre for Alternatives 4B and 6, respectively, as shown in Table 5.

Table 5 Impervious Area

Alternative	Alternative 4B	Alternative 6
Impervious Area for Proposed Project (acres)	1.852	1.718
Existing Impervious Area (acres)	1.240	1.240
Difference (acres)	0.612	0.478

Construction of the bridge and viaducts would not cause additional sedimentation in Limekiln Creek or the Pacific Ocean because the contractor would capture excess concrete and debris from demolition. However, rock slope protection and sea wall removal from the northern abutment would allow wave action to erode the newly exposed cliff face.

Dewatering may be necessary due to shallow groundwater. Dewatering activities would comply with the Caltrans Standard Specifications, and, if required, a separate dewatering permit would be obtained before the start of construction. A coffer dam (an enclosure where water is pumped out) or creek diversion would be implemented to avoid any temporary impacts to the water resources.

No permanent impacts are anticipated on stormwater, groundwater, or water resources. Minor sedimentation is anticipated over time due to the newly exposed cliff. For both alternatives, the project's increase in new impervious surface would be greater than 10,000 square feet, as shown above in Table 5. Therefore, the project would be required to install treatment Best Management Practices to treat stormwater runoff from the newly created impervious surface. These treatment practices would collect stormwater runoff either in the form of sheet flow or concentrated flow. This would allow infiltration and/or settlement of the stormwater runoff before flowing into the receiving water body.

Avoidance, Minimization, and/or Mitigation Measures

Best Management Practices would be incorporated into the project to reduce the discharge of pollutants temporarily, during construction, and permanently. This is a condition of the National Pollutant Discharge Elimination System, the State Water Resources Control Board, and other regulatory agency requirements. The following minimization measures would be included to reduce temporary impacts:

- WQ-1: Construction activities should be scheduled according to the relative sensitivity of the environmental concerns. Scheduling considerations will vary when working near perennial or ephemeral portions of Limekiln Creek within the project area. Work should be performed during the dry season. By their very nature, ephemeral drainages are usually dry in the summer, and therefore, in-stream construction activities will not cause significant water quality concerns. When working near streams, erosion and sediment controls should be implemented to keep sediment out of stream channels.
- WQ-2: Minimize disturbance through the selection of the narrowest crossing location, limiting the number of equipment trips across a stream during construction, and minimizing the number and size of work areas (equipment staging areas and spoil storage areas).
- WQ-3: Isolate equipment staging and spoil storage areas away from the stream channel using appropriate stormwater control barriers. Provide stabilized access to the stream when in-stream work is required.
- WQ-4: Locate project sites and work areas in pre-disturbed areas when possible.
- WQ-5: Select equipment that reduces the amount of pressure exerted on the ground surface and, therefore, reduces erosion potential, and/or uses overhead or aerial access for transporting equipment across drainage channels.
- WQ-6: Preserve existing vegetation outside of the active work area.
- WQ-7: Install temporary large sediment barriers to control sediment. Temporary large sediment barriers should only be installed where sediment-laden water can pond, thus allowing the sediment to settle out.
- WQ-8: Install temporary fiber rolls along the slope contour above the high water level to intercept runoff, reduce flow velocity, release the runoff as sheet flow, and provide sediment removal from the runoff. In a stream environment, temporary fiber rolls should be used in conjunction with other sediment control methods. Temporary fiber rolls and temporary hydraulic mulch (bonded fiber matrix) shall be applied above the high water level to all disturbed soil areas before every predicted rain event to prevent erosion.

- WQ-9: A gravel bag berm or barrier will be placed at the top of slopes or to replace dikes, preventing runoff in disturbed soil areas.
- WQ-10: Temporary check dams are placed in the flow line where stormwater leaves the project to slow the flow of water, allowing sediment to settle out.
- WQ-11: Work on the beach will be scheduled during low tide.

2.3.2 Geology/Soils/Seismic/Topography

Regulatory Setting

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

Topographic and geologic features are also protected under the California Environmental Quality Act (CEQA).

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

Affected Environment

A Structure Preliminary Geotechnical Report from August 13, 2014, was the primary source of information for this section. Though the project description has changed over the years, the information regarding the geologic structure of the land remains valid.

The area surrounding the proposed project is characterized by rugged terrain consisting of mountainous ridges divided by drainages that flow from the peaks of the Santa Lucia Mountains (approximately 5,000 feet above sea level) to the Pacific Ocean. Limekiln Creek is the main drainage in the vicinity and flows year-round. Steep slopes above and below the existing highway between the northern end of the bridge and the Rain Rocks Sidehill Viaduct are comprised of weathered Franciscan Formation rocks that are susceptible to land sliding and erosion.

The surficial deposits (layers of rock sediment that drape over the bedrock) within the project area include Quaternary-aged beach deposits consisting of sand and gravel, creek channel alluvium (clay, silt, sand, and gravel left by flowing streams), and landslide deposits. Franciscan Formation rocks,

including greywacke, schist, and weathered serpentized shales, are exposed in road cuts and natural exposures both north and south of the existing bridge and above and below the highway. Meta-volcanic rock, schist, and phyllite were observed in the outcrop on the beach and throughout the beach area. The bedrock surface is undulating and filled with sand, cobbles, and boulders.

The project site's subsurface conditions contain alluvial, beach, and landslide deposits of soils and weathered rock that are deposited over an undulating bedrock surface.

Groundwater was measured at approximately 18 feet above sea level in October 1955 in the creek channel. Regional groundwater regimes are complex and vary depending on seasonal fluctuation and springs moving through fractured zones in the rock. Estimated groundwater elevations and identification of groundwater issues that may affect design and construction would be determined in the geotechnical drilling subsurface investigation.

There are two active and potentially active faults near the project site: the San Gregorio Fault Zone and the Probabilistic USGS.

Environmental Consequences

Alternative 4B would affect the knoll at the southern abutment, as shown in Section 2.2.3. Grading the knoll would cause visual impacts. Alternative 6 was designed to avoid grading at the knoll and, therefore, any visual impacts.

Because of the shallow and variable bedrock, deep foundations and spread footings would likely be required at support locations for both alternatives. A Preliminary Geotechnical Report and Foundation Reports would be prepared. These reports would be based on subsurface investigations and laboratory soil tests. Geologic data, as-built plans, and bridge inspection records would be incorporated.

Soils with the potential for liquefaction (when soils become liquid) are typically loose deposits below the groundwater table. The alluvial deposits present below groundwater may be susceptible to liquefaction. The new structure is expected to be founded on rock, so liquefaction is not anticipated to affect the structure. Further analyses of the liquefaction potential would be provided after the subsurface investigation and bridge foundation design.

All new California bridges are designed with the latest guidelines and procedures, including Seismic Design Criteria, Memo to Designer, Structure Technical Policy Bridge Design Aid, and the Bridge Design Manual. The goal is to design a bridge that can withstand a designated level of seismic activity with different levels of performance depending on the bridge category. The overall goal is to ensure the safety of the traveling public.

Avoidance, Minimization, and/or Mitigation Measures

No measures are recommended at this time.

2.3.3 Air Quality

Regulatory Setting

The Federal Clean Air Act, 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 and the California Air Resources Board set standards for the concentration of pollutants in the air. At the federal level, these standards are called National Ambient Air Quality Standards. National Ambient Air Quality Standards and state ambient air quality standards have been established for six criteria pollutants that have been linked to potential health concerns: carbon monoxide, nitrogen dioxide, ozone, particulate matter—which is broken down for regulatory purposes into particles of 10 micrometers or smaller and particles of 2.5 micrometers and smaller—lead, and sulfur dioxide. In addition, state standards exist for visibility-reducing particles, sulfates, hydrogen sulfide, and vinyl chloride. The National Ambient Air Quality Standards 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 Federal Clean Air Act also applies.

Conformity

The conformity requirement is based on Federal Clean Air Act Section 1761, which prohibits the U.S. Department of Transportation and other federal agencies from funding, authorizing, or approving plans, programs, or projects that do not conform to the State Implementation Plan for attaining the National Ambient Air Quality Standards. “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 National Ambient Air Quality Standards and only for the specific National Ambient Air Quality Standards that are or were violated. U.S. Environmental Protection Agency regulations at 40 Code of Federal Regulations 93 govern the conformity process. Conformity requirements do not apply in unclassifiable/attainment areas for National

Ambient Air Quality Standards 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 National Ambient Air Quality Standards for carbon monoxide, nitrogen dioxide, ozone, particulate matter, and, in some areas (although not in California), sulfur dioxide. California has nonattainment or maintenance areas for all of these transportation-related “criteria pollutants” except sulfur dioxide and also has a nonattainment area for lead; however, lead is not currently required by the Federal Clean Air Act to be covered in transportation conformity analysis. Regional conformity is based on the emission analysis of Regional Transportation Plans and Federal Transportation Improvement Programs that include all transportation projects planned for a region over a period of at least 20 years (for the Regional Transportation Plan) and 4 years (for the Federal Transportation Improvement Plan). The Regional Transportation Plan and Federal Transportation Improvement Plan 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 Federal Clean Air Act and the State Implementation Plan are met. If the conformity analysis is successful, the Metropolitan Planning Organization, Federal Highway Administration, and Federal Transit Administration make the determination that the Regional Transportation Plan and Federal Transportation Improvement Plan are in conformity with the State Implementation Plan for achieving the goals of the Federal Clean Air Act. Otherwise, the projects in the Regional Transportation Plan and/or Federal Transportation Improvement Plan must be modified until conformity is attained. If the design concept and scope and the “open-to-traffic” schedule of a proposed transportation project are the same as described in the Regional Transportation Plan and Federal Transportation Improvement Plan, then the proposed project meets regional conformity requirements for purposes of project-level analysis.

Project-level conformity is achieved by demonstrating that the project comes from a conforming Regional Transportation Plan and Transportation Improvement Program; the project has a design concept and scope that have not changed significantly from those in the Regional Transportation Plan and Transportation Improvement Program; project analyses have used the latest planning assumptions and Environmental Protection Agency-approved emissions models; and in particulate matter areas, the project complies with any control measures in the State Implementation Plan. Furthermore, additional analyses (known as hot-spot analyses) may be required for projects located in carbon monoxide and particulate nonattainment or maintenance areas to examine localized air quality impacts.

Affected Environment

An Air Quality, Greenhouse Gas, and Noise Assessment Memorandum was prepared for the project on August 4, 2023. The project area has a Mediterranean climate with dry summers and rainy winters. The average annual precipitation is approximately 41 inches. Along the Big Sur Coast, precipitation occurs mainly on the western side of the Santa Lucia Range. Coastal fog and mist are common in spring and summer. Ocean, air, and land processes create inversions, which cause low coastal clouds to form and reduce summertime temperatures. The winds then determine how far fog and low clouds move inward.

The project site is in the North Central Coast Air Basin, which covers Monterey, Santa Cruz, and San Benito counties. The air quality in Monterey County is regulated by the Monterey Bay Air Resources District. The project is in an attainment/unclassified area for all current National Ambient Air Quality Standards but is in non-attainment status for suspended particulate matter less than 10 microns in diameter under California Ambient Air Quality Standards.

Environmental Consequences

There are no additional lanes, capacity increases, or significant highway alignment changes proposed with this project. Therefore, there would be no difference in long-term air emissions, with or without the proposed project.

The project would not increase operational emissions of particles less than 10 microns in diameter or any other air pollutant and is expected to produce less than significant amounts of all air pollutants during the construction phase. Therefore, transportation conformity requirements do not apply.

Alternative 4B would shift traffic west about 65 feet, while Alternative 6 would keep roughly the same alignment as the existing bridge. As a result, long-term air quality would improve slightly with Alternative 4B because of the added distance between the bridge and sensitive receptors within the campgrounds.

Temporary (Construction) Impacts

During construction, there would be a temporary increase in air emissions and fugitive dust. The exhaust from construction equipment contains hydrocarbons, oxides of nitrogen, carbon monoxide, suspended particulate matter, and odors. However, the largest percentage of pollutants would be windblown dust generated during demolition, hauling, and various other activities. The impacts of these activities would vary each day as construction progresses.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans's Standard Specifications Section 14-9.02 (Air Pollution Control) would be used to minimize dust emissions from the project. The contractor would be responsible for complying with all local air pollution control rules, regulations, ordinances, and statutes. Additionally, the project-level Stormwater Pollution Prevention Plan would address stormwater pollution control measures that cross-correlate with standard dust emission minimization measures such as covering soil stockpiles, watering haul roads, watering excavation and grading areas, and so on. By incorporating appropriate engineering design and stormwater Best Management Practices during construction, minimal short-term air quality impacts are anticipated.

The following measures would be implemented to reduce greenhouse gas emissions and potential climate change impacts from the project:

- GHG-1: Reduce construction waste and maximize the use of recycled materials, including but not limited to stockpiling pavement grindings for future use, salvaging rebar from demolished concrete, replacing drainage pipes, and processing waste to create usable fill material.
- GHG-2: Operate construction equipment with improved fuel efficiency by:
 - Properly tuning and maintaining equipment
 - Limiting idling to five minutes for delivery and dump trucks and other diesel-powered equipment
 - Using the right-sized equipment for the job
 - Use of alternative fuels, such as renewable diesel, as feasible
 - Produce hot mix asphalt with warm mix technology.
- GHG-3: Schedule traffic control with traffic handling plans and stage construction.
- GHG-4: Reduce water consumption during construction and prioritize the use of recycled water for construction needs.
- GHG-5: Conduct construction environmental training to provide construction personnel with information regarding methods to reduce greenhouse gas emissions related to construction.
- GHG-6: Select pavement materials that lower the rolling resistance of highway surfaces as much as possible while still maintaining design and safety standards.
- GHG-7: Maintain bicycle, pedestrian, and transit access throughout construction.

Climate Change

Neither the U.S. Environmental Protection Agency nor the Federal Highway Administration have issued explicit guidance or methods to conduct project-level greenhouse gas analysis. The Federal Highway Administration emphasizes concepts of resilience and sustainability in highway planning, project development, design, operations, and maintenance. Because there have been requirements set forth in California legislation and executive orders on climate change, the issue is addressed in the California Environmental Quality Act (CEQA) chapter of this document. The CEQA analysis may be used to inform the National Environmental Policy Act (NEPA) determination for the project.

2.3.4 Noise

Regulatory Setting

The National Environmental Policy Act (NEPA) of 1969 and the California Environmental Quality Act (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 foster a healthy environment. The requirements for noise analysis and consideration of noise abatement and/or mitigation, however, differ between NEPA and CEQA.

California Environmental Quality Act

CEQA requires a strictly baseline versus build analysis to assess whether a proposed project would have a noise impact. If a proposed project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless those measures are not feasible. The rest of this section will focus on the NEPA/Title 23 Part 772 of the Code of Federal Regulations (23 CFR 772) noise analysis; please see Chapter 3 of this document for further information on noise analysis under CEQA.

National Environmental Policy Act and 23 Code of Federal Regulations 772

For highway transportation projects with Federal Highway Administration involvement (and Caltrans, as assigned), the Federal-Aid Highway Act of 1970 and its implementing regulations (23 CFR 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations include noise abatement criteria that are used to determine when a noise impact would occur. The noise abatement criteria differ depending on the type of land use under analysis. For example, the noise abatement criteria for residences (67 dBA) is lower than that for commercial areas (72 dBA). The following table lists the noise abatement criteria for use in the NEPA/23 CFR 772 analysis for different activities.

There are undeveloped lands permitted for Activity Categories B and C in Table 6 below.

Table 6 Noise Abatement Criteria

Activity Category	NAC, Hourly A-Weighted Noise Level, Leq(h)	Description of Activity Category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	Residential.
C ¹	67 (Exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52 (Interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72 (Exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A–D or F.
F	No NAC—reporting only	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical, etc.), and warehousing.
G	No NAC—reporting only	Undeveloped lands that are not permitted.

Figure 27 lists the noise levels of common activities to enable readers to compare the actual and predicted highway noise levels discussed in this section with common activities.

Figure 27 Noise Levels of Common Activities

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

According to 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 12 dBA or more) or when the future noise level with the project approaches or exceeds the noise abatement criteria. A noise level is considered to approach the noise abatement criteria if it is within 1 dBA.

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 the final design are incorporated into the project plans and specifications. This document discusses noise abatement measures that would likely be incorporated into the project.

Caltrans' Traffic Noise Analysis Protocol sets forth the criteria for determining when an abatement measure is reasonable and feasible. The feasibility of noise abatement is basically an engineering concern. Noise abatement must be predicted to reduce noise by at least 5 dB at an impacted receptor to be considered feasible from an acoustical perspective. It must also be possible to design and construct the noise abatement measure for it to be considered feasible. Factors that affect the design and constructability of noise abatement include, but are not limited to, safety, barrier height, topography, drainage, access requirements for driveways, the presence of local cross streets, underground utilities, other noise sources in the area, and maintenance of the abatement measure. The overall reasonableness of noise abatement is determined by the following three factors: 1) the noise reduction design goal of 7 dB at one or more impacted receptors; 2) the cost of noise abatement; and 3) the viewpoints of benefited receptors (including property owners and residents of the benefited receptors).

Affected Environment

An Air Quality, Greenhouse Gas, and Noise Assessment Memorandum was prepared for the project on August 4, 2023. The overall project setting is mostly rural, along the Big Sur coastline, with one campground in the project vicinity. The campground within Limekiln State Park, northeast of the bridge, is considered a sensitive receptor.

Environmental Consequences

Long-Term Impacts

Transportation projects that are subject to Caltrans's Traffic Noise Analysis Protocol are explained in Section 23 of Code of Federal Regulations 772, which categorizes projects as Type I, Type II, or Type III projects. A Type I project is defined as:

"A proposed federal or federal-aid highway project for the construction of a 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."

The proposed project is considered a Type 1 Project. Existing noise levels, which would be the same as Alternative 6, are below the threshold that would require noise abatement. Alternative 4B would reduce noise levels by about 1.2 decibels. Neither alternative would require noise abatement.

Temporary (Construction) Impacts

It is inevitable that local noise levels in the vicinity of construction would experience a short-term increase due to construction activities. Particularly with the temporary bridge associated with Alternative 6. The proposed temporary bridge associated with Alternative 6 would move traffic towards the campground, increasing noise levels by approximately 3 decibels. This

temporary increase is also not enough to warrant noise abatement. There would also not be any sensitive receptors within Limekiln State Park because the park would be closed for the duration of construction.

The amount of construction noise would vary with the activities and associated models and types of equipment used by the contractor. Caltrans policy states that normal construction equipment should not emit noise levels greater than 86 dBA at 50 feet from the source during the hours from 9 p.m. to 6 a.m. It is not known at this time if nightwork would be required, but it is anticipated that it would not. The campground would be closed during construction. If night work occurs, the campground would not be affected by nighttime construction noise.

Avoidance, Minimization, and/or Abatement Measures

Adverse noise impacts from construction are not anticipated because the campground would be closed while construction takes place for either alternative. No receptors would be affected during the construction of this project. No temporary minimization measures would be required for this project.

2.4 Biological Environment

2.4.1 Natural Communities

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 habitats and thereby lessening their biological value.

Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act are discussed below in Section 2.4.4. Wetlands and other waters are discussed in Section 2.4.2.

Affected Environment

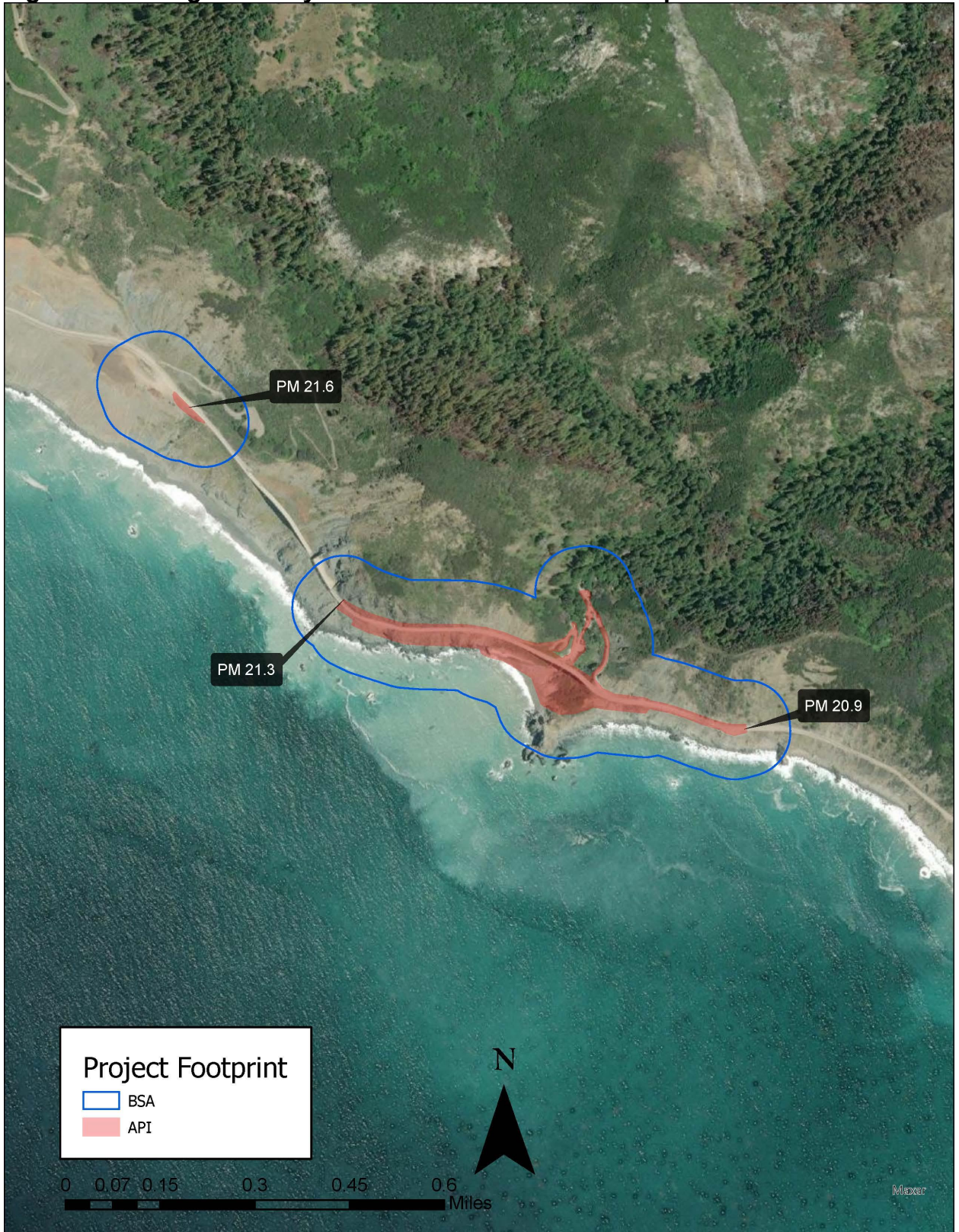
A Natural Environment Study was completed in July 2023 and is the main resource for this section.

The biological study area applies to Section 2.4 and is described as all areas that could potentially be directly impacted by the project and a buffer to encompass all indirect effects on surrounding natural areas. As shown in Figure 28, the biological study area (BSA) includes all potential permanent and temporary direct impacts (area of potential impact [API]) and a 300-foot

buffer to account for indirect impacts to plants and wildlife that may be caused by the project. Direct impacts include the removal of habitat and vegetation for the installation of the new bridge, pier, and viaducts; the removal of old structures; dewatering and water diversion; and other construction work and staging. Indirect impacts include construction noises, dust produced by ground disturbance, the visual impacts of large equipment and bridge demolition, and ground vibrations caused by the large equipment and demolition that may disturb wildlife.

The biological study area encompasses State Route 1, between post mile 20.9 and post mile 21.3, and contains both Caltrans right-of-way and Limekiln State Park. The biological study area also incorporates the construction staging area along State Route 1, north of the bridge, at post mile 21.6. On a landscape scale, the biological study area is surrounded by preserved natural land, including Limekiln State Park to the east, Pfeiffer Big Sur State Park to the north, and Los Padres National Forest to the south.

Figure 28 Biological Study Area and Area of Potential Impact

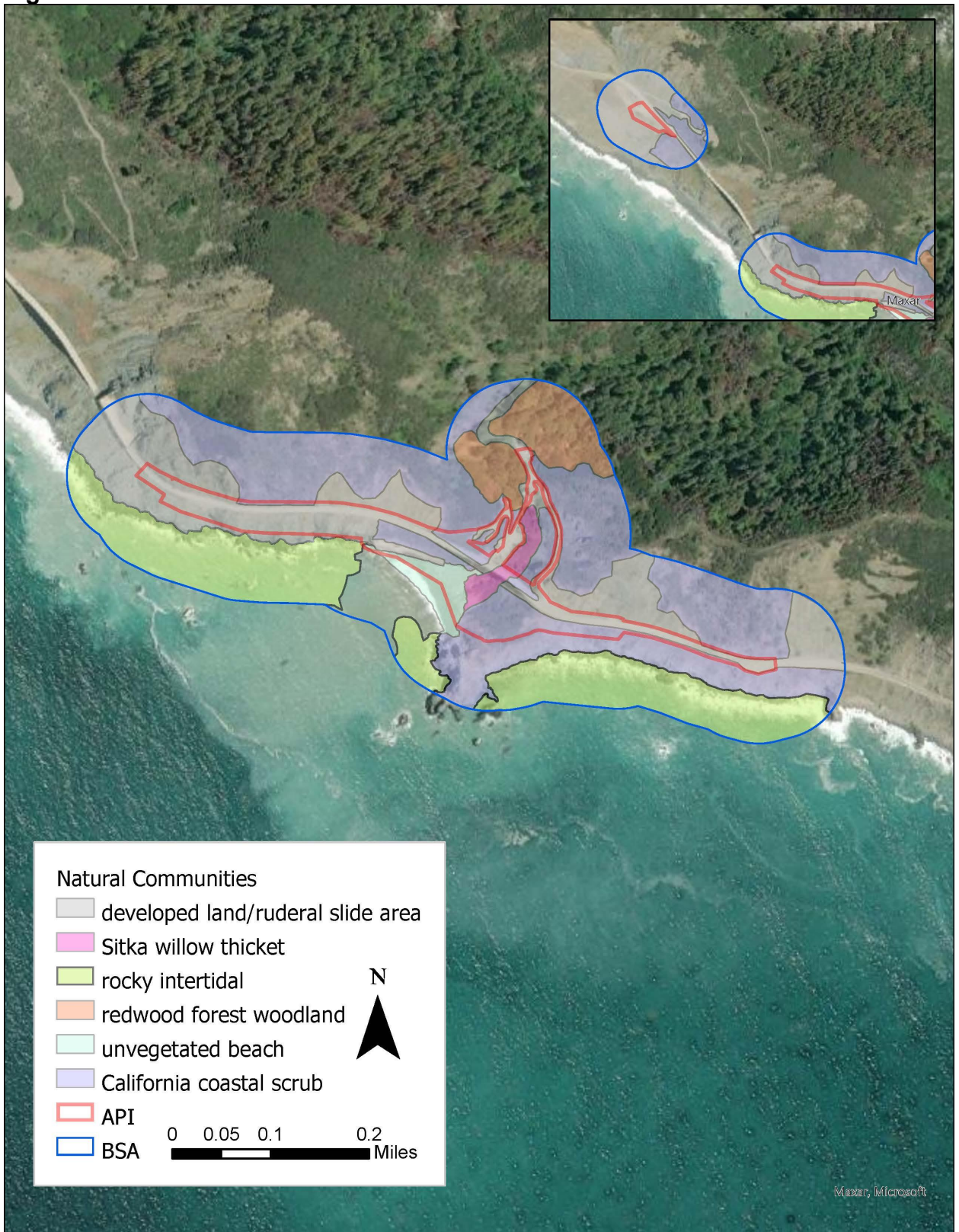


There are two sensitive natural communities within the biological study area, which include Sitka willow (*Salix sitchensis*) thicket and redwood (*Sequoia sempervirens*) forest woodland. Sitka willow thicket is found in the biological study area between the beach and redwood forest as a riparian corridor. Within this community, there are other plants, such as sycamore (*Platanus racemosa*) and California blackberry (*Rubus ursinus*). The redwood forest woodland lies in the northernmost section of the biological study area. It has a dominance of coast redwoods with a lower tier of trees such as California bay laurel (*Umbellularia californica*).

There are two types of coastal zone wetlands, known as environmentally sensitive habitat areas, within the biological study area. The first is the perennial stream habitat of Limekiln Creek. The second is the sensitive natural community mentioned above, the Sitka willow thicket.

Other natural communities found in the project area include California coastal scrub, unvegetated beaches, rocky intertidal areas and ocean, and developed/ruderal slide areas, as shown in Figure 29. California coastal scrub is found throughout the biological study area and consists of a dense shrub layer. Common plants in this community include California sagebrush (*Artemisia californica*), poison oak (*Toxicodendron diversilobum*), sticky monkey flower (*Diplacus aurantiacus*), California blackberry, coyote bush (*Baccharis pilularis*), etc. The unvegetated beach area is within the western portion of the biological study area and has sand, gravel, and large rock slope protection boulders. The rocky intertidal areas lie along the tide, where there is no sandy beach. This habitat has large natural boulders and rocky cliffs that support a variety of species, including feather boa kelp (*Egregia menziesii*), scouring pad algae (*Endocladia muricata*), southern sea palm (*Eisenia arborea*), etc. This is also where black abalone and associated critical habitats are found. Lastly, the developed/ruderal slide areas include paved highways, state park campsites, driveways, and other developed park facilities. These areas have ruderal or no vegetation. Invasive plants are common here, such as pampas grass (*Cortaderia jubata*).

Figure 29 Natural Communities



Environmental Consequences

The impacts discussed below are the same for both Alternative 4B and Alternative 6.

Natural Communities

There would be a net increase of 0.002 acre for Sitka willow thicket (environmentally sensitive habitat area) due to the removal of an existing pier.

Wildlife Corridors

According to the Essential Habitat Connectivity Model, the biological study area is an area of low importance. This is likely because the surrounding land is highly preserved by state and federal agencies, Limekiln State Park and Los Padres National Forest, respectively. There are no known terrestrial migration corridors through the area. The biological study area is also an area that is popular with tourists and campers, which may deter some sensitive species. Additionally, the Pacific Ocean is west of the project site, preventing land species from migrating.

Fish Passage

Limekiln Creek is a known South-Central California Coast steelhead stream that supports fish passage to and from the Pacific Ocean and is considered an environmentally sensitive habitat area. Currently, the Limekiln Creek Bridge does not act as a fish passage barrier. The bridge pier that is currently in the channel would be removed as part of the project. The new bridge would fully span the creek and associated riparian area.

Temporary Impacts

Temporary impacts to natural areas include access and work areas needed to construct the new bridge and viaduct and remove the existing bridge. These impacts would include tree and vegetation removal, grading, compaction by construction equipment, and foot traffic. A work trestle would be constructed to reduce impacts on these natural communities to the extent feasible.

There would be 0.295 acre of temporary impacts on Sitka willow thicket from temporary construction access and work areas.

Temporary High Visibility Fencing would be installed along the disturbance area limits to minimize impacts on habitat outside the area of potential impacts. All temporary work areas would be returned to the original grade and contour and revegetated or restored after construction.

Cumulative Impacts

Cumulative impacts are not anticipated for natural communities, as there would be a net increase. Considering the project area is not a high-traffic wildlife corridor and there would be no impacts on fish passage, cumulative impacts are not anticipated.

Avoidance, Minimization, and/or Mitigation Measures

Avoidance and minimization measures proposed for Sections 2.4.2 to 2.4.6 would also protect natural communities.

2.4.2 Wetlands and Other Waters

Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act (33 United States Code [USC] 1344), is the primary law regulating wetlands and surface waters. One purpose of the Clean Water Act is to regulate the discharge of dredged or fill material into waters of the U.S., including wetlands. Waters of the U.S. include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. The lateral limits of jurisdiction over non-tidal water bodies extend to the ordinary high-water mark in the absence of adjacent wetlands. When adjacent wetlands are present, Clean Water Act jurisdiction extends beyond the ordinary high-water mark to the limits of the adjacent wetlands. To classify wetlands for the purposes of the Clean Water Act, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present under normal circumstances for an area to be designated as a jurisdictional wetland under the Clean Water Act.

Section 404 of the Clean Water Act establishes a regulatory program that provides that discharge of dredged or fill material cannot be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers with oversight by the U.S. Environmental Protection Agency.

The extent of Clean Water Act Section 404 tidal waters extends to mean high-water mark elevation. Navigable waters of the U.S. subject to Section 10 of the Rivers and Harbors Act are those Waters of the U.S. that are subject to the ebb and flow of the tide shoreward to the mean high-water mark and/or are presently used, have been used in the past, or may be susceptible to use to transport interstate or foreign commerce. The mean high-water mark can be calculated using the National Oceanic and Atmospheric Administration National Tidal Datum, which defines the mean high-water mark as the average of all the high-water heights observed over the National Tidal Datum Epoch.

The U.S. Army Corps of Engineers issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide. Regional permits are issued for a general category of activities

when they are similar in nature and cause minimal environmental effects. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of the U.S. Army Corps of Engineers Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the U.S. Army Corps of Engineers decision to approve is based on compliance with the U.S. Environmental Protection Agency's Section 404(b)(1) Guidelines (40 Code of Federal Regulations [CFR] Part 230) and whether permit approval is in the public interest. The Section 404 (b)(1) Guidelines (Guidelines) were developed by the U.S. Environmental Protection Agency, in conjunction with the U.S. Army Corps of Engineers, 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 that would have less adverse effects. The Guidelines state that the U.S. Army Corps of Engineers may not issue a permit if there is a "least environmentally damaging practicable alternative" to the proposed discharge that would have lesser effects on the waters of the U.S. and not have any other significant adverse environmental consequences.

The Executive Order for the Protection of Wetlands (EO 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, EO 11990 states that a federal agency, such as the Federal Highway Administration and/or Caltrans, as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: (1) that there is no practicable alternative to the construction; and (2) that the proposed project includes all practicable measures to minimize harm. A Wetlands-Only Practicable Alternative Finding must be made.

At the state level, wetlands and waters are regulated primarily by the State Water Resources Control Board, the Regional Water Quality Control Boards, and the California Department of Fish and Wildlife. In certain circumstances, the California Coastal Commission (or Bay Conservation and Development Commission or the Tahoe Regional Planning Agency) may also be involved. Sections 1600–1607 of the California Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify the California Department of Fish and Wildlife before beginning construction. If the California Department of Fish and Wildlife determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. California Department of Fish and Wildlife jurisdictional limits are usually defined by the tops of the stream or lake banks or the outer edge of riparian vegetation, whichever is wider. Wetlands under the jurisdiction of the U.S. Army Corps of Engineers may or may not be included in the area covered by a Streambed

Alteration Agreement obtained from the California Department of Fish and Wildlife.

The Regional Water Quality Control Boards were established under the Porter-Cologne Water Quality Control Act to oversee water quality. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements and may be required even when the discharge is already permitted or exempt under the Clean Water Act. In compliance with Section 401 of the Clean Water Act, the Regional Water Quality Control Boards also issue water quality certifications for activities that may result in a discharge into the waters of the U.S. This is most frequently required in tandem with a Section 404 permit request. Please see the Water Quality section for more details.

Affected Environment

A Natural Environment Study, including Jurisdictional Waters Assessment, was prepared in July 2023 and is the main resource used for this section.

The jurisdictional delineation determined the presence of four resources: perennial streams (Limekiln Creek), navigable waters (Pacific Ocean), tidal waters (Pacific Ocean), and riparian areas, which are shown in the table below and Figure 30.

Table 7 Jurisdictional Aquatic Resources within Biological Study Area

Resource (location)	U.S. Army Corps of Engineers (Acres)	Regional Water Quality Control Board (Acres)	California Department of Fish and Wildlife (Acres)	California Coastal Commission (Acres)
Perennial stream (Limekiln Creek)	0.72	0.72	0.72	0.72
Navigable Waters (Pacific Ocean)	14.00	Not Applicable	Not Applicable	Not Applicable
Tidal waters (Pacific Ocean)	16.19	Not Applicable	Not Applicable	Not Applicable
Riparian areas	Not Applicable	1.27	1.27	1.27
Total area of jurisdiction	16.91	1.99	1.99	1.99

Navigable waters are included in tidal waters. Therefore, there are an additional 2.19 acres of additional tidal waters.

No areas that meet federal criteria for wetlands were present in the biological study area.

The limits for U.S. Army Corps of Engineers jurisdiction over Limekiln Creek were identified using the ordinary high-water mark (known as OHWM). There

is no tidal influence up into the creek beyond the shoreline of the Pacific Ocean.

The National Oceanic and Atmospheric Administration Monterey Station was used to collect data for the high tide line to determine jurisdictional limits for tidal waters. The high tide line was determined to be 7.18 feet above sea level.

The jurisdictional limits of navigable waters include all ocean and coastal waters within 3 miles from where the shoreline directly contacts the open sea as measured by the ordinary low tide. The shoreward limit of coastal jurisdiction extends to the line on the shore reached by the mean, or average, high-water mark. The National Oceanic and Atmospheric Administration Monterey Station was used to determine the mean high-water mark at 4.64 feet elevation.

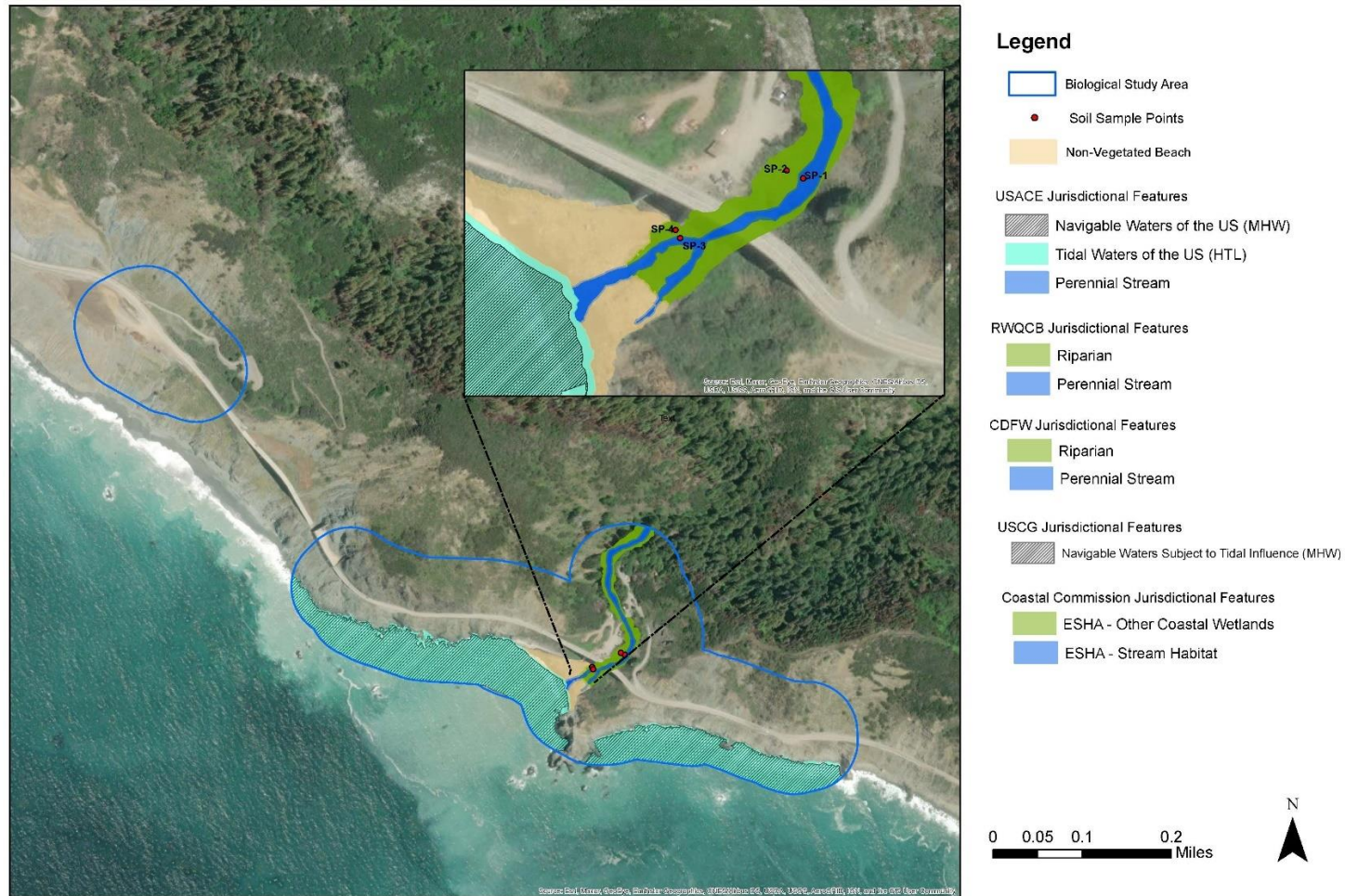
All waters of the United States subject to Clean Water Act Section 404 are also subject to Section 201 and are, therefore, waters of the state regulated by the Regional Water Quality Control Board. The riparian zone and streambanks, discussed below, are also treated as waters of the state.

Limekiln Creek is subject to California Fish and Game Code Section 1602 under the California Department of Fish and Wildlife jurisdiction. The California Department of Fish and Wildlife has jurisdiction over streambanks to the top of a bank or the edge of a riparian zone. In the biological study area, the riparian area was defined by a dense group of mature Sitka willow and sycamore woodland. The boundaries of the riparian area were defined where the Sitka willow group ended.

There are two types of coastal zone wetlands, or Environmentally Sensitive Habitat Areas, within the biological study area. The first is the stream habitat for Limekiln Creek, which runs year-round. The second is Other Coastal Wetlands, which include riparian Sitka willow thickets (the sensitive natural community mentioned above).

Figure 30 Jurisdictional Delineation

Limekiln Creek Bridge Replacement Jurisdictional Delineation



Environmental Consequences

Many alternatives have been reviewed for this project, as discussed in Section 1.5. One of the top priorities of this project has been to avoid impacts on the riparian area. Both current build alternatives would remove the existing bridge pier from Limekiln Creek and the associated riparian area. Temporary impacts on jurisdictional areas would be required for construction access; however, all proposed permanent bridge structures would span jurisdictional areas.

The table below summarizes anticipated impacts on aquatic resources, which are the same for both Alternative 4B and 6. There would be a net permanent increase of 0.005 acre of perennial stream (environmentally sensitive habitat area) and 0.002 acre of riparian area/coastal wetlands due to the removal of piers within and adjacent to Limekiln Creek. The new pier would be located outside of aquatic resources.

Table 8 Estimated Impacts to Jurisdictional Aquatic Resources

Jurisdictional Aquatic Resources	Permanent Impacts (acres)	Temporary Impacts (acres)
Perennial stream	+0.005	0.163
Tidal waters/navigable waters	0	0.053/0.030
Riparian area/coastal wetlands	+0.002	0.295
Total impacts	+0.007	0.511

The “+” indicates an increase in habitat acres due to removal of existing pier.

Temporary Impacts

The project would require temporary construction access and work areas through the riparian area and streambed to reach the existing and new pier locations on the south side of Limekiln Creek. As shown in Table 8, it is expected that there would be 0.163 acre of temporary impacts on perennial stream habitat and 0.053 acre of temporary impacts on tidal (including 0.030 acre of navigable) waters. There would also be approximately 0.295 acre of temporary impacts on riparian areas and coastal wetland habitat. Total temporary impacts are approximately 0.511 acre.

A work trestle would likely be installed, spanning the creek (as described in Chapter 1), to limit impacts to the creek and riparian area and to reduce the time and seasons required for stream diversion. The trestle may require minor clearing and grubbing, tree trimming or removal, and ground compaction to install temporary piles in riparian areas. This would result in temporary shading of the stream and riparian areas directly underneath. Wooden platforms and/or a debris containment system would ensure that no debris is dropped into the creek. The trestle would be removed when construction and

demolition on the south side of the creek is complete, and the creek would no longer need to be crossed.

Work within jurisdictional streams and riparian areas would occur during the dry season when Limekiln Creek would be flowing at its lowest volume. The work trestle would be used to work year-round throughout project activities (over multiple seasons) outside and/or above these aquatic resources to move equipment, construct, and demolish the bridges.

Work below the high tide line of the Pacific Ocean would be required to remove rock slope protection and portions of the existing seawall and crib wall. Once the rock slope protection is removed, portions of the seawall and crib wall would be removed, to the extent that is safe. Heavy equipment, including excavators and/or loaders, would be required below the high tide line. Work on the beach would be restricted to negative tide events to avoid working in the ocean. It is anticipated that it would take approximately 15 to 20 days to remove the rock slope protection and portions of the seawall and crib wall, but only 5 to 10 days would require work below the mean high-water mark.

Alternative 4B

For Alternative 4B, a stream diversion would be required during the dry season (June 1 to October 31) for one year to create a dry work area to remove the existing pier that is currently below the ordinary high-water mark of the stream. The diversion would ensure that no debris from the pier is dropped into creek waters. Once the pier is removed, the creek bed would be restored, and the diversion would be deconstructed.

Alternative 6

In addition to the impacts described above for Alternative 4B, Alternative 6 may require one to two additional seasons (up to three seasons total) of stream diversion for installation and removal of the temporary bridge pier below the ordinary high-water mark.

The diversion would ensure that no debris from the pier is dropped into the creek waters, and no work would occur within the water. Once the pier is in place, the creek bed would be restored, and the diversion would be deconstructed. After the temporary bridge is no longer required, the creek would be diverted again, the pier would be removed, the creek bed would be restored, and the diversion would be deconstructed again. The impact area for the additional stream diversion is anticipated to be approximately the same and is captured in the acreage identified above.

Cumulative Impacts

Both alternatives would have a long-term net benefit to the watershed due to the removal of piers within and adjacent to Limekiln Creek and, therefore,

would not contribute to the cumulative impact on aquatic resources in this area.

Avoidance, Minimization, and/or Mitigation Measures

The following measures would be implemented to avoid and minimize potential impacts on aquatic resources resulting from the project:

- JUR-1: All trees that are removed will be replanted at a 1-to-1 or 3-to-1 ratio, depending on species and size. A mitigation and monitoring plan will be used to ensure the restoration of the disturbed riparian corridor. Replacement plants, erosion control material, native seed mixtures, and an invasive weed treatment plan will be described in detail in the mitigation and monitoring plan. The final mitigation and monitoring plan will be consistent with the agency requirements as written in project permits and will be reviewed and approved through the regulatory review process. Caltrans will implement the mitigation and monitoring plan as necessary during construction and immediately following project completion.
- JUR-2: Instream work will occur between June 1 and October 31, during the period of seasonally lower water levels. Deviations from this work window will only be made with concurrence from regulatory resource agencies.
- JUR-3: Before any ground-disturbing activities, temporary high-visibility fencing will be installed around work limits or otherwise flagged, as appropriate, to ensure no impacts occur outside the project limits. Environmentally Sensitive Areas will be included in design plans and delineated in the field before the start of construction activities.
- JUR-4: All project-related hazardous materials spills within the project site will be cleaned up immediately. Readily accessible spill prevention and cleanup materials will be kept by the contractor on-site at all times during construction.
- JUR-5: Cleaning and refueling of equipment and vehicles will occur only within a designated staging area. This area will either be a minimum of 100 feet from aquatic resources, or if the area is less than 100 feet from aquatic areas, the area must be surrounded by barriers (e.g., fiber rolls or equivalent). The staging areas will conform to Caltrans Construction Site Best Management Practices (Caltrans 2017).
- JUR-6: Caltrans will ensure that Best Management Practices are implemented according to the most current approved guidelines to control erosion and sedimentation during and after project implementation. Under the California Interagency Noxious Weed Free Forage and Mulch Program (<http://pi.cdfa.gov/weed/wff>), California is taking steps to make noxious weed-free hay and straw widely available. Under this program, weed-free

hay and straw bales will be used for erosion control measures when they become available.

- JUR-7: Immediately upon completing in-channel work, all in-channel structures will be removed in a manner that minimizes disturbance to downstream flows and water quality.
- JUR-8: All temporary excavations and fills within project limits will be removed in their entirety, and the affected areas returned to preconstruction elevations. After construction has been completed in aquatic resources, contours will be restored as close as possible to their original condition.
- JUR-9: Dewatering and stream diversion will be performed according to Caltrans Construction Site Best Management Practices (2017), and upstream and downstream passage of adult and juvenile fish will be maintained at all times, according to current National Marine Fisheries Service guidelines and criteria (National Marine Fisheries Service 2001).
- JUR-10: Before construction, the contractor will prepare and sign a Water Pollution Control Plan or a Stormwater Pollution Prevention Plan that complies with the Caltrans Stormwater Quality Handbook (Caltrans 2011). Provisions of this plan will be implemented during and after construction as necessary to avoid and minimize erosion and stormwater pollution in and near the work area.

2.4.3 Animal Species

Regulatory Setting

Many state and federal laws regulate impacts on wildlife. The U.S. Fish and Wildlife Service, the National Oceanic and Atmospheric Administration's National Marine Fisheries Service, and the California Department of Fish and Wildlife 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 the Threatened and Endangered Species Section 2.4.4 below. All other special-status animal species are discussed here, including California Department of Fish and Wildlife fully protected species, species of special concern, and United States Fish and Wildlife Service or National Marine Fisheries 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

- National Marine Sanctuaries 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

Affected Environment

A Natural Environment Study was completed in July 2023 and is the primary source for this section.

The biological study area has diverse wildlife. Thirty-two bird species were identified during surveys. These species include black oystercatcher (*Haematopus bachmani*), pigeon guillemot (*Cepphus columba*), brown pelican (*Pelecanus occidentalis*), great blue heron (*Ardea herodias*), double-crested cormorant (*Phalacrocorax auritus*), and several gull species in and near the ocean. Swallows occupy nests on the bridge structure. White-crowned sparrow (*Zonotrichia leucophrys*), black phoebe (*Sayornis nigricans*), pacific slope flycatcher (*Empidonax difficilis*), purple finch (*Haemorhous purpureus*), spotted towhee (*Pipilo maculatus*), wren tit (*Chamaea fasciata*), American bush tit (*Psaltriparus minimus*), Wilson's warbler (*Cardellina pusilla*), house wren (*Troglodytes aedon*), and chestnut-backed chickadee (*Poecile rufescens*) were observed in and around scrub and riparian habitat. The California condor (*Gymnogyps californianus*) and turkey vulture (*Cathartes aura*) were also noted soaring above the canyon.

Mammals in the biological study area include woodrats (*Neotoma sp.*) and a large population of California ground squirrels (*Otospermophilus beecheyi*). Harbor seals (*Phoca vitulina*) were also observed in the rocky intertidal areas.

Insects in the area are abundant in the coastal scrub habitat and include several species of yellow-jacket, bees, caterpillars, moths, and butterflies, including the Smith's blue butterfly.

Juvenile South-Central California Coast steelhead were observed near the confluence of Limekiln Creek and the Pacific Ocean, in addition to adult steelhead carcasses. Crayfish were also seen in Limekiln Creek, both near the Pacific Ocean and within the redwood forest.

Essential Fish Habitat

The Magnuson-Stevens Fishery Conservation and Management Act requires federal agencies to consult with the Secretary of Commerce regarding any action or proposed action authorized, funded, or undertaken by that agency that may adversely affect essential fish habitat, which is defined as those waters and substrates necessary to fish for spawning, breeding, feeding, or growth to maturity.

Essential fish habitat is listed on the National Marine Fisheries Service Official Species List within the biological study area for the following species: coastal pelagic, highly migratory species, and groundfish.

Coastal pelagic fish habitat: The east-west boundary of the habitat is defined to be all marine and estuarine waters from the shoreline along the coast of California, Oregon, and Washington, extending offshore to the east until areas where thermal conditions are no longer suitable. Work within Limekiln Creek extends past the shoreline, outside of the boundaries of this essential fish habitat.

Pacific coast groundfish habitat: The upper reach of groundfish essential fish habitat is defined as the mean higher high-water (average of high-water heights). The National Oceanic and Atmospheric Administration Monterey Tidal Station has recorded the value of mean higher high water as 5.48 feet. Removal of the rock slope protection and partial removal and modification to the sea and crib walls from the beach would require work below mean higher high water, and therefore, the groundfish essential fish habitat may be impacted by the project. The confluence of Limekiln Creek and the Pacific Ocean lies above the mean higher high water; therefore, Limekiln Creek does not fall within the limits of essential fish habitat. Impacts on essential fish habitat in the biological study area would be limited to impacts on essential fish habitat below mean higher high water in the Pacific Ocean and nearshore habitats.

Because the project does not occur within and would not have a direct or indirect impact on open ocean waters (3 or more miles from shore), it would not affect highly migratory species and essential fish habitat. No further consultation with the National Marine Fisheries Service for this habitat is required.

Monterey Bay National Marine Sanctuary

Monterey Bay National Marine Sanctuary (known as MBNMS) was designated on September 18, 1992, by the National Oceanic and Atmospheric Administration under the authority of the National Marine Sanctuaries Act. It is the largest marine sanctuary in the United States, covering 6,094 square miles of California ocean waters, from Cambria to the Marin Headlands. The marine sanctuary encompasses no dry ground. Its shoreward boundary extends inland no further than the mean high tide line. Inner harbor areas are excluded from sanctuary boundaries. The only inland waterway included in the sanctuary is the main channel of Elkhorn Slough, east from the State Route 1 bridge to the Elkhorn Road tide gates. Within the biological study area, all areas below the mean high tide line are designated as part of the Monterey Bay National Marine Sanctuary.

Migratory Birds

Several species of native migratory birds are known to occur in the biological study area. This includes swallows observed nesting on the bridge. Measures NB-1 through NB-10 would also apply to migratory birds.

Environmental Consequences

The impacts discussed below are the same for both Alternative 4B and Alternative 6.

Essential Fish Habitat

Coastal pelagic essential fish habitat: This habitat extends to the shoreline. While areas of the biological study area contain coastal pelagic essential fish habitat, no work would occur within oceanic waters. All access and work on the beach, including sea and crib wall modification and rock slope protection removal, would occur at low tide and on dry land; therefore, there would be no work within this essential fish habitat.

Groundfish essential fish habitat: In the long term, removal of rock slope protection and partial removal of the sea and crib walls would expose new areas of the hillside to natural elements in the air and ocean. This may cause erosion in the Pacific Ocean. Similarly, partial removal has the potential to increase turbidity temporarily, which would decrease water quality. Limekiln Beach is within a small cove, and it is likely that sedimentation would stay localized in the cove, restricted by the surrounding landscape. Although restricted, this increase in fine and coarse sediments can reduce production, decrease water quality, and bury some rocky intertidal habitat. Specifically, vegetation and filter-feeding invertebrates could be negatively affected. Though minor and temporary, Caltrans anticipates adverse impacts to groundfish essential fish habitat due to work below the mean higher high water.

Within the biological study area, the area above essential fish habitat is prone to major landslides. All work to the sea and crib walls would be designed to restore the natural hillside to the extent feasible while maintaining hillside stabilization. While modifications to the sea and crib walls may cause earth movement, naturally occurring landslides are common along the entire Big Sur Coast. In the unlikely event that the project resulted in massive sedimentation from a landslide, Caltrans would coordinate with the National Marine Fisheries Service to determine how to restore the area.

Monterey Bay National Marine Sanctuary

Within the Monterey Bay National Marine Sanctuary, there would be minor temporary impacts and permanent improvements.

Anticipated impacts are the same as impacts to essential fish habitat regarding temporary increased turbidity and the potential of a major landslide.

Partial removal of rock slope protection and the walls would be a net benefit to the coastline because it would re-naturalize the area and increase long-term habitat quality.

Temporary Impacts

Within the Monterey Bay National Marine Sanctuary, there would be 0.030 acre of temporary impacts because of work below the high tide line that would be required to remove rock slope protection and portions of the existing sea and crib walls. Heavy equipment would be required below the high tide line for this work. Work on the beach would be restricted to low tides to avoid working in the ocean. It is anticipated that it would take approximately 15 to 20 days to remove the rock slope protection and portions of the sea and crib walls, but only 5 to 10 days would require work below the mean high tide line.

Cumulative Impacts

There are several Caltrans projects occurring along State Route 1, as this area requires continuous stabilization. There are several culvert improvement and bridge rail improvement projects that are being planned both north and south of the proposed project limits. Transportation work in this part of the state is ongoing due to the unstable geomorphology of the road's location, erosion on slopes due to wave activity, and salt intrusion on concrete structures. California State Parks does not anticipate any projects in Limekiln State Park at this time.

In the winters of 2016–2017 and 2022–2023, Paul's Slide to the north of the project area caused massive sedimentation in the project vicinity. This slide has contributed to an increase in water turbidity in the offshore waters near Limekiln State Park. Additionally, severe fires along the Big Sur Coast in recent years have led to extensive debris flows. There may be a slight decline in water quality due to increased erosion and turbidity caused by the removal of rock slope protection and the partial removal of the sea and crib walls. This would likely add a negligible amount of sedimentation relative to previous natural disasters.

In the unlikely event that the project was to cause a major slide, similar to previous slides in the area, measures implemented for the project would reduce indirect impacts on groundfish, essential fish habitat, and Monterey Bay National Marine Sanctuary.

The proposed project would have a net benefit to the coastline from the modification and partial removal of the sea and crib walls and the removal of rock slope protection, and, therefore, would not add to the cumulative impact on Pacific Coast groundfish essential fish habitat and Monterey Bay National Marine Sanctuary. This project would partially re-naturalize the coastline near Limekiln State Park, which would increase the long-term habitat quality in the project area.

Avoidance, Minimization, and/or Mitigation Measures

The measures proposed for wetlands, other waters, riparian areas (Section 2.4.2), black abalone (Section 2.4.4), and steelhead critical habitat (Section 2.4.4) would also minimize effects on essential fish habitat. The following additional measures are proposed to avoid and minimize impacts on the Monterey Bay National Marine Sanctuary:

- MB-1: Before construction, Caltrans will coordinate with the National Oceanic and Atmospheric Administration to acquire any permits or authorizations required for work within the Monterey Bay National Marine Sanctuary.

2.4.4 Threatened and Endangered Species

Regulatory Setting

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act (Federal Endangered Species Act): 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 (and Caltrans, as assigned), are required to consult with the U.S. Fish and Wildlife Service (United States Fish and Wildlife Service) and the National Oceanic and Atmospheric Administration's National Marine 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 or a Letter of Concurrence. Section 3 of the Federal Endangered Species Act defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or any attempt at such conduct."

California has enacted a similar law at the state level, the California Endangered Species Act, California Fish and Game Code Section 2050, et seq. The California Endangered Species Act emphasizes early consultation to avoid potential impacts on 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 is the agency responsible for implementing the California Endangered Species Act. Section 2080 of the California Fish and Game Code prohibits the "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the California Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt,

pursue, catch, capture, or kill.” The California Endangered Species Act allows for take incidental to otherwise lawful development projects; for these actions, an incidental take permit is issued by the California Department of Fish and Wildlife. For species listed under both the Federal Endangered Species Act and the California Endangered Species Act requiring a Biological Opinion under Section 7 of the Federal Endangered Species Act, the California Department of Fish and Wildlife may also authorize impacts on California Endangered Species Act species by issuing a Consistency Determination under Section 2080.1 of the California Fish and Game Code.

The Marine Mammal Protection Act establishes a federal responsibility to conserve marine mammals, with management vested in the Department of Commerce (National Marine Fisheries Service) for cetaceans and pinnipeds other than walrus. The Department of the Interior (U.S. Fish and Wildlife Service) is responsible for all other marine mammals, including sea otters, walruses, polar bears, dugongs, and manatees. The Act generally assigns identical responsibilities to the secretaries of the two departments.

The Marine Mammal Protection Act is the main regulatory vehicle that protects marine mammal species and their habitats in an effort to maintain sustainable populations. In doing so, the statute outlines prohibitions, required permits, criminal and civil penalties, and international aspects of addressing marine mammals. The Act requires consultation on any action that may adversely affect marine mammals and provides a mechanism for an “incidental” take of species not listed under the Federal Endangered Species Act.

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.

Affected Environment

A Natural Environment Study was completed in July 2023 and is the primary source for this section.

Caltrans will prepare a Biological Assessment and initiate formal consultation with the National Marine Fisheries Service, resulting in a Biological Opinion for potential effects on Federal Endangered Species Act species.

The proposed project is not expected to result in the take of any state-listed species as defined by the California Endangered Species Act and, therefore, is not anticipated to require a 2081 Incidental Take Permit. Additional surveys would be conducted before construction. If a California Endangered Species Act candidate or listed species are identified in the project area, Caltrans will coordinate with the California Department of Fish and Wildlife and, if necessary, a 2081 Incidental Take Permit will be acquired.

Crotch's Bumblebee

The Crotch's bumblebee (*Bombus crotchii*) is a state candidate endangered species. The closest occurrence of Crotch's bumblebee is approximately 5 miles north of the biological study area, near the intersection of Big Creek and the Pacific Ocean. There are no other nearby records of Crotch's bumblebee. Habitat assessments and surveys were conducted during appropriate blooming and weather conditions on April 27, 2023. No species of bumblebee were detected during surveys.

Though no species were detected, the landscape within and surrounding the biological study area provides suitable habitat conditions for a variety of bumblebee species. These areas are primarily located in Limekiln State Park. Much of the project area is exposed, but the area surrounding Limekiln Creek has a shaded and wind-protected habitat with flowering species that could be used by the Crotch's bumblebee. The other areas of the project area include the ocean, sandy beaches, rocky intertidal areas, developed areas, and cliffs with invasive species that do not support bumblebee habitat. Because of this and the highly disturbed areas of the campground, nesting habitat is not optimal.

Black Abalone and Critical Habitat

Black abalone (*Haliotis cracherodii*) is listed as endangered under the Federal Endangered Species Act. There are about 90,000 acres of designated critical habitat along the California Coast. Within the biological study area, critical habitat occurs within the rocky intertidal habitats or the rocky areas near the shore. There are large, natural boulders with different-sized crevices that are suitable habitats for young and mature black abalone. There are also several required food sources within the project area.

In 2020, a team of black abalone experts conducted surveys to determine the presence of black abalone and the quality of critical habitat. Low, medium, and high-quality critical habitats were found. A healthy population of black abalone was found within Limekiln State Park. A total of 322 black abalone were observed within the biological study area, but none were found within the area of potential impact.

South-Central California Coast Steelhead and Critical Habitat

The South-Central California Coast steelhead is listed as threatened under the Federal Endangered Species Act. Critical habitat within the biological study area occurs in Limekiln Creek and the Pacific Ocean. Limekiln Creek is a perennial (flows year-round) stream that provides freshwater migration corridors. Increased downstream flow allows adults to migrate upstream, and juveniles can make their way from upstream spawning sites back to the Pacific Ocean. The Pacific Ocean serves as a marine habitat for foraging and development.

Smith’s Blue Butterfly

The Smith’s blue butterfly (*Euphilotes enoptes smithi*) is federally endangered. Smith’s blue butterflies spend their entire lives in association with two species of buckwheat: seacliff buckwheat (*Eriogonum parvifolium*) and seaside buckwheat (*Eriogonum latifolium*). These plants are hosts for the larvae and primary nectar sources for adults. Individuals typically spend their lifetime within 200 feet of the host plant they emerged from.

The proposed project is within the known range of the southern metapopulation of Smith’s blue butterfly. A habitat assessment was conducted in August 2019 and updated in September 2022. Caltrans biologists surveyed the area to determine the number of plants present within a 230-foot buffer of the area of potential impact. No seaside buckwheat plants were documented, but the following table shows the results for seacliff buckwheat.

Table 9 Buckwheat Survey Results

Date	Total Seacliff Buckwheat Within 230-Foot Buffer Area	Seacliff Buckwheat Within Area of Potential Impact	Percent Within the Area Of Potential Impact
August 2019	429	100	23.3
September 2022	1,046	598	57.2

Surveys in 2022 detected over twice as many seacliff buckwheat plants than 2019. The cause of this variation is unknown, but possible reasons could include surveyor accuracy and methodology, seasonal variation, vegetation maintenance regimes by California State Parks, environmental conditions. Additional surveys would be conducted prior to construction to update buckwheat quantities.

Protocol surveys for Smith’s blue butterfly were conducted on July 10 and July 16, 2019. These surveys confirmed species presence: two females were observed on July 10, and two males and three females were observed on July 16.

The California Natural Diversity Database identifies several Smith's blue butterfly occurrences north and south of the biological study area. Within a five-mile radius, there are approximately 10 occurrences, cumulatively documenting over 100 individuals. Most recently, 21 individuals were identified in 2006 near Mill Creek, approximately 2 miles south of the area of potential impact.

There is no final critical habitat designated for the species.

California Red-Legged Frog

The California red-legged frog (*Rana draytonii*) is federally threatened and a California Department of Fish and Wildlife Species of Special Concern. No California red-legged frogs were detected during general wildlife or botanical surveys, so protocol surveys were not conducted. A habitat assessment was conducted by Caltrans biologists for the California red-legged frog on May 13, 2019.

Red-legged frogs prefer aquatic habitats with little or no flow. Within the area of potential impact, Limekiln Creek is a perennial stream that flows to the Pacific Ocean adjacent to work activities. There are two plunge pools or step pools with slower-moving water, but both move rather quickly because of the fast-flowing waterfalls upstream and downstream.

Crayfish were found in Limekiln Creek during surveys on several occasions. This likely has a negative impact on any semi-aquatic breeding populations in the creek because crayfish are one of the most aggressive predators of aquatic eggs and larvae in the Big Sur area.

Because of the fast-flowing and largely unvegetated nature of the stream, proximity to the ocean, and presence of predators, it is anticipated that Limekiln Creek, within the area of potential impact, does not support California red-legged frog breeding. Though no breeding habitat was identified in the area of potential impact and the surrounding 1-mile area, pooling may occur along the upper areas of Limekiln Creek or West Fork Limekiln Creek. Therefore, the California red-legged frog is assumed to be present in the biological study area.

The California red-legged frog may also occur in upland habitat within the area of potential impact. The riparian and redwood forests could provide adequate upland habitat by providing cool, moist, shaded cover and animal burrows for refuge. Other areas of the project, such as hardpan paved roads and the campground, are not considered upland habitat. Poor habitat immediately adjacent to riparian areas may result in habitat fragmentation.

Due to the potential presence of suitable aquatic breeding habitat adjacent to the biological study area and the presence of suitable upland habitat areas,

the California red-legged frog is presumed to be present within the project limits.

California Condor, Least Bell's Vireo, and Other Nesting Birds

The California condor (*Gymnogyps californianus*) and least Bell's vireo (*Vireo bellii pusillus*) are federally and state listed as endangered. All other nesting bird species are addressed as a group because they have similar habitat requirements, project-related impacts, and avoidance and minimization measures. These bird species are also protected by the Migratory Bird Treaty Act and California Fish and Game Code Section 3503.

The biological study area does not contain any suitable nesting habitat for California condors. There is coastal scrub that could provide foraging habitat. A condor was seen on August 8, 2018, soaring above the coastal scrub habitat north of the campground.

The riparian habitat surrounding Limekiln Creek is complex but may support the least Bell's vireo. The riparian habitat is narrow and next to the campground, a highly disturbed and busy recreation area. Five focused bird surveys were conducted on April 24, May 16, May 29, June 2, and July 2019. No least Bell's vireos were observed.

There is suitable nesting habitat for other non-listed bird species within the biological study area, primarily in vegetated areas outside of ruderal developed areas and on the existing bridge.

Western Pond Turtle, Coast Range Newt, and Other Semi-Aquatic Species

The western pond turtle (*Actinemys marmorata*) and coast range newt (*Taricha torosa torosa*) are both considered a Special Species of Concern by the California Department of Fish and Wildlife.

No amphibians or semi-aquatic species were detected during any wildlife or botanical surveys conducted in the biological study area. Limekiln Creek is a fast-moving perennial stream that does not contain slow-moving water, plunge pools, or reservoirs that would have calm enough waters for any of the species to use.

A habitat assessment was conducted for the California red-legged frog on May 16, 2019. Because these species have similar aquatic habitat requirements and often occupy the same aquatic environments, the habitat assessment for aquatic habitat could be applied to western pond turtles and coast range newts.

The upland habitat for coast range newts and California red-legged frogs is similar. The riparian and redwood forests could provide adequate upland habitat. However, no suitable aquatic breeding habitat is available in the biological study area or the surrounding 1-mile area; therefore, it would be

highly unlikely that any of the species would be close enough to use the upland habitat. Additionally, the high vehicle traffic, hardpan, paved roads, noise, and disturbance in the campground would likely have had a long-term negative impact on a population of semi-aquatic species. Because the campground is next to the riparian corridor, the upland habitat is somewhat isolated.

Western pond turtles prefer grassy upland habitats to dig holes to protect eggs. There is no suitable upland grassy habitat to support the western pond turtle in the biological study area. Woodland habitat exists but is suboptimal. Additionally, turtles prefer ponds with direct sunlight to bask in, and the dense riparian habitat is heavily shaded.

Due to the lack of suitable breeding habitat in and surrounding the biological study area and the isolated and somewhat disturbed condition of upland habitat, these species are presumed to be absent from the area of potential impact.

Southern Sea Otter and Other Marine Mammals

The southern sea otter (*Enhydra lutris nereis*) is a federally threatened marine mammal that is also protected under the Marine Mammal Protection Act. Guadalupe fur seal (*Arctocephalus townsendi*) is a federally threatened seal that may also occur in the project area.

Other marine mammals that may occur in the area and are not protected under Federal Endangered Species Act or California Endangered Species Act but are protected under the Marine Mammal Protection Act include: Northern elephant seal (*Mirounga angustirostris*), California sea lion (*Zalophus californianus*), Risso's dolphin (*Grampus griseus*), common bottlenose dolphin (*Tursiops truncatus*), northern right-whale dolphin (*Lissodelphis borealis*), pacific white-sided dolphin (*Lagenorhynchus obliquidens*), short-beaked common dolphin (*Delphinus delphis*), Dall's porpoise (*Phocoenoides dalli*), harbor porpoise (*Phocoena phocoena*), fin whale (*Balaenoptera physalus*), humpback whale (*Megaptera novaeangliae*), gray whale (*Eschrichtius robustus*), killer whale (*Orcinus orca*), minke whale (*Balaenoptera acutorostrata*), Northern Pacific right whale (*Eubalaena japonica*), short-finned pilot whale (*Globicephala macrorhynchus*), and blue whale (*Balaenoptera musculus*).

No focused surveys have been done for the southern sea otter or other marine mammals. Incidental observations have been recorded, but data on marine mammal use within and adjacent to the biological survey area is limited. An extensive literature search was conducted to identify potential observations, historic studies, and citizen science in the area.

There have been two sightings of single southern sea otters, but census data and local agencies do not have records of southern sea otters or other marine mammals in the area.

Southern sea otter habitat quality is marginal in the biological study area. The Big Sur coastline in this area has high ambient noise and visual disturbance levels due to traffic on State Route 1, parking and picnicking at scenic vistas, ongoing highway maintenance from landslides, camping, and day visitors. Large kelp beds provide high-quality habitat and are not found in Limekiln Bay. This might be partly due to ongoing turbidity and sedimentation from the large-scale landslide approximately 0.5 mile north of the project. There is more suitable habitat located south of the biological study area.

California sea lions have been documented approximately 0.8 mile northwest of the biological study area. The Marine Mammal Center maintains data on public reports of potentially stranded marine mammals in the project area. Between May 2016 and present, the center received 12 reports of possible marine mammal strandings in the project vicinity. All were reported as California sea lions, elephant seals, or unknown.

Due to the presence of suitable habitat for the marine mammals listed above and occurrence records within the project vicinity, marine mammals (including otters, seals, dolphins, and porpoises) are presumed to be present. It is presumed that whales would not occur within the biological study area due to its proximity to the beach and shallow waters.

Environmental Consequences

Crotch's Bumblebee

The following impacts apply to both Alternative 4B and 6.

It is unlikely that the species would nest within the project area during project activities, but suitable foraging habitat may be impacted. Any blooming plants that would be removed would first be inspected by a qualified biologist to ensure that no bumblebees are on or near the plant. Because Crotch's bumblebees would not remain on food flowers for an extended period, it is anticipated that if they are observed in the project area during work activities, they could be avoided until they move out of the area on their own accord.

Ground disturbance for project activities is primarily within and adjacent to the existing roadway and areas of high disturbance in low-quality nesting habitat. If any species of bumblebee is identified in the work area, it would be avoided to the extent feasible.

It is not anticipated that Crotch's bumblebees would nest in the project area; therefore, it is expected that there would be no state take of the Crotch's bumblebee. Additional focused surveys would be conducted during the design phase. If Crotch's bumblebees are observed in the project area,

Caltrans would coordinate with the California Department of Fish and Wildlife and apply for a 2081 Incidental Take Permit if necessary.

Black Abalone and Critical Habitat

The following impacts apply to both Alternative 4B and 6.

The project would have approximately 0.03 acre of temporary impacts on black abalone, a designated critical habitat, due to rock slope protection and partial wall removal. This is limited to sandy beaches and developed areas and would not impact areas where all elements necessary for abalone occur.

Construction activities would require large equipment, such as excavators, to access the beach lower than the mean high-water mark. All work and access would be timed to occur only during negative tides, and no work or equipment would be allowed within ocean waters.

Caltrans anticipates the proposed project, per the Federal Endangered Species Act, is likely to adversely affect black abalone and its critical habitat. Caltrans would initiate consultation with the National Marine Fisheries Service after finalizing the environmental document.

South-Central California Steelhead Critical Habitat

The project would have direct temporary impacts on approximately 0.163 acre of south-central California steelhead critical habitat due to temporary stream diversion for existing bridge pier removal, construction access, and installation of a work trestle and falsework for the proposed bridge. After the removal of the existing bridge pier in Limekiln Creek, the creek bed would be restored, and the diversion would be deconstructed. Then, there would be a net increase of approximately 0.005 acre of critical habitat.

Alternative 4B

A temporary stream diversion would be required during the dry season (June 1 to October 31) for one year to create a dry work area to remove the existing pier that is currently below the ordinary high-water mark of the stream. The diversion would ensure that no debris from the pier is dropped into the creek waters, and no work would occur within the water.

Work within jurisdictional streams and riparian areas would occur in the one dry season when Limekiln Creek would be flowing at its lowest velocity and volume. The work trestle would be used to work year-round outside of these aquatic resources to move equipment and construct and demolish the bridges.

Alternative 6

In addition to the impacts described above for Alternative 4B, Alternative 6 may require stream diversions for one to two additional dry seasons (June 1 to October 31) to create a dry work area to install and remove the temporary

bridge pier below the ordinary high-water mark of the stream. The diversion would ensure that no debris from the pier is dropped into the creek waters, and no work would occur within the water. Once the pier is in place, the creek bed would be restored, and the diversion would be deconstructed. After the temporary bridge is no longer required, the creek would be diverted again, the pier would be removed, the creek bed would be restored, and the diversion would be deconstructed again. The impact area for the additional stream diversion is anticipated to be approximately the same (0.163 acre).

Caltrans anticipates that both build alternatives to the proposed project, per the Federal Endangered Species Act, may affect and are likely to adversely affect South-Central California Coast steelhead and its critical habitat. Caltrans would initiate consultation with the National Marine Fisheries Service after finalizing the environmental document.

Smith's Blue Butterfly

The following impacts apply to both Alternative 4B and 6.

Project activities may result in the direct mortality or injury of Smith's blue butterfly adults, pupae, and larvae from activities such as foot traffic, grading or other heavy machinery use, grubbing, and vegetation removal activities. Any buckwheat that requires removal due to project activities would follow Best Management Practices. This would include the relocation of plants and surrounding soil and organic matter to live buckwheat stands outside of areas of disturbance (see Avoidance and Minimization Measures below). Project noise, dust, and vibrations may also directly affect all life stages of the species by disturbing feeding, resting, and mating activities and by indirectly discouraging habitat use of some or all life stages.

Host plant removal may lead to population fragmentation and the loss of foraging and reproduction habitat. Surveys conducted in 2022 documented approximately 598 buckwheat plants within the area of potential impact. Most of these plants would be avoided and marked as environmentally sensitive areas on project plans, including a large patch of nearly 100 plants within the State Park campground. A minor variation in the cut and fill locations of the two build alternatives may result in slightly different impacts on buckwheat host plants. Currently, both alternatives are expected to affect less than 100 plants; however, the total number of impacted plants would depend on temporary bridge pier placement for Alternative 6, and potential access road improvement needs for both alternatives.

These impacts would become more refined as the design develops; however, Caltrans intends to meet the criteria outlined in the Programmatic Biological Opinion for Highway 1 Management Activities that Affect Smith's Blue Butterfly, Monterey County, and San Luis Obispo County, California. This includes impacting a maximum of 300 individual seacliff plants and removing

no more than 75 percent of plants within the survey area (area of potential impact plus 230 feet).

With the implementation of on-site revegetation and invasive species control, impacts on habitat are anticipated to be minor and temporary. Both alternatives would lengthen the bridge, reduce the number of piers from 8 to 1, and replace the existing northern roadway with a viaduct. The removal of these hardscapes from the California coastal scrub natural community would create additional suitable habitat for buckwheat.

Potential indirect impacts on Smith's blue butterfly include uncontrolled dust, erosion, and ground disturbance. Dust from heavy equipment, bridge demolition, and other project activities may settle on host plants, which may lead to plant mortality or desiccation or make them inhospitable to butterflies. Dust in the air may prohibit adult butterflies from entering habitats that may otherwise be suitable. Erosion control and dust prevention measures would be implemented to reduce impacts on buckwheat host plants.

Potential erosion or landslides caused by project activities may occur in the new viaduct to the north of the bridge. This area is outside most of the buckwheat population within the project area and is where the active landslide has likely destroyed the host plant population.

Ground disturbance from construction could facilitate the spread of invasive plants, which could compete with seacliff buckwheat and thereby degrade or fragment habitat for the Smith's blue butterfly. To prevent this, equipment would be cleaned of invasive species prior to entering the project, and proposed vegetation management is designed to control invasive plants. Areas with high proportions of the host plants within the area of potential impact would primarily be used for access (state park roads for public access to campgrounds) or for minor highway realignment; therefore, impacts on the host plants would be limited.

Caltrans has determined that the proposed project, per the Federal Endangered Species Act, may affect and is likely to adversely affect Smith's blue butterfly. Caltrans would initiate consultation with the United States Fish and Wildlife Service using the Programmatic Biological Opinion for Highway 1 Management Activities that Affect Smith's Blue Butterfly, Monterey County, and San Luis Obispo County, California (1-8-07-F-68).

No final critical habitat is designated for the species; therefore, there would be no impacts on critical habitat.

California Red-Legged Frog

The following impacts apply to both Alternative 4B and 6.

Project activities may result in the direct injury or mortality of California red-legged frogs within the area of potential impact from being crushed by ground-disturbing activities, heavy equipment, foot traffic, and construction and bridge demolition debris. The proposed avoidance and minimization measures, including supervision of work in riparian habitats by a biological monitor and preconstruction surveys, would ensure that there is no direct mortality of individuals during construction. If frogs are encountered during preconstruction surveys or at any time during construction in areas within or directly next to disturbances, they would be relocated to suitable habitat. Mortality, injury, or stress may occur because of handling, containment, or transportation. Amphibian handling best practices would be implemented to reduce the risk of mortality during relocation. Direct impacts on tadpoles and eggs are not anticipated due to a lack of suitable breeding pools within the area of potential impact.

Indirect effects could occur from noise and vibrations from construction equipment. Frogs may be flushed from the project footprint due to noise and ground tremors caused by moving trucks, construction equipment, and bridge demolition. Dust from these project activities may settle on vegetation used as refugia, which may lead to a reduction in habitat quality. Frogs that are disturbed by project activities have an increased risk of predation due to exposure.

Additionally, ground disturbance from construction would remove vegetation that may be used for refugia (an area where a species could survive in unfavorable conditions). This could cause the spread of invasive plants, reducing habitat quality. Avoidance and minimization measures would be implemented to reduce indirect effects on the California red-legged frog, including equipment cleaning prior to entering the project, vegetation management to control invasive plants, revegetation, and dust and erosion control. There is also a large amount of suitable habitat adjacent to the project that frogs could relocate to if disturbed by project activities.

Although the previously mentioned impacts could occur, potential direct and indirect disturbances are unlikely to have a negative influence on the California red-legged frog population. The biological study area is surrounded to the east and west by continuous coast redwood forest. This is not expected to be a strain on local populations that are likely already residing in suitable adjacent upland or aquatic habitat.

The project would have no direct or indirect impacts on suitable aquatic breeding habitat. Any individuals temporarily displaced from the biological study area would not need to travel far to find suitable upland habitat and would have access to aquatic habitat for the duration of construction.

Caltrans anticipates the proposed project, per the Federal Endangered Species Act, may affect and is likely to adversely affect the California red-legged frog.

California Condor, Least Bell's Vireo, and Other Nesting Birds

The following impacts apply to both Alternative 4B and 6.

Temporary impacts to potential nesting habitat would occur due to temporary construction access in riparian areas (Sitka willow thicket) and California coastal scrub for bridge removal. Direct impacts on nesting birds would be avoided by removing vegetation outside of the nesting bird season, conducting preconstruction nesting bird surveys, and avoiding any nests. Bird exclusion would be installed to avoid impacts on nesting birds on the existing bridge.

Indirect impacts could result from noise and dust from project activities. Noises created by large construction equipment could affect perching, foraging, and/or nesting behaviors. Dust could disturb air quality, reduce visibility, and alter habitat use for foraging and nesting passerines. Removal of potential nesting trees for three consecutive work seasons would temporarily reduce the availability of nesting and roosting habitat.

Because no suitable condor nesting habitat exists in the biological study area, project activities would not affect condors. Additionally, the noise created by campers at the campground and on State Route 1 likely deters most large mammals from using the biological study area. If large decaying mammals were found on site, they would be quickly removed by the California State Parks maintenance. Therefore, it is unlikely that the biological study area could provide any foraging benefit to the species.

Project activities are unlikely to affect condors soaring overhead due to existing ambient disturbance levels and low condor habitat quality within the biological study area. Because this part of the coastline contains large amounts of continuous habitat, such as the Los Padres National Forest, the biological study area does not contribute meaningful foraging habitat for the condor. Avoidance and minimization measures would be used to avoid impacts on condors and other nesting birds.

Caltrans anticipates the proposed project, per the Federal Endangered Species Act, would have no effect on California condors or the least Bell's vireo.

The proposed activities would not directly harm California condor or the least Bell's vireo; therefore, per California Endangered Species Act, there would be no state "take" of California condor or the least Bell's vireo, as defined by the California Fish and Game Code.

Western Pond Turtle, Coast Range Newt, and Other Semi-Aquatic Species

The following impacts apply to both Alternative 4B and 6.

While it is not anticipated that the proposed project would have direct or indirect impacts on western pond turtles or coast range newts, excavation within the area of potential impact has the potential to kill, injure, or displace animals if they are present. Therefore, avoidance measures would be implemented to avoid any potential impacts.

Southern Sea Otter and Other Marine Mammals

The following would apply to both Alternative 4B and 6.

Activities near sea level on Limekiln Beach and within the campground would include demolition of the existing bridge and work along the work trestle to construct the new bridge. Heavy equipment work below the high tide line of the Pacific Ocean would be required to remove rock slope protection and portions of the existing sea and crib walls. Work on the beach would be restricted to negative tide events to avoid working in the ocean. It is anticipated that it would take approximately 15 to 20 days to remove the rock slope protection and portions of the sea and crib walls, but only 5 to 10 days would require work below the mean high water mark. These activities are expected to be above ambient noise levels.

These activities may increase visual and airborne acoustic disturbance to southern sea otters. The length of the project, three to four years, is substantially longer than routine maintenance activities that occur at sea level in this area. Other marine mammals are not anticipated to be impacted because their activity within Limekiln Bay would primarily be under water.

H-piles would likely be required for the work trestle and falsework installation. These piles would either be vibrated or driven into place. No construction activities would occur within ocean waters. Considering all work would be restricted to dry ground, there would be very little or no transmission of noise into surrounding waters.

Acoustic thresholds for marine mammals vary based on the type of sound and hearing group and are not well defined for the southern sea otter. The National Oceanic and Atmospheric Administration confirmed piles installed on dry ground for this project would not cause hydroacoustic effects on mammals under their jurisdiction.

The behavioral hydroacoustic for fish is lower than the recommended threshold for marine mammals, and, therefore, the avoidance and minimization measures outlined for south-central California steelhead would ensure hydroacoustic impact avoidance for marine mammals as well.

Project activities may cause minor and temporary airborne acoustic and visual disturbances to southern sea otters because the species may be in nearshore surface waters. Caltrans anticipates that the proposed project, per the Federal Endangered Species Act, may affect, but is not likely to adversely affect, the southern sea otter. Caltrans would initiate informal consultation with the United States Fish and Wildlife Service after finalizing the environmental document. There would be no other potential take of marine mammals per the Federal Endangered Species Act, the California Endangered Species Act, or the Marine Mammals Protection Act.

Findings of Affect

The preliminary Federal Endangered Species Act Section 7 effect determination is that the proposed project may affect and is likely to adversely affect:

- Black abalone
- Black abalone critical habitat
- South-Central California Coast steelhead
- South-Central California Coast steelhead critical habitat
- Smith's blue butterfly
- California red-legged frog

The preliminary Federal Endangered Species Act Section 7 effect determination is that the proposed project may affect but is not likely to adversely affect:

- Southern sea otter

Cumulative Impacts

There are several Caltrans projects throughout State Route 1, as the area requires continuous stabilization in areas of active movement. Other transportation projects include pavement, bridge, drainage, and rail improvements. California State Parks does not anticipate any projects in Limekiln State Park at this time.

With the implementation of measures CBB-1 through CBB-5 and SBB-1 through SBB-16, the project would result in no adverse cumulative impacts on the Crotch's bumblebee and Smith's blue butterfly. No direct or indirect cumulative impacts are anticipated for marine mammals, California red-legged frogs, western pond turtles, coast range newts, and other semi-aquatic species as a result of this project.

In the winters of 2016/2017 and 2022/2023, Paul's Slide to the north of the biological study area caused massive sedimentation in the project vicinity. This slide has contributed to an increase in water turbidity in the offshore waters near Limekiln State Park. Additionally, severe fires along the Big Sur

Coast led to extensive debris flows. There may be a slight decline in water quality due to increased erosion and turbidity caused by the removal of rock slope protection and the partial removal of the sea and crib walls. This would likely add a negligible amount of sedimentation relative to previous natural disasters.

In the unlikely event that the project was to cause a major slide, similar to previous slides in the area, measures would be implemented to reduce indirect impacts on black abalone and associated critical habitats, South-Central California Coast steelhead, and associated critical habitats.

There are temporary direct impacts anticipated by this project, such as diverting the stream and subsequent fish relocation. This would negatively impact any steelhead using that section of Limekiln Creek for the duration of the diversion. The avoidance measures SCCC-1 through SCCC-5 would minimize impacts on steelhead and its critical habitat during construction.

The proposed project would have a net benefit to the coastline from the modification and partial removal of the crib wall and removal of rock slope protection, and, therefore, would not add to the cumulative impact on black abalone and associated critical habitat, South-Central California Coast steelhead, and associated critical habitat. This project would partially re-naturalize the coastline near Limekiln State Park, which would increase the long-term habitat quality in the project area.

California condors are acclimated to the high disturbance levels along State Route 1 from construction activities, tourism, and consistent recreation. With the implementation of measures NB-1 through NB-10, the project would result in no adverse cumulative impacts to the California condor, least Bell's vireo, or nesting birds.

Avoidance, Minimization, and/or Mitigation Measures

The following measures are proposed to avoid and minimize impacts on the Crotch's bumblebee:

- CBB-1: Surveys will occur prior to ground disturbance for nesting bumblebees. No work will occur within 50 feet of an active Crotch's bumblebee nest unless approved by the California Department of Fish and Wildlife.
- CBB-2: A Worker Environmental Awareness Training will be provided for all construction personnel prior to the start of any ground disturbance or vegetation removal to discuss Crotch's bumblebee identification, ecology, habitat, and avoidance and minimization measures.
- CBB-3: Any blooming flowering plants that are scoped for removal would be inspected by a qualified biologist immediately prior to work to ensure that no bumblebees are on or near the plant. If a bumblebee is identified

on or adjacent to vegetation that is to be removed, work in that area would not proceed until the bumblebee leaves the area of its own accord.

- CBB-4: Prior to any ground-disturbing activities, Environmentally Sensitive Area fencing shall be installed, as appropriate, around Crotch's bumblebee feeding and nesting habitats to be avoided. Environmentally Sensitive Areas shall be noted on design plans and delineated in the field prior to the start of construction activities.
- CBB-5: Any areas of suitable Crotch's bumblebee habitat that are temporarily impacted during construction will be replaced on-site at a minimum 1-to-1 ratio.

The measures proposed for wetlands and other waters (Section 2.4.2) also apply to black abalone. The following additional measures are proposed to minimize the impacts on black abalone and its critical habitat:

- BA-1: Prior to construction, Caltrans will complete a Federal Endangered Species Act consultation with the National Marine Fisheries Service.
- BA-2: If required by the National Marine Fisheries Service (in coordination with permitting agencies), a monitoring plan will be submitted to the agencies and approved to ensure that the black abalone population is monitored for any impacts that occur during and/or after construction activities.
- BA-3: If required (in coordination with permitting agencies), an emergency relocation plan will be created for implementation in the unlikely event that the population is imperiled by a slide caused by construction activities.
- BA-4: Preconstruction surveys will occur before any work above black abalone habitat by an approved biologist.
- BA-5: Prior to construction, a qualified biologist will conduct a worker environmental training program that will include a description of protected species and habitats, their legal/protected status, proximity to the project site, avoidance/minimization measures to be implemented during the project, and the implications of violating the Federal Endangered Species Act and other relevant permit conditions.
- BA-6: A construction monitor will be present during all construction within the black abalone habitat to ensure that no black abalone are injured or removed. All sea walls, crib walls, and rock slope protection being removed from the beach will be thoroughly inspected for abalone individuals.
- BA-7: To avoid impacts on critical habitat for black abalone, all work to remove rock slope protection and alter the sea and crib walls from the beach will occur during negative tides. No work will occur within ocean/tidal waters.

- BA-8: No work will occur within a suitable habitat for black abalone. All work on the crib and sea walls and rock slope protection will be confined to the sandy beach and adjacent hillside. No rocks that could support the species will be removed or moved.
- BA-9: Where feasible, netting will be installed on the slope above medium-to-high-value critical habitat for black abalone before any adjacent work is initiated to ensure that no debris falls into critical habitat and crushes black abalone.
- BA-10: All debris, equipment, and non-essential construction materials will be removed from the area after each day, and areas of critical habitat for black abalone will be restored when construction is complete.

The measures proposed for wetlands, other waters, riparian areas, and black abalone critical habitat will also minimize effects on the South-Central California Coast steelhead critical habitat. The following additional measures are proposed to minimize impacts on the South-Central California Coast steelhead critical habitat:

- SCCC-1: Prior to construction, Caltrans will complete a Federal Endangered Species Act consultation with the National Marine Fisheries Service.
- SCCC-2: An aquatic species exclusion and relocation plan will be prepared and approved by the National Marine Fisheries Service and implemented before a diversion is installed.
- SCCC-3: No in-water pile driving will occur as part of project activities.
- SCCC-4: If feasible, pile driving will not occur within 200 feet of the water's edge (Limekiln Creek and the Pacific Ocean high tide line). If pile driving is required within 200 feet of these areas, then a hydroacoustic analysis will be performed.
- SCCC-5: If piles are driven within 200 feet of open water (Limekiln Creek or the Pacific Ocean), a hydroacoustic analysis will be prepared to evaluate possible hydroacoustic effects. This analysis for underwater sound impacts would be provided in the Biological Assessment for South-Central California Coast steelhead and other biological permits, as needed. Project-specific measures to reduce potential effects will be implemented as needed, and hydroacoustic monitoring will be done to avoid and minimize adverse effects on fish.

The following additional measures from the Programmatic Biologic Opinion will be implemented to minimize impacts on Smith's blue butterfly, seacliff buckwheat, and seaside buckwheat:

- SBB-1: No more than 300 individual buckwheat plants and no more than 75 percent of buckwheat within the 230-foot buckwheat survey area will be impacted by project activities.

- SBB-2: Buckwheat revegetation will use buckwheat seeds and plants sourced from the Smith's blue butterfly southern metapopulation's range, from the Carmel Valley south along the Big Sur Coast to Hearst San Simeon State Park.
- SBB-3: Caltrans will prohibit mowing and broadcast spraying of herbicide in stands of buckwheat. Within areas that contain buckwheat, control of invasive weeds, which is beneficial to buckwheat, will be achieved by spot spraying of herbicide and/or hand clearing.
- SBB-4: Caltrans will ensure that only U.S. Fish and Wildlife Service-approved biologists will participate in the capture, handling, and monitoring of the Smith's blue butterfly in all life stages and the handling of buckwheat plants.
- SBB-5: Caltrans will ensure that ground disturbance for project activities will not begin within stands of buckwheat until a service-approved biologist is on site.
- SBB-6: A U.S. Fish and Wildlife Service-approved biologist will survey the work site no more than 30 days before the start of ground disturbance. If any life stage of the Smith's blue butterfly or its host plants, seacliff and seaside buckwheat, is found and is likely to be killed or injured by work activities, the approved biologist will be allowed sufficient time to relocate seacliff buckwheat plants, duff, and/or soil from the site before work activities begin. The seacliff buckwheat plants, duff, and/or soils will be hand removed and placed as close as possible to, but not on, living seacliff buckwheat plants. The service-approved biologist will relocate the seacliff buckwheat plants, duff, and/or soils to the shortest distance possible to a location that contains suitable habitat and will not be affected by activities associated with the proposed project. The service-approved biologist will maintain detailed records of the number of seacliff buckwheat plants that are moved.
- SBB-7: Before any project activity work begins within stands of buckwheat, a service-approved biologist will provide training to all field personnel. At a minimum, the training will include a description of the Smith's blue butterfly and its habitat, the specific measures that are being implemented to conserve the Smith's blue butterfly, and the boundaries within which the project may be accomplished. Brochures, books, and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions.
- SBB-8: A U.S. Fish and Wildlife Service-approved biologist will be present at the work site for project activities within stands of buckwheat until all Smith's blue butterflies and seacliff buckwheat plants that are at risk due to project activities have been removed, workers have been instructed, and disturbance to habitat has been completed. After this time, Caltrans will designate a person to monitor on-site compliance with all minimization measures. The service-approved biologist will ensure that this monitor

receives the training outlined in Measure SBB-7 and for the identification of the Smith's blue butterfly and its host plant, seacliff buckwheat. If the monitor or the service-approved biologist recommends that work be stopped because the Smith's blue butterfly or seacliff buckwheat will be affected to a degree that exceeds the levels anticipated by Caltrans and the Service during the review of the proposed action, they will notify the resident engineer (the engineer that is directly overseeing and in command of construction activities) immediately. The resident engineer will either resolve the situation by eliminating the unanticipated effect(s) immediately or require that all actions causing these effects to be stopped. If work is stopped, the Service will be notified as soon as is reasonably possible.

- SBB-9: An assemblage of native species will be used for the revegetation of project sites. Seacliff buckwheat seeds or plants will be placed only outside the vegetation control areas (10 feet from Caltrans road edges). The spread of invasive weeds during revegetation efforts will be controlled according to the Vegetation Management Guidelines (California Department of Transportation 2002) developed as part of the Big Sur Coast Highway Management Plan (California Department of Transportation 2004).
- SBB-10: The number of access routes, the size of staging areas, and the total area of the activity will be limited to the minimum necessary to achieve the project goal. Environmentally sensitive areas will be established to confine access routes and construction areas to the minimum area necessary to complete construction and minimize the impact on Smith's blue butterfly and seacliff buckwheat.
- SBB-11: Caltrans will ensure that Best Management Practices are implemented according to the most current approved guidelines to control erosion and sedimentation during and after project implementation.
- SBB-12: All buckwheat plants or stands outside the work limits will be flagged and marked as environmentally sensitive areas prior to construction. Environmentally sensitive area limits will be depicted on the final design plans and will be placed in the field by a qualified biologist prior to the start of work.
- SBB-13: At least five days prior to the beginning of work, the resident engineer shall meet with the district biologist in the field at the project site for the identification of select locations where flagging shall be incorporated.
- SBB-14: To avoid the loss of buckwheat in the range of Smith's blue butterfly and to promote species recovery across the range, seacliff buckwheat will be replanted on-site, either from seed or seedling.
 - a. Caltrans will monitor revegetated areas and the immediate vicinity for invasive weed species every 6 months for the first year and annually

thereafter for a total of 5 years. If replacement ratios or invasive weed-free conditions are not met at the end of the monitoring period, then corrective measures will be developed and implemented, subject to approval by the United States Fish and Wildlife Service.

- b. If replanted from seedlings, there will be at least two seedlings planted for every plant removed (minimum 2 to 1 replacement ratio).
 - c. If buckwheat is replanted from seed, the total area occupied by buckwheat at the end of the 5-year monitoring period will be the same as the area of buckwheat plants removed (1 to 1 ratio).
 - d. Caltrans will conduct revegetation efforts in all other disturbed areas that are outside of those impacted by buckwheat removal. Caltrans will reseed these disturbed areas with a native seed mix that includes seacliff buckwheat seed. Caltrans will monitor these disturbed areas and the immediate vicinity for invasive weed species every 6 months for the first year and annually thereafter for a total of 5 years. Any invasive weed species present, including seedlings, will be removed without damaging seacliff buckwheat plants.
- SBB-15: Replanting will occur as close as possible to the original site of buckwheat removal but outside the vegetation control area or other areas where repeated disturbance or future activities are anticipated.
 - SBB-16: Dust and erosion control will be implemented to prevent adverse effects on buckwheat.

Measures proposed for wetlands, other waters, riparian areas, and other species will also minimize effects on the California red-legged frog and other semi-aquatic species. The following additional measures identified in the Programmatic Biological Opinion will be implemented to minimize impacts on these species:

- CRLF-1: Only United States Fish and Wildlife Service-approved biologists shall participate in activities associated with the capture, handling, and monitoring of California red-legged frogs.
- CRLF-2: Ground disturbance shall not begin until written approval is received from the United States Fish and Wildlife Service that the biologist is qualified to conduct the work.
- CRLF-3: A United States Fish and Wildlife Service-approved biologist shall survey the project area no more than 48 hours before the start of work activities. If any life stage of the California red-legged frog is found and these individuals are likely to be killed or injured by work activities, the approved biologist shall be allowed sufficient time to move them from the site before work begins. The United States Fish and Wildlife Service-approved biologist shall relocate the California red-legged frogs to the

shortest distance possible to a location that contains suitable habitat and will not be affected by project activities. The relocation site shall be in the same drainage to the extent practicable. Caltrans shall coordinate with the U.S. Fish and Wildlife Service on the relocation site prior to the capture of any California red-legged frogs.

- CRLF-4: Before any activities begin on a project, a United States Fish and Wildlife Service-approved biologist shall conduct a training session for all construction personnel. At a minimum, the training shall include a description of the California red-legged frog and its habitat, the specific measures that are being implemented to conserve the California red-legged frog for the current project, and the boundaries within which the project may be accomplished. Brochures, books, and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions.
- CRLF-5: A United States Fish and Wildlife Service-approved biologist shall be present at the work site until all California red-legged frogs have been removed, workers have been instructed, and disturbance of the habitat has been completed. After this time, Caltrans shall designate a person to monitor on-site compliance with all minimization measures. The United States Fish and Wildlife Service-approved biologist shall ensure that this monitor receives the training outlined in CRLF-4 and in the identification of California red-legged frogs. If the monitor or the United States Fish and Wildlife Service-approved biologist recommends that work be stopped because California red-legged frogs would be affected in a manner not anticipated by Caltrans and the United States Fish and Wildlife Service during the review of the proposed action, they shall notify the resident engineer immediately. The resident engineer shall resolve the situation by requiring that all actions that are causing these effects to be stopped. When work is stopped, the United States Fish and Wildlife Service shall be notified as soon as possible.
- CRLF-6: During project activities, all trash that may attract predators or scavengers shall be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris shall be removed from work areas.
- CRLF-7: Without the expressed permission of the United States Fish and Wildlife Service to do otherwise, all refueling, maintenance, and staging of equipment and vehicles shall occur at least 60 feet from the riparian habitat or water bodies and not in a location from where a spill would drain directly toward aquatic habitat. The monitor shall ensure contamination of habitat does not occur during such operations. Prior to the start of work, Caltrans shall ensure that a plan is in place for prompt and effective response to any accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

- CRLF-8: Habitat contours shall be returned to a natural configuration at the end of the project activities. This measure shall be implemented in all areas disturbed by project activities unless the United States Fish and Wildlife Service and Caltrans determine that it is not feasible or that modification of the original contours would benefit the California red-legged frog.
- CRLF-9: The number of access routes, the size of staging areas, and the total area of activity shall be limited to the minimum necessary to achieve the project. Environmentally sensitive areas shall be established to confine access routes and construction areas to the minimum area necessary to complete construction and minimize the impact on California red-legged frog habitat; this goal includes locating access routes and construction areas outside of wetlands and riparian areas to the maximum extent practicable.
- CRLF-10: Caltrans shall attempt to schedule work for times of the year when impacts on the California red-legged frog would be minimal. For example, work that would affect large pools that may support breeding would be avoided, to the maximum degree practicable, during the breeding season (November through May). Isolated pools that are important to maintain California red-legged frogs through the driest portions of the year would be avoided, to the maximum degree practicable, during the late summer and early fall. Habitat assessments, surveys, and technical assistance between Caltrans and the United States Fish and Wildlife Service during project planning shall be used to assist in scheduling work activities to avoid sensitive habitats during key times of the year.
- CRLF-11: To control sedimentation during and after project completion, Caltrans shall implement the Best Management Practices outlined in any authorizations or permits issued under the authority of the Clean Water Act received for the project. If Best Management Practices are ineffective, Caltrans shall attempt to remedy the situation immediately, in coordination with the United States Fish and Wildlife Service.
- CRLF-12: If a work site is to be temporarily dewatered by pumping, intakes shall be completely screened with wire mesh not larger than 0.2 inch to prevent California red-legged frogs from entering the pump system. Water shall be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. Upon completion of construction activities, any diversions or barriers to flow shall be removed in a manner that would allow flow to resume with the least disturbance to the substrate. Alteration of the streambed shall be minimized to the maximum extent possible; any imported material shall be removed from the streambed upon completion of the project.

- CRLF-13: Unless approved by the United States Fish and Wildlife Service, water shall not be impounded in a manner that may attract California red-legged frogs.
- CRLF-14: A United States Fish and Wildlife Service-approved biologist shall permanently remove any individuals of exotic species, such as bullfrogs (*Rana catesbeiana*), signal and red swamp crayfish (*Pacifasticus leniusculus*; *Procambarus clarkia*), and centrarchid fishes, from the project area to the maximum extent possible. The United States Fish and Wildlife Service-approved biologist shall be responsible for ensuring his or her activities follow the California Fish and Game Code.
- CRLF-15: If Caltrans demonstrates that disturbed areas have been restored to conditions that allow them to function as habitat for the California red-legged frog, these areas will not be included in the amount of total habitat permanently disturbed.
- CRLF-16: To ensure that diseases are not conveyed between work sites by the United States Fish and Wildlife Service-approved biologist, the fieldwork code of practice developed by the Declining Amphibian Task Force shall be followed at all times.
- CRLF-17: Project sites shall be revegetated with an assemblage of native riparian, wetland, and upland vegetation suitable for the area. Locally collected plant materials shall be used to the extent practicable. Invasive exotic plants shall be controlled to the maximum extent practicable. This measure shall be implemented in all areas disturbed by project activities unless the United States Fish and Wildlife Service and Caltrans determine that it is not feasible or practical.
- CRLF-18: Caltrans shall not use herbicides as the primary method to control invasive, exotic plants. However, if it is determined that the use of herbicides is the only feasible method for controlling invasive plants at a specific project site, it will implement the following additional protective measures (CRLF-19 through CRLF-28) for the California red-legged frog:
- CRLF-19: Caltrans shall not use herbicides during the breeding season for the California red-legged frog.
- CRLF-20: Caltrans shall conduct surveys for the California red-legged frog immediately prior to the start of herbicide use. If found, California red-legged frogs shall be relocated to suitable habitat far enough from the project area that no direct contact with herbicide would occur.
- CRLF-21: Giant reed and other invasive plants shall be cut and hauled out by hand and painted with glyphosate-based products, such as Aquamaster® or Rodeo®.
- CRLF-22: Licensed and experienced Caltrans staff or a licensed and experienced contractor shall use a hand-held sprayer for foliar application of Aquamaster® or Rodeo® where large monoculture stands occur at an individual project site.

- CRLF-23: All precautions shall be taken to ensure that no herbicide is applied to native vegetation.
- CRLF-24: Herbicides shall not be applied on or near open water surfaces (no closer than 60 feet from open water).
- CRLF-25: Foliar applications of herbicide shall not occur when wind speeds are more than 3 miles per hour.
- CRLF-26: No herbicides shall be applied within 24 hours of forecasted rain.
- CRLF-27: Application of all herbicides shall be done by qualified Caltrans staff or contractors to ensure that overspray is minimized, that all applications are made in accordance with the label recommendations, and with the implementation of all required and reasonable safety measures. A safe dye shall be added to the mixture to visually denote the treated sites. Application of herbicides shall be consistent with the Environmental Protection Agency's Office of Pesticide Programs and Endangered Species Protection Program county bulletins.
- CRLF-28: All herbicides, fuels, lubricants, and equipment shall be stored, poured, or refilled at least 60 feet from riparian habitat or water bodies in a location where a spill would not drain directly toward aquatic habitat. Prior to the start of work, Caltrans shall ensure that a plan is in place for a prompt and effective response to accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

Measures listed for aquatic resources will also apply to all bird nesting habitats impacted by the proposed project. The following additional measures are proposed to minimize impacts on birds protected by the Migratory Bird Treaty Act and California Fish and Game Code 3503:

- NB-1: If feasible, vegetation removal, tree trimming, and bridge demolition shall be scheduled to occur between October 1 and January 31, outside of the typical nesting bird season, which is February 1 to September 30.
- NB-2: If it is not feasible to conduct this work outside of the nesting bird season, nesting bird surveys shall be conducted by a qualified biologist no more than seven days prior to the start of construction. If an active nest is found, a qualified biologist shall determine an appropriate Environmentally Sensitive Area buffer (typically 100 feet around active passerine nests and 500 feet for active bird of prey or raptor nests) or monitoring strategy based on the habits and needs of the species. The buffer area shall be avoided, or a monitoring strategy shall be implemented until a qualified biologist has determined that juveniles have fledged.
- NB-3: Bird exclusion will be installed or implemented during the construction of the new bridge and the demolition of the existing bridge to reduce impacts on swallows that are nesting on the existing bridge. Bird

exclusions will be installed before the nesting bird season each year that bridge work is anticipated.

- NB-4: Trees to be removed will be noted on design plans. Prior to any ground-disturbing activities, temporary high-visibility fencing or flagging will be installed around the dripline of trees to be protected within project limits.
- NB-5: Least Bell's vireo surveys will be performed prior to construction. If an active nest for least Bell's vireo is found within 100 feet of the area of potential impact at any point during construction, all project activities shall immediately cease while Caltrans coordinates with applicable regulatory agencies and determines if additional measures are necessary. If California condors are observed within the construction area, all work shall cease within 250 feet of the animals until the animals leave the area of their own accord. The Caltrans Resident Engineer and Biologist will be notified immediately. The biologist will call appropriate regulatory agencies as needed to coordinate additional protective measures, if necessary.
- NB-6: No rodent control pesticides shall be used, including anticoagulant rodenticides such as brodifacoum, bromadiolone, difethialone, and difenacoum. This is a necessary precaution to avoid secondary poisoning by raptors that hunt and feed on rodents and other small animals.
- NB-7: A litter control program shall be instituted at each project site. No canine or feline pets or firearms (except for law enforcement officers and security personnel) shall be permitted on construction sites to avoid harassment, killing, or injuring animals. Environmental training will include the importance of not leaving hazardous materials exposed and the daily removal of all garbage fragments to maintain condor health.
- NB-8: Project activities will be stopped temporarily if any California condors are observed within the project area prior to the start of work. The California condors will be allowed to depart on their own before project activities resume. California condors that arrive in the project area or approach work crews while work is ongoing will be hazed with direction from a qualified biologist, pursuant to the September 3, 2014, California Condor Recovery Program memo (United States Fish and Wildlife Service 2014).
- NB-9: Work crews will store all project materials, tools, hardware, equipment, and all loose items in a manner that will prevent their removal or ingestion by California condors and other wildlife.
- NB-10: Work crews will place all materials that are liquid, granular, or powder in sealed leak-proof containers and store them in a manner that prevents access by California condors and other wildlife.

The measures proposed for wetlands, other waters, riparian areas, and other species will also minimize effects on western pond turtles, coast range newts,

and other semi-aquatic species. The following additional measures are proposed to minimize impacts to these species:

- SAS-1: Preconstruction surveys will be conducted for aquatic and semi-aquatic species before work in the creek or riparian areas occurs.
- SAS-2: If the preconstruction survey reveals the presence of western pond turtles or coast range newts within the area of potential impact, Caltrans will notify the California Department of Fish and Wildlife and/or the United States Fish and Wildlife Service.

Measures for South-Central California Coast steelhead, wetlands, other waters, and riparian areas will also minimize and avoid effects on marine mammals. Implementation of the following additional avoidance measures will ensure the avoidance of any potential impacts on marine mammals:

- MM-1: A Marine Mammal Avoidance Plan will be prepared to avoid and minimize the effects on marine mammals. The plan will outline:
 - a. Biological monitoring requirements, including activities and times when one or more qualified biologists would be required to monitor for marine mammals using binoculars from a high vantage point. Monitoring activities will include any work activities onshore within 50 feet of tidal waters (defined for this project as a high tide line). No in-water work will occur within ocean waters. The biological monitor will have the authority to stop project activities if southern sea otters or other marine mammals approach or enter the exclusion zone (see measure c) or if, in the professional judgment of the monitor, southern sea otters or other marine mammals outside the exclusion zone display a significant and alarming reaction to construction or project activity. Biological monitoring will begin 0.5 hour before work begins and will continue until 0.5 hour after work is completed each day.
 - b. Weather conditions that would prohibit work activities if sight distance is limited.
 - c. Procedures for when a marine mammal enters the project vicinity, including species-specific stop-work buffers. Work will start only with the approval of the biological monitor to ensure that no southern sea otters are present in the exclusion zone.
 - d. An exclusion zone will be implemented at all times when work is occurring onshore within 50 feet of tidal waters (high tide line). The radius of the exclusion zone will be a minimum of 50 feet to prevent the injury or disturbance of southern sea otters and other marine mammals from project activities.
 - e. If project activities (e.g., pile driving) occur within areas where they may generate underwater noise, an exclusion zone will be

implemented that includes all areas where underwater sound pressure levels are expected to reach or exceed 160 dB re 1 μ Pa (sound pressure level). Project activities such as pile extraction or driving will not start (or restart following a shutdown) until southern sea otters are not sighted within the exclusion zone for a 15-minute period.

- MM-2: No in-water pile driving will occur.
- MM-3: To reduce the risk of potentially startling marine mammals with a sudden, intensive sound, the construction contractor will begin construction activities gradually each day by starting tractors or other heavy equipment one at a time.
- MM-4: Night work would be limited to the minimum necessary to complete the project. A preconstruction survey would be conducted prior to night work to ensure no marine mammals are hauled out within the project area. Work that is tidal dependent will occur within 1 hour before sunrise and 1 hour after sunset.
- MM-5: If southern sea otters or other marine mammals are present within the work area, they will be allowed to leave of their own volition (i.e., they will not be hazed).
- MM-6: Prior to construction, a qualified biologist will conduct a worker environmental training program that will include a description of protected species and habitats, their legal/protected status, proximity to the project site, avoidance/minimization measures to be implemented during the project, and the implications of violating the Federal Endangered Species Act, the California Endangered Species Act, the Marine Mammals Protection Act, and other relevant permit conditions.

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 and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). The Federal Highway Administration's responsibility for environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 United States Code Section 327 (23 USC 327) and the Memorandum of Understanding dated May 27, 2022, and executed by the Federal Highway Administration and Caltrans. Caltrans is the lead agency under CEQA and NEPA.

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

CEQA, on the other hand, does require 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 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 the mandatory significance of CEQA. This chapter discusses the effects of this project and its CEQA significance.

3.2 CEQA Environmental Checklist

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 will indicate that there are no impacts on a particular resource. A no-impact answer in the last column reflects this determination. The words “significant” and “significance” used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Project features, which can include both design elements of the project and standardized measures that are applied to all or most Caltrans projects, such as Best Management Practices and measures included in the Standard Plans and Specifications or as Standard Special Provisions, are considered to be an integral part of the project and have been considered prior to any significance determinations documented below; see Chapters 1 and 2 for a detailed discussion of these features. The annotations to this checklist are summaries of information contained in Chapter 2 in order to provide the reader with the rationale for significance determinations; for a more detailed discussion of the nature and extent of impacts, please see Chapter 2. This checklist incorporates, by reference, the information contained in Chapters 1 and 2.

3.2.1 Aesthetics

Except as provided in Public Resources Code Section 21099, 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) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?
- d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

CEQA Significance Determinations for Aesthetics

a, b, c) Significant and Unavoidable Impact

As discussed in Section 2.2.3, both alternatives would result in an increase in the roadway for the bridge and viaducts, bridge girder height, and a

realignment of structures. This would impact the existing views. Though it would be a moderate reduction of existing views, these visual resources are considered high quality and have a high value placed on them by the community.

State Route 1 in Monterey County is classified as an Officially Designated State Scenic Highway. Scenic resources associated with the viewing experience throughout the project area include expansive views of the Pacific Ocean and beaches, dramatic topography and hillsides, rocky outcroppings, native vegetative patterns, and undeveloped landscapes.

Both alternatives would affect views of the ocean and beach. Alternative 4B would also involve grading the rocky outcropping near the existing southern abutment.

The project's location increases the likelihood that the final aesthetic design of the new elements would be determined with input from the local community. Aesthetic treatments may reduce adverse impacts on community character, though impacts on visual quality and character would still occur.

The wider bridge, taller girder, and realignment would result in an incremental loss of visual quality and would not support the aesthetic values expressed in the Coast Highway Management Plan and other coastal planning documents. Given the higher viewer sensitivity of this coastal setting, this visual change would result in a noticeable degradation of visual character along the corridor.

In an effort to mitigate the significant impact, the following mitigation measures have been incorporated:

- VIS-1: Design the bridge and viaduct structures with the highest quality architectural and engineering practices and considerations, acknowledging the existing historic bridges of the Big Sur Coast, local policies, and considering the adjacent Rain Rocks and Pitkins Curve structures. The design shall be done in coordination with District 5 Landscape Architecture.
- VIS-2: Involve the members of the community in the aesthetic design of all structures.
- VIS-3: The design of all structures shall consider including a high level of architectural detailing, including the shape of columns and other structural elements that are visible to pedestrians under the structures. The design shall be done in coordination with District 5 Landscape Architecture.
- VIS-4: Use an open-style bridge rail that maximizes views. Bridge rail selection shall be done in coordination with District 5 Landscape Architecture.

- VIS-5: Use finish, colors, and textures that minimize reflectivity and glare, and they shall be selected in coordination with District 5 Landscape Architecture.
- VIS-8: All excavation slopes shall include slope-rounding and landform-grading as appropriate to reduce their engineered appearance and to visually blend with the natural topography of the region.
- VIS-17: Metal roadside elements, including but not limited to guardrails, guardrail transitions, and end treatments, should be stained or darkened to be visually compatible with the rural setting. The color shall be determined and approved by Caltrans District 5 Landscape Architecture.
- VIS-18: Pedestrian or bicycle railing shall not be included on top of a bridge or viaduct rail unless required by traffic safety standards. If pedestrian or bicycle railing is required, it shall be designed with materials, form, and colors to minimize noticeability and ocean-view blockage and to complement the bridge architecture.

While these measures would be incorporated, given the fact that the bridge would still have a different alignment and be a larger structure, the measures do not reduce the proposed project's impacts to a level of no significant impact or less than significant impact.

d) No impact

No new sources of light or glare are proposed as part of this project.

3.2.2 Agriculture and Forestry Resources

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

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

- b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?
- c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?
- d) Result in the loss of forest land or conversion of forest land to non-forest use?
- 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?

CEQA Significance Determinations for Agriculture and Forestry Resources

a, b, c, d, e) No Impact

The project area does not contain any designated farmland. Therefore, the project would have no impact relating to the conversion of farmland to non-agricultural use.

The project area does not contain any agriculturally zoned land or any parcels under the Williamson Act. Therefore, the project would have no impact relating to conflicts with agricultural zoning or Williamson Act contracts.

The project site does not contain any land zoned as forest land, timberland, or timberland production. Therefore, the project would have no impact relating to the zoning or rezoning of these land use zones.

Although the project biological study area contains a small amount of redwood forest woodland, which includes a portion of the Limekiln State Park campground, the project limits (Area of Potential Impact) do not contain forest land. Therefore, the project would have no impact relating to the loss or conversion of forest land.

The project site would not involve other changes to the existing environment that could result in the conversion of farmland or forest land to other uses. Nearby forest lands have federally or state-protected status, but there is no potential for the project to result in the conversion of these lands to different uses. Therefore, the project would have no impact relating to the conversion of farmland or forest land.

3.2.3 Air Quality

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

Would the project:

- a) Conflict with or obstruct implementation of the applicable air quality plan?
- b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?
- c) Expose sensitive receptors to substantial pollutant concentrations?
- d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

CEQA Significance Determinations for Air Quality

a) No Impact

The project site is located in the North Central Coast Air Basin and is within the jurisdiction of the Monterey Bay Air Resources District and the California Air Resources Board. This project is not a capacity-increasing transportation project. It would have no impact on traffic volumes and would generate a less than significant amount of air pollutants during the limited construction time. Therefore, the proposed project would not conflict with the current Monterey Bay Air Resources District Air Quality Management Plan and would have no impact as regards this plan.

b, c, d) Less Than Significant Impact

As discussed in Section 2.3.3, the North Central Coast Air Basin is in attainment for all criteria pollutants under the National Ambient Air Quality Standards, but it is in non-attainment status for suspended particulate matter less than 10 microns in diameter under the California Ambient Air Quality Standards. However, because the project is replacing an existing structure, it would not increase operational emissions of particulate matter or any other air pollutant. There would be no change postconstruction. During construction, there would be a temporary increase in air emissions, fugitive dust from construction equipment, and windblown dust from demolition.

The only nearby air pollutant-sensitive receptor populations that could potentially be affected by the project are campers at the Limekiln State Park campground and motorists driving on State Route 1. The campground and park would be closed to the public for the entire duration of construction. Motorists driving through the construction zone would not be allowed to linger

and would, therefore, only be briefly exposed to any pollutants from equipment exhaust.

Due to temporary increases in emissions and pollutants, impacts are anticipated to be less than significant.

3.2.4 Biological Resources

Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service or National Oceanic and Atmospheric Administration Fisheries?

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

CEQA Significance Determinations for Biological Resources

The potential for the proposed project to result in adverse impacts on biological resources was assessed in the Caltrans Natural Environment Study written for the project, dated July 2023. The Natural Environment Study assessment is based on the project's Area of Potential Impact as well as a 300-foot buffer zone around the Area of Potential Impact, which together make up the project's biological study area. The discussion presented in this section is paraphrased from the Natural Environment Study and also references information provided in Section 2.4 of this document.

a, b, c, d) Less Than Significant Impact with Mitigation Incorporated

As discussed in Section 2.4.4 of this document, certain candidate, sensitive, and special-status species may potentially occur within the project's Area of Potential Impact or in the immediate vicinity due to the presence of suitable habitat. In some cases, this includes federally designated critical habitat.

These species include Crotch's bumblebee, black abalone, South-Central California Coast steelhead, Smith's blue butterfly, California red-legged frog, California condor, least Bell's vireo, western pond turtle, and Coast Range newt.

The preliminary Federal Endangered Species Act Section 7 effect determination for the proposed project is that the project may affect and is likely to adversely affect black abalone and its critical habitat, South-Central California Coast steelhead and its critical habitat, Smith's blue butterfly, and California red-legged frog. The preliminary determination also found that the proposed project may affect but is not likely to adversely affect the southern sea otter.

The impact is expected to be less than significant with the implementation of these mitigation measures:

- CBB-1: Surveys will occur prior to ground disturbance for nesting bumblebees. No work will occur within 50 feet of an active Crotch's bumblebee nest unless approved by the California Department of Fish and Wildlife.
- CBB-2: A Worker Environmental Awareness Training will be provided for all construction personnel prior to the start of any ground disturbance or vegetation removal to discuss Crotch's bumblebee identification, ecology, habitat, and avoidance and minimization measures.
- CBB-3: Any blooming flowering plants that are scoped for removal would be inspected by a qualified biologist immediately prior to work to ensure that no bumblebees are on or near the plant. If a bumblebee is identified on or adjacent to vegetation that is to be removed, work in that area would not proceed until the bumblebee leaves the area of its own accord.
- CBB-4: Prior to any ground-disturbing activities, Environmentally Sensitive Area fencing shall be installed, as appropriate, around Crotch's bumblebee feeding and nesting habitats to be avoided. Environmentally Sensitive Areas shall be noted on design plans and delineated in the field prior to the start of construction activities.
- CBB-5: Any areas of suitable Crotch's bumblebee habitat that are temporarily impacted during construction will be replaced on-site at a minimum ratio of 1 to 1.

- BA-1: Prior to construction, Caltrans will complete a Federal Endangered Species Act consultation with the National Marine Fisheries Service.
- BA-2: If required by the National Marine Fisheries Service (in coordination with permitting agencies), a monitoring plan will be submitted to the agencies and approved to ensure that the black abalone population is monitored for any impacts that occur during and/or after construction activities.
- BA-3: If required (in coordination with permitting agencies), an emergency relocation plan will be created for implementation in the unlikely event that the population is imperiled by a slide caused by construction activities.
- BA-4: An approved biologist will conduct preconstruction surveys before work starts above black abalone habitat.
- BA-5: Prior to construction, a qualified biologist will conduct a worker environmental training program that will include a description of protected species and habitats, their legal/protected status, proximity to the project site, avoidance/minimization measures to be implemented during the project, and the implications of violating the Federal Endangered Species Act and other relevant permit conditions.
- BA-6: A construction monitor will be present during all construction within the black abalone habitat to ensure that no black abalone are injured or removed. All sea walls, crib walls, and rock slope protection being removed from the beach will be thoroughly inspected for abalone individuals.
- BA-7: To avoid impacts on critical habitat, all work to remove rock slope protection and alter the sea and crib walls from the beach will occur during negative tides. No work will occur within ocean/tidal waters.
- BA-8: No work will occur within suitable habitat for black abalone. All work on the crib, sea walls, and rock slope protection will be confined to the sandy beach and adjacent hillside. No rocks that could support the species will be removed or moved.
- BA-9: Where feasible, netting will be installed on the slope above medium-to-high-value critical habitat before any adjacent work is initiated to ensure that no debris falls into critical habitat and crushes black abalone.
- BA-10: All debris, equipment, and non-essential construction materials will be removed from the area after each day, and areas of critical habitat will be restored when construction is complete.
- SCCC-1: Prior to construction, Caltrans will complete a Federal Endangered Species Act consultation with the National Marine Fisheries Service.
- SCCC-2: An aquatic species exclusion/relocation plan will be prepared and approved by the National Marine Fisheries Service and implemented before a diversion is installed.

- SCCC-3: No in-water pile driving will occur as part of project activities.
- SCCC-4: If feasible, pile driving will not occur within 200 feet of the water's edge (Limekiln Creek and the Pacific Ocean high tide line). If pile driving is required within 200 feet of these areas, then a hydroacoustic analysis will be performed.
- SCCC-5: If piles are driven within 200 feet of open water (Limekiln Creek or the Pacific Ocean), a hydroacoustic analysis will be prepared to evaluate possible hydroacoustic effects. This analysis for underwater sound impacts would be provided in the Biological Assessment for South-Central California Coast steelhead and other biological permits, as needed. Project-specific measures to reduce potential effects will be implemented as needed, and hydroacoustic monitoring will be done to avoid and minimize adverse effects on fish.
- SBB-1: No more than 300 individual buckwheat plants and no more than 75 percent of buckwheat within the 230-foot buckwheat survey area will be impacted by project activities.
- SBB-2: Buckwheat revegetation will use buckwheat seeds and plants sourced from the Smith's blue butterfly southern metapopulation's range, from the Carmel Valley south along the Big Sur Coast to Hearst San Simeon State Park.
- SBB-3: Caltrans will prohibit mowing and broadcast spraying of herbicide in stands of buckwheat. Within areas that contain buckwheat, control of invasive weeds, which is beneficial to buckwheat, will be achieved by spot spraying of herbicide and/or hand clearing.
- SBB-4: Caltrans will ensure that only U.S. Fish and Wildlife Service-approved biologists will participate in the capture, handling, and monitoring of all life stages of the Smith's blue butterfly and the handling of buckwheat plants.
- SBB-5: Caltrans will ensure that ground disturbance for project activities will not begin within stands of buckwheat until a service-approved biologist is on site.
- SBB-6: A U.S. Fish and Wildlife Service-approved biologist will survey the work site no more than 30 days before the start of ground disturbance. If any life stage of the Smith's blue butterfly or its host plant, seacliff and seaside buckwheat, is found and is likely to be killed or injured by work activities, the approved biologist will be allowed sufficient time to relocate seacliff buckwheat plants, duff, and/or soil from the site before work activities begin. The seacliff buckwheat plants, duff, and/or soil will be hand removed and placed as close as possible to, but not on, living seacliff buckwheat plants. The service-approved biologist will relocate the seacliff buckwheat plants, duff, and/or soil the shortest distance possible to a location that contains suitable habitat and will not be affected by activities associated with the proposed project. The service-approved

biologist will maintain detailed records of the number of seacliff buckwheat plants that are moved.

- SBB-7: Before any project activity work begins within stands of buckwheat, a service-approved biologist will provide training to all field personnel. At a minimum, the training will include a description of the Smith's blue butterfly and its habitat, the specific measures that are being implemented to conserve the Smith's blue butterfly, and the boundaries within which the project may be accomplished. Brochures, books, and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions.
- SBB-8: A U.S. Fish and Wildlife Service-approved biologist will be present at the work site for project activities within stands of buckwheat until all Smith's blue butterflies and seacliff buckwheat plants that are at risk due to project activities have been removed, workers have been instructed, and disturbance to habitat has been completed. After this time, Caltrans will designate a person to monitor on-site compliance with all minimization measures. The service-approved biologist will ensure that this monitor receives the training outlined in Measure SBB-7 and for the identification of the Smith's blue butterfly and its host plant, seacliff buckwheat. If the monitor or the service-approved biologist recommends that work be stopped because the Smith's blue butterfly or seacliff buckwheat will be affected to a degree that exceeds the levels anticipated by Caltrans and the Service during the review of the proposed action, they will notify the resident engineer (the engineer that is directly overseeing and in command of construction activities) immediately. The resident engineer will either resolve the situation by eliminating the unanticipated effect(s) immediately or require that all actions causing these effects be stopped. If work is stopped, the Service will be notified as soon as is reasonably possible.
- SBB-9: An assemblage of native species will be used for the revegetation of project sites. Seacliff buckwheat seeds or plants will only be placed outside the vegetation control areas (10 feet from Caltrans road edges). The spread of invasive weeds during revegetation efforts will be controlled according to the Vegetation Management Guidelines (California Department of Transportation 2002) developed as part of the Big Sur Coast Highway Management Plan (California Department of Transportation 2004).
- SBB-10: The number of access routes, the size of staging areas, and the total area of the activity will be limited to the minimum necessary to achieve the project goal. Environmentally sensitive areas will be established to confine access routes and construction areas to the minimum area necessary to complete construction and minimize the impact on Smith's blue butterfly and seacliff buckwheat.

- SBB-11: Caltrans will ensure that Best Management Practices are implemented according to the most current approved guidelines to control erosion and sedimentation during and after project implementation.
- SBB-12: All buckwheat plants or stands outside the work limits will be flagged and marked as environmentally sensitive areas prior to construction. Environmentally sensitive area limits will be depicted on the final design plans and will be placed in the field by a qualified biologist prior to the start of work.
- SBB-13: At least five days prior to the beginning of work, the resident engineer shall meet with the district biologist in the field at the project site for the identification of select locations where flagging shall be incorporated.
- SBB-14: To avoid the loss of buckwheat in the range of Smith's blue butterfly and to promote species recovery across the range, seacliff buckwheat will be replanted on-site, either from seed or seedling.
 - a. Caltrans will monitor revegetated areas and the immediate vicinity for invasive weed species every 6 months for the first year and annually thereafter for a total of 5 years. If replacement ratios or invasive weed-free conditions are not met at the end of the monitoring period, then corrective measures will be developed and implemented, subject to approval by the United States Fish and Wildlife Service.
 - b. If replanted from seedlings, there will be at least two seedlings planted for every one plant removed (minimum 2-to-1 replacement ratio).
 - c. If buckwheat is replanted from seed, the total area occupied by buckwheat at the end of the 5-year monitoring period will be the same as the area of buckwheat plants removed (1 to 1 ratio).
 - d. Caltrans will conduct revegetation efforts in all other disturbed areas that are outside of those impacted by buckwheat removal. Caltrans will reseed these disturbed areas with a native seed mix that includes seacliff buckwheat seed. Caltrans will monitor these disturbed areas and the immediate vicinity for invasive weed species every 6 months for the first year and annually thereafter for a total of 5 years. Any invasive weed species present, including seedlings, will be removed without damaging seacliff buckwheat plants.
- SBB-15: Replanting will occur as close as possible to the original site of buckwheat removal but outside the vegetation control area or other areas where repeated disturbance or future activities are anticipated.
- SBB-16: Dust and erosion control will be implemented to prevent adverse effects on buckwheat.
- CRLF-1: Only United States Fish and Wildlife Service-approved biologists shall participate in activities associated with the capture, handling, and monitoring of California red-legged frogs.

- CRLF-2: Ground disturbance shall not begin until written approval is received from the United States Fish and Wildlife Service that the biologist is qualified to conduct the work.
- CRLF-3: A United States Fish and Wildlife Service-approved biologist shall survey the project area no more than 48 hours before the start of work activities. If any life stage of the California red-legged frog is found and these individuals are likely to be killed or injured by work activities, the approved biologist shall be allowed sufficient time to move them from the site before work begins. The United States Fish and Wildlife Service-approved biologist shall relocate the California red-legged frogs to the shortest distance possible to a location that contains suitable habitat and will not be affected by project activities. The relocation site shall be in the same drainage to the extent practicable. Caltrans shall coordinate with the United States Fish and Wildlife Service on the relocation site prior to the capture of any California red-legged frogs.
- CRLF-4: Before any activities begin on a project, a United States Fish and Wildlife Service-approved biologist shall conduct a training session for all construction personnel. At a minimum, the training shall include a description of the California red-legged frog and its habitat, the specific measures that are being implemented to conserve the California red-legged frog for the current project, and the boundaries within which the project may be accomplished. Brochures, books, and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions.
- CRLF-5: A United States Fish and Wildlife Service-approved biologist shall be present at the work site until all California red-legged frogs have been removed, workers have been instructed, and disturbance of the habitat has been completed. After this time, Caltrans shall designate a person to monitor on-site compliance with all minimization measures. The United States Fish and Wildlife Service-approved biologist shall ensure that this monitor receives the training outlined in CRLF-4 and in the identification of California red-legged frogs. If the monitor or the United States Fish and Wildlife Service-approved biologist recommends that work be stopped because California red-legged frogs would be affected in a manner not anticipated by Caltrans and the United States Fish and Wildlife Service during the review of the proposed action, they shall notify the resident engineer immediately. The resident engineer shall resolve the situation by requiring that all actions that are causing these effects be stopped. When work is stopped, the United States Fish and Wildlife Service shall be notified as soon as possible.
- CRLF-6: During project activities, all trash that may attract predators or scavengers shall be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris shall be removed from work areas.

- CRLF-7: Without the express permission of the United States Fish and Wildlife Service to do otherwise, all refueling, maintenance, and staging of equipment and vehicles shall occur at least 60 feet from the riparian habitat or water bodies and not in a location from which a spill would drain directly toward aquatic habitat. The monitor shall ensure contamination of habitat does not occur during such operations. Prior to the start of work, Caltrans shall ensure that a plan is in place for prompt and effective response to any accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.
- CRLF-8: Habitat contours shall be returned to a natural configuration at the end of the project activities. This measure shall be implemented in all areas disturbed by project activities unless the United States Fish and Wildlife Service and Caltrans determine that it is not feasible or that modification of the original contours would benefit the California red-legged frog.
- CRLF-9: The number of access routes, the size of staging areas, and the total area of activity shall be limited to the minimum necessary to achieve the project. Environmentally sensitive areas shall be established to confine access routes and construction areas to the minimum area necessary to complete construction and minimize the impact on California red-legged frog habitat; this goal includes locating access routes and construction areas outside of wetlands and riparian areas to the maximum extent practicable.
- CRLF-10: Caltrans shall attempt to schedule work for times of the year when impacts on the California red-legged frog would be minimal. For example, work that would affect large pools that may support breeding would be avoided, to the maximum degree practicable, during the breeding season (November through May). Isolated pools that are important to maintain California red-legged frogs through the driest portions of the year would be avoided, to the maximum degree practicable, during the late summer and early fall. Habitat assessments, surveys, and technical assistance between Caltrans and the United States Fish and Wildlife Service during project planning shall be used to assist in scheduling work activities to avoid sensitive habitats during key times of the year.
- CRLF-11: To control sedimentation during and after project completion, Caltrans shall implement the Best Management Practices outlined in any authorizations or permits issued under the authority of the Clean Water Act received for the project. If Best Management Practices are ineffective, Caltrans shall attempt to remedy the situation immediately, in coordination with the United States Fish and Wildlife Service.
- CRLF-12: If a work site is to be temporarily dewatered by pumping, intakes shall be completely screened with wire mesh not larger than 0.2

inch to prevent California red-legged frogs from entering the pump system. Water shall be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. Upon completion of construction activities, any diversions or barriers to flow shall be removed in a manner that would allow flow to resume with the least disturbance to the substrate. Alteration of the streambed shall be minimized to the maximum extent possible; any imported material shall be removed from the streambed upon completion of the project.

- CRLF-13: Unless approved by the United States Fish and Wildlife Service, water shall not be impounded in a manner that may attract California red-legged frogs.
- CRLF-14: A United States Fish and Wildlife Service-approved biologist shall permanently remove any individuals of exotic species, such as bullfrogs (*Rana catesbeiana*), signal and red swamp crayfish (*Pacifasticus leniusculus*; *Procambarus clarkia*), and centrarchid fishes, from the project area to the maximum extent possible. The United States Fish and Wildlife Service-approved biologist shall be responsible for ensuring his or her activities follow the California Fish and Game Code.
- CRLF-15: If Caltrans demonstrates that disturbed areas have been restored to conditions that allow them to function as habitat for the California red-legged frog, these areas will not be included in the amount of total habitat permanently disturbed.
- CRLF-16: To ensure that diseases are not conveyed between work sites by the United States Fish and Wildlife Service-approved biologist, the fieldwork code of practice developed by the Declining Amphibian Task Force shall be followed at all times.
- CRLF-17: Project sites shall be revegetated with an assemblage of native riparian, wetland, and upland vegetation suitable for the area. Locally collected plant materials shall be used to the extent practicable. Invasive exotic plants shall be controlled to the maximum extent practicable. This measure shall be implemented in all areas disturbed by project activities unless the United States Fish and Wildlife Service and Caltrans determine that it is not feasible or practical.

CRLF-18: Caltrans shall not use herbicides as the primary method to control invasive, exotic plants. However, if it is determined that the use of herbicides is the only feasible method for controlling invasive plants at a specific project site, it will implement the following additional protective measures (CRLF-19 through CRLF-28) for the California red-legged frog:

- CRLF-19: Caltrans shall not use herbicides during the breeding season for the California red-legged frog.
- CRLF-20: Caltrans shall conduct surveys for the California red-legged frog immediately prior to the start of herbicide use. If found, California red-

legged frogs shall be relocated to suitable habitat far enough from the project area that no direct contact with herbicide would occur.

- CRLF-21: Giant reed and other invasive plants shall be cut and hauled out by hand and painted with glyphosate-based products, such as Aquamaster® or Rodeo®.
- CRLF-22: Licensed and experienced Caltrans staff or a licensed and experienced contractor shall use a hand-held sprayer for foliar application of Aquamaster® or Rodeo® where large monoculture stands occur at an individual project site.
- CRLF-23: All precautions shall be taken to ensure that no herbicide is applied to native vegetation.
- CRLF-24: Herbicides shall not be applied on or near open water surfaces (no closer than 60 feet from open water).
- CRLF-25: Foliar applications of herbicide shall not occur when wind speeds are more than 3 miles per hour.
- CRLF-26: No herbicides shall be applied within 24 hours of forecasted rain.
- CRLF-27: Application of all herbicides shall be done by qualified Caltrans staff or contractors to ensure that overspray is minimized, that all applications are made in accordance with the label recommendations, and with the implementation of all required and reasonable safety measures. A safe dye shall be added to the mixture to visually denote the treated sites. Application of herbicides shall be consistent with the Environmental Protection Agency's Office of Pesticide Programs and Endangered Species Protection Program county bulletins.
- CRLF-28: All herbicides, fuels, lubricants, and equipment shall be stored, poured, or refilled at least 60 feet from riparian habitat or water bodies in a location where a spill would not drain directly toward aquatic habitat. Prior to the start of work, Caltrans shall ensure that a plan is in place for a prompt and effective response to accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

The project area contains two sensitive natural communities: Sitka willow thicket and redwood forest woodland (see Section 2.4.1 of this document for additional detail).

Project activities in and near natural areas would include access and work areas needed to construct the new bridge and viaduct and remove the existing bridge. The associated temporary impacts would include tree and vegetation removal, grading, compaction by construction equipment, and foot traffic.

The project would result in 0.295 acre of temporary impacts to the Sitka willow thicket from temporary construction access and work areas. This area would be restored upon project completion and would actually increase slightly in size due to the project's removal of an existing bridge pier in the riparian area along Limekiln Creek. There would be no project-related impacts on the redwood forest woodland community, and any impacts on other natural communities in the project vicinity would be temporary.

Temporary high-visibility fencing would be installed along the disturbance area limits to minimize impacts to habitat outside the Area of Potential Impact. A work trestle will be constructed to reduce impacts on these natural communities to the extent feasible. After construction, all natural areas would be restored to their original grade and contour and revegetated as appropriate.

No wetlands that meet federal criteria are present in the biological study area. However, federal navigable and tidal waters and state-protected riparian areas are present. In addition, Limekiln Creek is both federally and state protected as a perennial stream. In total, the biological study area includes 16.91 acres of federal jurisdictional waters, 16.19 acres of which are tidal waters, and 1.99 acres of state jurisdictional waters (see Section 2.4.2 of this document for additional detail).

Both build alternatives include the removal of the existing bridge pier in Limekiln Creek, which would require temporary construction access and work areas through the riparian area and streambed to reach the existing and new pier locations on the south side of Limekiln Creek.

The project would require that Limekiln Creek be diverted during the dry season (June 1 to October 31) for one year (Alternative 4B) or for up to three years (Alternative 6) to create a dry work area to remove the existing pier that is in the creek and to prevent debris from pier demolition from entering the creek. As a result, temporary impacts on 0.511 acre of regulated waters (jurisdictional areas) would be unavoidable.

A work trestle would be installed, spanning the creek to limit impacts to the creek and riparian area and to reduce the time and seasons required for the stream diversion. Wooden platforms and/or a debris containment system on the temporary work trestle would ensure that no debris is dropped into the creek. The work trestle would be used year-round, but work within jurisdictional streams and riparian areas would occur only during the dry season when Limekiln Creek would be flowing at its lowest velocity and volume.

Additionally, under either build alternative, the use of heavy equipment, including excavators and/or loaders, would be required on the beach below the high tide line to remove rock slope protection and portions of the existing

seawall and crib wall. It is expected that this work would require 5 to 10 days of activity below the mean high-water mark. Work on the beach would be restricted to negative tide events to avoid working in the ocean.

The impacts are anticipated to be less than significant with the inclusion of these mitigation measures:

- JUR-1: All trees that are removed will be replanted at a 1-to-1 ratio or a 3-to-1 ratio, depending on species and size. A mitigation and monitoring plan will be used to ensure the restoration of the disturbed riparian corridor. Replacement plants, erosion control material, native seed mixtures, and an invasive weed treatment plan will be described in detail in the mitigation and monitoring plan. The final mitigation and monitoring plan will be consistent with the agency requirements as written in project permits and will be reviewed and approved through the regulatory review process. Caltrans will implement the mitigation and monitoring plan as necessary during construction and immediately following project completion.
- JUR-2: Instream work will occur between June 1 and October 31, during the period of seasonally lower water levels. Deviations from this work window will only be made with concurrence from regulatory resource agencies.
- JUR-3: Prior to any ground-disturbing activities, temporary high-visibility fencing will be installed around work limits or otherwise flagged, as appropriate, to ensure no impacts occur outside the project limits. Environmentally Sensitive Areas will be included in design plans and delineated in the field prior to the start of construction activities.
- JUR-4: All project-related hazardous materials spills within the project site will be cleaned up immediately. Readily accessible spill prevention and cleanup materials will be kept by the contractor on-site at all times during construction.
- JUR-5: Cleaning and refueling of equipment and vehicles will occur only within a designated staging area. This area will either be a minimum of 100 feet from aquatic resources, or if the area is less than 100 feet from aquatic areas, the area must be surrounded by barriers (e.g., fiber rolls or equivalent). The staging areas will conform to Caltrans Construction Site Best Management Practices (Caltrans 2017).
- JUR-7: Immediately upon completing in-channel work, all in-channel structures will be removed in a manner that minimizes disturbance to downstream flows and water quality.
- JUR-8: All temporary excavations and fills within project limits will be removed in their entirety, and the affected areas will be returned to preconstruction elevations. After construction has been completed in

aquatic resources, contours will be restored as close as possible to their original condition.

Upon project completion, all permanent bridge structures would span jurisdictional areas, and there would be a net increase of 0.007 acre in habitat/jurisdictional waters because of restoration activities conducted after the removal of the existing bridge piers in and adjacent to the creek. Thus, the project's impact on any federally or state-protected wetlands is expected to be less than significant with mitigation incorporated.

The proposed project is not expected to have undesirable long-term impacts on animal movement, wildlife corridors, or native wildlife nursery sites, but it may temporarily impede the use of native wildlife habitat. For example, the removal of native buckwheat plants could affect the foraging and breeding behavior of Smith's blue butterfly. As another example, the temporary diversion of Limekiln Creek for several months a year for up to three years, depending on the build alternative chosen, could impede fish passage for South-Central California Coast steelhead trout during migration between their spawning grounds and the Pacific Ocean.

The project site is in a rural wildland area, most of which is federally and state-protected land (e.g., Los Padres National Forest, Limekiln State Park), which provides large tracts of natural habitat. However, there are no known terrestrial migration corridors through the biological study area, and the area is identified by the California Department of Fish and Wildlife's Essential Habitat Connectivity Model as an area of low importance for wildlife migration. This is most likely due to the preserved status of the surrounding land, the coastline to the immediate west, and the fact that the biological study area is a popular recreation area for tourists and campers, which may deter more sensitive wildlife species from using the area.

Any project-related impacts on animal movement or breeding would be temporary and would be reduced by the implementation of the measures specified in Section 2.4 of this document. For instance, Smith's blue butterfly would be protected by imposing limitations on buckwheat plant removal, revegetating from locally sourced seed/plants, restricting mowing and broadcast spraying of herbicide in stands of buckwheat, and over a dozen other measures.

To protect the migration of South-Central California Coast steelhead trout, a temporary diversion of Limekiln Creek would only occur during the dry season (June 1 to October 31). Upon completion of construction, the disturbed portion of the creek channel would be fully restored to a natural condition. Because of the bridge pier removal, there would be a small net increase in the area of the creek channel and riparian area available for fish/wildlife use.

During the construction of the existing and new bridge structures, the possibility of disturbing roosting and/or nesting birds and bats would be avoided by the installation of bird and bat exclusions.

The proposed project may adversely affect essential fish habitat for groundfish. An assessment of impacts to groundfish essential fish habitat will be submitted to the National Marine Fisheries Service with the biological assessment for Federal Endangered Species Act consultation for this project. The scale of impact is anticipated to be small, resulting in no measurable, permanent decrease in the quality of essential fish habitat species. Because the project does not occur within and will not have a direct or indirect impact on pelagic waters, it will have no adverse effect on coastal pelagic and highly migratory species' essential fish habitat. No further consultation with the National Marine Fisheries Service for this essential fish habitat is required (see Section 2.4.3 of this document).

For these reasons, the project's impact on the movement of any native animal species, the use of wildlife corridors, or the use of native wildlife nursery sites is expected to be less than significant with mitigation incorporated.

e, f) No impact

The Natural Environment Study does not identify a potential for the proposed project to conflict with any local policies or ordinances protecting biological resources. Nor does it identify a potential for the proposed project to conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, there is expected to be no impact.

3.2.5 Cultural Resources

Would the project:

- a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?
- b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?
- c) Disturb any human remains, including those interred outside of dedicated cemeteries?

CEQA Significance Determinations for Cultural Resources

a, b) Significant and Unavoidable Impact

As discussed in Section 2.2.4, the proposed project has the potential to significantly and adversely affect one historic site (MNT-2452/H, Rockland

Landing). Although no historic features are anticipated to be directly impacted by Alternative 6, the project's construction of a new bridge west of the existing bridge would alter the integrity of the Rockland Landing site by encroaching on the area of the historic doghole port. This would have an impact on the resource as a whole and on the Rockland Lime and Lumber Company Historic Landscape District for both alternatives.

The proposed project has the potential to significantly and adversely affect one archeological site (MNT-1892). Demolition of the existing bridge would impact the entire site. It is likely that the entire site deposit would be removed as a result of project activities.

In an effort to mitigate the significant impact, the following measures would be included:

- ARC-1: Marine survey of the intertidal related to the Rockland Landing Doghole Port. This would determine whether any additional features of the doghole port are present in the intertidal waters off Limekiln Beach. Resource locations would be recorded with GPS, photography, and measurements. Archaeologists will use snorkels or self-contained underwater breathing apparatus (known as SCUBA) diving visual surveys to locate resources underwater. The results will be documented in the Marine Survey Inventory Report, and any resources would be added to the site record for MNT-2452/H and to the District record for the Rockland Lime and Lumber Company Historic Landscape District.
- ARC-2: Preparation of a District Nomination Form for the Rockland Lime and Lumber Company Historic Landscape District. An archeological district record for the Rockland Lime and Lumber Company Historic Landscape District has been prepared and recommended for listing on the National Register. This would be compiled into a formal district nomination that would consider nominating the doghole port as part of a Maritime Cultural Landscape.
- ARC-3: Preparation of Public Outreach Materials Related to the Rockland Lime and Lumber Company. California State Parks has developed a cell phone application that features various park-specific cultural content to create an immersive experience for hikers along a park trail. Caltrans would work with California State Parks to develop content specific to the Rockville Landing site and the broader Rockland Lime and Lumber Company Historic Landscape District.
- ARC-4: Data recovery excavations targeting specific datasets. A limited deposit is present at MNT-1892. A targeted approach of a single one-by-one meter excavation is proposed. The unit would be excavated in 10-centimeter levels with a 50-by-50-centimeter quadrant from each level collected to obtain plant macrofossils, small fish bones, and shells. The remainder of the unit will be screened on-site to collect any larger tools or faunal remains. The proposed methods and resulting laboratory efforts

and reporting will be detailed in an Archaeological Data Recovery Plan, which will be developed prior to project implementation.

- ARC-5: Stable isotope seasonality studies. These studies require sampling the margins of whole mussel shells from the site. Shells for analysis will be obtained from the large bulk soil samples obtained from the proposed control unit. A sample of up to 50 shells will be sampled, with up to 200 isotope measurements read (up to four per shell).
- ARC-6: Academic manuscript preparation. As the archaeological community constitutes a large part of the interested public, the proposed mitigation studies will result in the preparation of a manuscript for publication in an academic journal. This manuscript will address either the seasonality studies or the analysis of fish remains at the site.

Though these measures would be incorporated, there would still be permanent impacts because of bridge demolition and realignment. These impacts would be considered significant and unavoidable.

c) Less Than Significant Impact with Mitigation Incorporated

The discovery of human remains on the project site is not anticipated, but the possibility cannot be ruled out. If human remains are discovered, California Health and Safety Code Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the County Coroner contacted. If the remains are thought by the coroner to be Native American, the coroner will notify the California Native American Heritage Commission, who, pursuant to PRC Section 5097.98, will then notify the Most Likely Descendant. At this time, the person who discovered the remains will contact the consultant project manager so that they may work with the Most Likely Descendant on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

3.2.6 Energy

Would the project:

- a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?
- b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

CEQA Significance Determinations for Energy

A Climate Change Report was prepared for this project and is summarized in Section 3.5.

a) Less Than Significant Impact

Caltrans incorporates energy efficiency into the design, construction, and maintenance of all transportation projects. Energy-efficient measures (including Standard Specifications) and product recycling would be incorporated into the project wherever feasible.

The proposed project is not capacity increasing and therefore would not increase energy usage over the long term (operational phase). Strategies implemented to reduce greenhouse gas emissions during the project's construction phase would also conserve energy (see Section 3.6, Project-Level Greenhouse Gas Reduction Strategies). Thus, the project's impact as relates to wasteful, inefficient, or unnecessary consumption of energy would be considered less than significant.

b) No Impact

The proposed project would not substantially change energy use, violate local/state policies, or conflict with or obstruct any State or local renewable energy or energy efficiency plan. There would be no impact from the project in this regard.

3.2.7 Geology and Soils

Would the project:

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?

ii) Strong seismic ground shaking?

iii) Seismic-related ground failure, including liquefaction?

iv) Landslides?

b) Result in substantial soil erosion or the loss of topsoil?

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

CEQA Significance Determinations for Geology and Soils

a: i) No Impact

The Project Geotechnical Design report, dated November 19, 2007, identifies the Sur-Arroyo Laguna-San Simeon fault as the controlling fault for the project site. The fault is located offshore, approximately 3.4 miles west of the project site, and is believed to be capable of producing an earthquake with a moment magnitude of up to 7.5. However, the geotechnical design report also states that no known or potentially active faults project towards or cross State Route 1 within the project limits. Therefore, there is no potential for surface fault rupture, no mitigation efforts are necessary, and there is no impact as relates to this hazard.

a: ii, iii, iv) Less Than Significant Impact

The project would be designed and constructed to withstand ground shaking from the maximum credible earthquake event for the site, following Caltrans seismic standards. Project-related impacts, as they relate to strong ground shaking, are therefore expected to be less than significant.

The Structure Preliminary Geotechnical Report dated August 13, 2014, notes that soils below the project site may be susceptible to liquefaction, but because the new bridge would likely be founded on rock, the effects of surficial soil liquefaction on the structure are anticipated to be minimal. The liquefaction potential of soils encountered during subsurface investigation will be reported in the project foundation report, and the final bridge design will consider the potential effects of liquefaction on the structure. Thus, the effects of liquefaction as they relate to the project are considered to be less than significant.

The slopes above the existing highway are known as landslide areas. During construction, some grading would be required at the northern access road, and a temporary 200-foot retaining wall would be required near the northern abutment for Alternative 6. Both build alternatives are designed to avoid any potential landslides or impacts from a landslide. The new structures have been designed so that, in the event any natural landslides occur, they will be

mostly unaffected and will remain structurally sound over their projected 80-year lifespan. Therefore, the effects of the project as they relate to landslides are considered less than significant.

b, c, d) Less Than Significant Impact

The steep slopes above and below State Route 1 between the northern end of the Limekiln Creek Bridge and the Rain Rocks Sidehill Viaduct consist of weathered Franciscan Formation rocks that are susceptible to localized rockfall, landslides, and erosion. Although some soil erosion is anticipated during construction, the effects are expected to be less than significant. Removing part of the rock slope protection and crib wall would also result in soil erosion in an attempt to restore the slope to its natural condition. Native seed and erosion control would be applied, further reducing any soil erosion potential. Please see Sections 2.3.2 and 2.4 for additional information.

Exposures of Franciscan Formation rock with highly variable components (e.g., greywacke, schist, serpentized shale) are seen throughout the project area. Surficial soil deposits within the area include beach deposits consisting of sand and gravel, creek channel alluvium, and landslide deposits. On the beach, the bedrock surface undulates, and the topographic lows are filled with sand, cobbles, and boulders.

As mentioned, it is known that the slope with the rock slope protection is unstable. This is why partial removal is proposed in an attempt to restore its natural condition. Based on preliminary geotechnical data, the proposed structure has been designed to avoid unstable soil. Further data would be collected during the subsurface investigation, which would further help determine and avoid unstable geologic units. This would avoid the potential for off-site landslides, lateral spreading subsidence, liquefaction, and collapse. The impact of unstable or potentially unstable geologic units or soil on the project is therefore considered less than significant.

Preliminary investigations have found that the project is located on soils that are composed of a mix of silt, sand, clay, and gravel. Clay is commonly identified as an expansive soil. Further geotechnical investigation would be conducted prior to project construction to better identify the soil characteristics within the project area. Expansive soils are not anticipated to occur on the project site, but if needed, the project would incorporate design features to protect structures from the effects of these soils. The impact of expansive soils is therefore considered less than significant.

e) No Impact

No septic tanks or wastewater disposal systems are proposed for this project. Therefore, no impact on soils that are inadequate to support the use of septic or alternative wastewater disposal systems is anticipated.

f) Less Than Significant Impact

All project-related earthwork is anticipated to occur on previously disturbed ground where the probability of encountering paleontological resources is low. The project's likely impact on paleontological resources is therefore considered less than significant.

Please refer to Section 2.3.2 for an additional discussion regarding geology and soils and Section 2.1.13 regarding paleontological resources.

3.2.8 Greenhouse Gas Emissions

Would the project:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

CEQA Significance Determinations for Greenhouse Gas Emissions

A separate Climate Change Report was prepared for this project. The findings are summarized in Section 3.5.

a) Less Than Significant Impact

Because the project would not increase operational roadway capacity, it would not be expected to result in any new or additional greenhouse gas emissions upon completion of construction. Activities during the project construction phase would unavoidably result in a temporary increase in greenhouse gas emissions in the area, but the amounts predicted are not considered to be minor. Therefore, as regards generation of greenhouse gas emissions the project's impact is considered to be less than significant.

In addition, implementation of measures GHG-1 through GHG-7 would further reduce greenhouse gas emissions and potential climate change impacts from the project. Please refer to Section 3.6 of this document for additional detail.

b) No Impact

Applicable plans, policies, and/or regulations adopted for the purpose of reducing the emissions of greenhouse gases are summarized in Table 3 (Section 3.6.2) of this document. The proposed project would not conflict with any of these. Therefore, there is expected to be no impact.

Please refer to Section 3.6 for additional discussion regarding greenhouse gas emissions.

3.2.9 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?
- b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
- d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?
- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?
- f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
- g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

CEQA Significance Determinations for Hazards and Hazardous Materials

a, b) Less Than Significant

As mentioned in Section 2.1.7, it is possible that asbestos-containing materials may exist in the current bridge that would be demolished. These materials would be handled in accordance with Caltrans Standard Special Provisions. Any hazardous materials used on the site would be handled appropriately as per Standard Provisions and Best Management Practices and would not be expected to adversely affect human health. For these reasons, the potential for creation of a hazard pertaining to the transport, use, or disposal of hazardous materials is considered less than significant.

Because there is the possibility of asbestos-containing materials, there is the potential for creation of a hazard pertaining to the release of hazardous materials on the project site. As noted above, any existing hazardous materials found on the site, such as treated wood waste, would be handled in accordance with Caltrans Standard Special Provisions, and any hazardous

materials used during construction and operation would be handled appropriately as per Standard Provisions and Best Management Practices.

c, d, e) No Impact

There are no existing or proposed schools within the project vicinity. Therefore, there would be no impact from the proposed project pertaining to schools.

A review of environmental records and agency databases was conducted and no record of hazardous waste on the project site were found. Thus, there would be no impact relating to the project as concerns the site being listed on a hazardous materials site list.

There are no airports within the project vicinity. Therefore, there would be no impact from the proposed project pertaining to airports.

f, g) Less Than Significant Impact

A Traffic Management Plan would be implemented during project construction and the highway would remain open and passable during construction. Alternative 4B would maintain traffic on the existing bridge. Alternative 6 would maintain traffic by constructing a temporary bridge. Both alternatives would use one-way reversible traffic with signals. The potential for the project to impair or interfere with an adopted emergency response or evacuation plan is considered less than significant.

The project would not expose people or structures to an increased risk of wildfire beyond the risk level that already exists due to the existence of flammable native vegetation and leaf litter in the area. Caltrans Standard Specifications and Best Management Practices already include measures to ensure fire safety on project sites. The project would also include as a design feature the elimination of wooden guardrail posts in favor of steel or fire-resistant plastic material. For these reasons, the project would have a less than significant impact as relates to exposing people or structures to the effects of wildfire.

3.2.10 Hydrology and Water Quality

Would the project:

- a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?
- b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i) Result in substantial erosion or siltation onsite or offsite?

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite?

iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

iv) Impede or redirect flood flows?

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

CEQA Significance Determinations for Hydrology and Water Quality

a, b) Less Than Significant Impact

The proposed project would not result in substantial degradation of water quality in either the short term or the long term. Best Management Practices would be incorporated into the project to reduce the discharge of pollutants both temporarily, during construction, and permanently, as required under Caltrans' National Pollutant Discharge Elimination System permit with the State Water Resource Control Board. These treatment practices would collect stormwater runoff either in the form of sheet flow or concentrated flow. This would allow infiltration and/or settlement of the stormwater runoff before flowing into the receiving water body. Thus, the project would have a less than significant impact on water quality at the project site. Please refer to Section 2.3.1 for details regarding minimization measures that would further protect water quality.

The project would not substantially decrease groundwater within the project limits. However, dewatering may be necessary during the construction phase due to shallow groundwater. Dewatering activities would comply with the Caltrans Standard Specifications, and, if required, a separate dewatering permit would be obtained prior to the start of construction. A coffer dam (an enclosure where water is pumped out) or creek diversion would be implemented to avoid any temporary impacts on water resources. The project's impact on groundwater would be less than significant.

c: i, ii, iii) Less Than Significant Impact

The proposed project would result in an estimated 3.647 acres for Alternative 4B and 3.458 acres for Alternative 6 of disturbed soil area. However, the project would incorporate Best Management Practices to limit erosion and siltation. The removal of rock slope protection and portions of the sea wall from the northern bridge abutment would allow wave action to erode the newly exposed cliff face, but this is not expected to substantially alter existing drainage patterns. The project's impact in terms of substantial erosion or siltation is expected to be less than significant.

A hydraulics study was not completed for this project because the proposed improvements would not adversely affect the Limekiln Creek watershed and the new bridge piers would avoid the creek bed. There is no Federal Emergency Management Agency floodplain (flood insurance map) associated with this project. For both alternatives, the project's increase in new impervious surface would be greater than 10,000 square feet. Therefore, the project would be required to install treatment Best Management Practices to treat stormwater runoff from the newly created impervious surface. These treatment practices would collect stormwater runoff either in the form of sheet flow or concentrated flow. This would allow infiltration and/or settlement of the stormwater runoff before flowing into the receiving water body. Therefore, the project's impact in terms of increased rates or amounts of surface runoff is expected to be less than significant.

The project would replace an existing bridge and install two viaducts in the alignment of the current roadway north of the bridge. Stormwater drainage systems on the new structures would be designed to handle the expected amounts of water. Runoff is not expected to be greater in amount or more polluted than runoff from the existing bridge and roadway. The project's impact relating to stormwater runoff is expected to be less than significant.

c: iv, d) No Impact

Although the project would require work to be completed in the channel of Limekiln Creek for up to 3 years, necessitating creek diversion, this work would only occur during the dry season (June 1 to October 31), when the ephemeral creek is already mostly dry. Prior to the start of the rainy season, the diversion and all construction debris would be removed from the channel. Higher creek flows resulting from winter storms would flow to the ocean as usual. In addition, after construction is complete, streamflow will improve over current conditions because of the removal of the existing bridge pier in the creek channel. Thus, the project would have no impact on flood flows in Limekiln Creek.

As mentioned in Section 2.1.6, the proposed project is not located within a floodplain. According to the California Governor's Office of Emergency

Services MyHazards map, the project area is not within a tsunami hazard zone. Construction equipment used on the beach would be timed during a low tide and is not anticipated to release pollutants due to inundation.

e) Less Than Significant Impact

The proposed project would not conflict with or obstruct any water quality or groundwater management plan. The project would incorporate numerous design features and practices to protect surface water and groundwater resources in the project area. The project's impact as it relates to this topic would be less than significant.

3.2.11 Land Use and Planning

Would the project:

- a) Physically divide an established community?
- b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

CEQA Significance Determinations for Land Use and Planning

a, b) No Impact

The bridge would replace an existing structure and not divide an established community. There would be no impact regarding this topic.

Both alternatives would replace an existing structure and be consistent with applicable land use plans, policies, and regulations.

3.2.12 Mineral Resources

Would the project:

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

CEQA Significance Determinations for Mineral Resources

a, b) No Impact

There are no known mineral resources in the vicinity of the project, according to the California Department of Conservation's Mineral Land Classification Map. The project would have no impact on any such resources.

There are no known locally important mineral resources in the project vicinity. The project would have no impact on any such resources.

3.2.13 Noise

Would the project result in:

- a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
- b) Generation of excessive groundborne vibration or groundborne noise levels?
- c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

CEQA Significance Determinations for Noise

a) Less Than Significant Impact

The existing noise level at the sensitive receptor site (Limekiln State Park) is 57.6 decibels (dBA). The predicted noise level for Alternative 6 would be the same, 57.6, and the noise level for Alternative 4B would be reduced to 56.4. There would be a temporary increase in noise during construction, but Limekiln State Park would be closed for the duration of construction. Therefore, the impact of project-related noise would be less than significant.

b) Less Than Significant Impact with Mitigation Incorporated

Project construction could result in groundborne vibration and noise from the use of heavy equipment such as bulldozers, rollers, and pile drivers. As noted above, Limekiln State Park would be closed for the duration of construction.

Groundborne vibration and noise could affect wildlife, as discussed in Sections 2.1.4 and 2.4.4. The following mitigation measures would be included:

- SCCC-1: Prior to construction, Caltrans will complete a Federal Endangered Species Act consultation with the National Marine Fisheries Service.
- SCCC-2: An aquatic species exclusion/relocation plan will be prepared and approved by the National Marine Fisheries Service and implemented before a diversion is installed.
- SCCC-3: No in-water pile driving will occur as part of project activities.
- SCCC-4: If feasible, pile driving will not occur within 200 feet of the water's edge (Limekiln Creek and the Pacific Ocean high tide line). If pile driving is required within 200 feet of these areas, then a hydroacoustic analysis will be performed.
- SCCC-5: If piles are driven within 200 feet of open water (Limekiln Creek or the Pacific Ocean), a hydroacoustic analysis will be prepared to evaluate possible hydroacoustic effects. This analysis for underwater sound impacts would be provided in the Biological Assessment for the South-Central California Coast steelhead and other biological permits, as needed. Project-specific measures to reduce potential effects will be implemented as needed, and hydroacoustic monitoring will be done to avoid and minimize adverse effects on fish.
- MM-1: A Marine Mammal Avoidance Plan will be prepared to avoid and minimize effects on marine mammals. The plan will outline:
 - a. Biological monitoring requirements, including activities and times when one or more qualified biologists would be required to monitor for marine mammals using binoculars from a high vantage point. Monitoring activities will include any work activities onshore within 50 feet of tidal waters (defined for this project as a high tide line). No in-water work will occur within ocean waters. The biological monitor will have the authority to stop project activities if southern sea otters or other marine mammals approach or enter the exclusion zone (see measure c) or if, in the professional judgment of the monitor, southern sea otters or other marine mammals outside the exclusion zone display a significant and alarming reaction to construction or project activity. Biological monitoring will begin 0.5 hour before work begins and will continue until 0.5 hour after work is completed each day.
 - b. Weather conditions that would prohibit work activities if sight distance is limited.
 - c. Procedures for when a marine mammal enters the project vicinity, including species-specific stop-work buffers. Work will start only with the approval of the biological monitor to ensure that no southern sea otters are present in the exclusion zone.

- d. An exclusion zone will be implemented at all times when work is occurring onshore within 50 feet of tidal waters (high tide line). The radius of the exclusion zone will be a minimum of 50 feet to prevent the injury or disturbance of southern sea otters and other marine mammals from project activities.
 - e. If project activities (e.g., pile driving) occur within areas where they may generate underwater noise, an exclusion zone will be implemented that includes all areas where underwater sound pressure levels are expected to reach or exceed 160 dB re 1 μ Pa (sound pressure level). Project activities such as pile extraction or driving will not start (or start again following a shutdown) until southern sea otters are not sighted within the exclusion zone for a 15-minute period.
- MM-2: No in-water pile driving will occur.

With these mitigation measures incorporated, impacts are anticipated to be less than significant.

c) No Impact

There are no airports within the project vicinity. Therefore, there would be no impact from the proposed project pertaining to airports.

3.2.14 Population and Housing

Would the project:

- a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?
- b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

CEQA Significance Determinations for Population and Housing

a, b) No Impact

The proposed project would replace an existing structure, would not increase roadway capacity, and would not induce population growth in the project area. The project would have no impact pertaining to growth inducement.

The project would not displace any population or housing. There would be no impact as regards this topic.

3.2.15 Public Services

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 following 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:

Fire protection?

Police protection?

Schools?

Parks?

Other public facilities?

CEQA Significance Determinations for Public Services

a, b, c, d, e) No Impact

This project is limited to improvements to existing facilities and would not increase demand for fire or police protection services, schools, parks, or other public facilities. There would be no impact on public services from the project.

3.2.16 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?

CEQA Significance Determinations for Recreation

a, b) No Impact

The project would replace an existing bridge and would not add capacity that would increase the use of existing parks or recreational facilities. There would be no impact from the project in this regard.

The project does not include the construction or expansion of any recreational facilities. The project is limited to improving existing facilities. There would be no impact from the project as regards this topic.

3.2.17 Transportation

Would the project:

- a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?
- b) Conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?
- c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
- d) Result in inadequate emergency access?

CEQA Significance Determinations for Transportation

a) No Impact

The proposed project would not conflict with any program, plan, ordinance, or policy addressing the circulation system. There would be no impact.

b) Less Than Significant Impact

The project would not expand roadway capacity or affect vehicle miles traveled. This impact would be less than significant.

c) No Impact

The project would meet State and federal highway standards. It would not substantially increase any hazards due to design features or incompatible uses. Therefore, there would be no impact.

d) Less Than Significant Impact

It is expected that temporary construction activities have the potential to impede emergency access to State Route 1 during construction due to lane closures and one-way reversing traffic control, as mentioned in the alternatives description (see Section 1.5). During construction, traffic and emergency access would be maintained. A Traffic Management Plan would be implemented to maintain traffic flow during this period. The public would be notified of planned construction traffic management strategies through various methods as part of a public awareness campaign and motorist information on the project route. Therefore, the project's impact as regards emergency access would be less than significant.

3.2.18 Tribal Cultural Resources

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

- 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)?
- 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.

CEQA Significance Determinations for Tribal Cultural Resources

In February 2017, the District 5 Native American Coordinator, Terry I. Joslin, contacted the Salinan community members to apprise them of the project, initiate the Section 106 process, and provide AB 52 notification.

In October 2019, the consultation group was provided a copy of the draft extended phase 1 and archaeology evaluation proposal.

Patti Dutton, representing the Salinan Tribe of Monterey and San Luis Obispo counties, asked for continued consultation and monitoring during all aspects of the project.

During the excavation program (February 19 to 23, 2020), Robert Patti represented the Salinan Tribe of Monterey and San Luis Obispo counties and monitored the effort. He was provided with copies of the archaeological

survey report, final extended phase 1, and archaeology evaluation proposal prior to initiating the testing program.

In March 2020, all members of the Salinan consultation group were provided with copies of the Post-Field Summary of Phase II Excavations for the Limekiln Creek Bridge Replacement Project.

In November 2020, the draft archaeological report was sent to all members of the consultation group. No comments were received, and before the document was finalized, Joslin called Robert Patti to ensure his comments, if any, were incorporated. A voicemail message was left, and no calls were returned.

a) Significant and Unavoidable Impact

Project earthwork would disturb two archaeological sites (MNT-1892 and MNT-2452H) that are eligible for listing in the California Register of Historical Resources. Disturbance of the site cannot be avoided for this project.

Site MNT-1892 would likely be completely destroyed for both alternatives because of the demolition of the existing bridge. There is also a proposed Adverse Effect on site MNT-2452H for both alternatives due to the proposed bridge's western alignment.

However, Alternative 6 would avoid direct physical impacts on the site by avoiding grading the southern knoll. See Section 2.2.4 for further discussion.

In an effort to mitigate the significant impact, the following measures would be included:

- ARC-1: Marine survey of the intertidal related to the Rockland Landing Doghole Port. This would determine whether any additional features of the doghole port are present in the intertidal waters off Limekiln Beach. Resource locations would be recorded with GPS, photography, and measurements. Archaeologists will use snorkels or self-contained underwater breathing apparatus (known as SCUBA) diving visual surveys to locate resources underwater. The results would be documented in the Marine Survey Inventory Report, and any resources would be added to the site record for MNT-2452/H and to the district record for the Rockland Lime and Lumber Company Historic Landscape District.
- ARC-2: Preparation of a District Nomination Form for the Rockland Lime and Lumber Company Historic Landscape District. An archeological district record for the Rockland Lime and Lumber Company Historic Landscape District has been prepared and recommended for listing on the National Register of Historic Places. This would be compiled into a formal district nomination that would consider nominating the doghole port as part of a Maritime Cultural Landscape.

- ARC-3: Preparation of Public Outreach Materials related to the Rockland Lime and Lumber Company. California State Parks has developed a cell phone application that features various park-specific cultural content to create an immersive experience for hikers along a park trail. Caltrans would work with California State Parks to develop content specific to the Rockville Landing site and the broader Rockland Lime and Lumber Company Historic Landscape District.
- ARC-4: Data recovery excavations targeting specific datasets. A limited deposit is present at MNT-1892. A targeted approach of a single one-by-one meter excavation is proposed. The unit would be excavated in 10-centimeter levels with a 50-by-50-centimeter quadrant from each level collected to obtain plant macrofossils, small fish bones, and shells. The remainder of the unit will be screened on-site to collect any larger tools or faunal remains. The proposed methods and resulting laboratory efforts and reporting will be detailed in an Archaeological Data Recovery Plan, which will be developed prior to project implementation.
- ARC-5: Stable isotope seasonality studies. These studies require sampling the margins of whole mussel shells from the site. Shells for analysis will be obtained from the large bulk soil samples obtained from the proposed control unit. A sample of up to 50 shells will be sampled, with up to 200 isotope measurements read (up to four per shell).
- ARC-6: Academic manuscript preparation. As the archaeological community constitutes a large part of the interested public, the proposed mitigation studies will result in the preparation of a manuscript for publication in an academic journal. This manuscript will address either the seasonality studies or the analysis of fish remains at the site.

Though these measures would be incorporated, there would still be permanent impacts because of bridge demolition and realignment. These impacts would be considered significant and unavoidable.

b) No Impact

The sites were determined not to be significant to associated Native American tribes. See Chapter 4 for further discussion.

3.2.19 Utilities and Service Systems

Would the project:

- a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

- b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?
- c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?
- d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?
- e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

CEQA Significance Determinations for Utilities and Service Systems

a) Less Than Significant Impact

The proposed project would require the relocation of a telecommunications line. It is anticipated that the line could be moved underground during construction. The proposed project would not impact any other utilities. This impact would be considered less than significant.

b, c) No Impact

The project is to replace a deteriorating highway bridge and adjacent roadway sections. There would be no need for the project to have access to a water supply on a long-term basis. Therefore, there is no impact relating to water supplies.

The project is to replace a deteriorating highway bridge and adjacent roadway sections. There would be no need for the project to receive service from a wastewater treatment provider. Therefore, there is no impact relating to wastewater treatment.

d, e) Less Than Significant Impact

The project is to replace a deteriorating highway bridge and adjacent roadway sections. There is no potential for the project to generate solid waste on a long-term basis. There would be solid waste as a result of project construction and existing bridge demolition. Additionally, Alternative 6 would have additional waste from the temporary bridge. Therefore, there is a less than significant impact relating to solid waste.

Caltrans Standard Specifications would be followed to ensure compliance with all federal and state solid waste regulations during construction, including disposal of any potential asbestos-containing materials.

3.2.20 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

- a) Substantially impair an adopted emergency response plan or emergency evacuation plan?
- b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?
- c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?
- d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

CEQA Significance Determinations for Wildfire

a, b, c, d) Less Than Significant Impact

A Traffic Management Plan would be implemented for this project. Due to the rugged terrain and unstable slopes of Big Sur, State Route 1 is often closed for periods of time. At least one lane of travel will be open for the duration of construction, allowing for emergency response and evacuation. The project's impact on adopted emergency response and evacuation plans would be considered less than significant.

The project would not result in an increased risk of wildfires in the project area. During construction, Caltrans would use standard specifications for fire prevention. This impact would be considered less than significant.

During construction, temporary infrastructure, such as a work trestle and a concrete batch plant, would be installed. Equipment, including earthmoving vehicles, generators, power cables, and lights, would be used. As noted above, Caltrans would use standard specifications for fire prevention. Therefore, this impact would be considered less than significant.

The slope above the northern abutment is a known landslide. Both bridge alternatives were designed so that the proposed bridge would avoid impacts from the landslide. The revetment on the northern part of the beach would be partially removed. A previous Coastal Development Permit requested full removal; however, this has been determined unsafe because full removal would likely cause a large landslide movement. As discussed in Section 2.3.1, the net impervious area would be smaller as a result of this project, and

increased runoff, drainage changes, and post-fire slope instability are not anticipated to cause downslope flooding or landslides. Therefore, this impact would be considered less than significant.

3.2.21 Mandatory Findings of Significance

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

CEQA Significance Determinations for Mandatory Findings of Significance

a) Significant and Unavoidable Impact

An archeological site, MNT-1892, and a historic district, Rockland Lime and Lumber Historic Landscape District, would have significant and unavoidable impacts. Site MNT-1892 would likely be fully demolished due to the removal of the existing bridge. This site has had previous data recovery and evaluation excavations, which have left the site with a limited deposit. One contributing feature of the historic district would be directly impacted by Alternative 4B, but both alternatives would encroach on the district as a whole. This is discussed further in Sections 2.2.4 and 3.2.5.

Both alternatives would also result in significant and unavoidable visual impacts due to the realignment, increase in size of the structure, and increase in “human-made” presence. This is discussed in more detail in Section 2.2.3.

b) Significant and Unavoidable Impact

As discussed in Section 2.2.3, there would be cumulative impacts on visual resources as a result of the proposed project. This project, along with existing projects, would cause an unavoidable increase in man-made structures.

c) Less Than Significant Impact

The project proposes to replace an existing structure, and no adverse impacts on human beings, including hazards or environmental justice issues, are anticipated.

3.2.22 Senate Bill 743/Induced Demand Analysis

Regulatory Setting

Senate Bill 743 (2013) amended CEQA to allow the Governor's Office of Planning and Research to develop new guidelines under CEQA, establishing alternative metrics for levels of service for the analysis of transportation impacts. On December 28, 2018, the Office of Administrative Law approved the amendments to the CEQA Guidelines, including changes related to Senate Bill 743. The amended CEQA Guidelines add a new section on determining the significance of transportation impacts and generally specify vehicle miles traveled as the most appropriate measure of transportation impacts.

Affected Environment

The proposed project would replace an existing structure and would not increase vehicle miles traveled.

Environmental Consequences

This project does not propose additional lanes or induce growth, so no impacts are anticipated.

Avoidance, Minimization, and/or Mitigation Measures

No measures are proposed.

3.2.23 Wildfire

Regulatory Setting

Senate Bill 1241 required the Office of Planning and Research, the Natural Resources Agency, and the California Department of Forestry and Fire Protection to develop amendments to the "CEQA Checklist" for the inclusion of questions related to fire hazard impacts for projects located on lands classified as very high fire hazard severity zones. The 2018 updates to the CEQA Guidelines expanded this to include projects "near" these very high fire hazard severity zones.

Affected Environment

According to the CalFire Fire Hazard Severity Zone online mapping website, the project area is in a Very High Fire Hazard Severity Zone, as shown in the figure below.

Figure 31 Fire Hazard Severity Zone Map



Environmental Consequences

Highway closures are very common in this area due to the unstable geography and exposure to natural elements. It is not uncommon for the highway to close for several months at a time due to landslides, fires, and storm events. Caltrans is responsible for monitoring the highway and notifying closures. A Traffic Management Plan will be used for this project, and the highway where the bridge is located will remain open for the duration of construction, which will not impair any emergency response or evacuation plans.

Standard plans with fire prevention procedures would be used to avoid accidental fire starts during construction. The project would replace existing wooden posts with steel guardrail posts to reduce wildfire risks.

There are potential risks to people, specifically along Limekiln Beach, due to slope instability. The slope above the northern abutment is a known landslide. Both alternatives for the bridge replacement have been designed so that the support piers are outside the unstable slope and would allow any potential landslide to fall under the bridge. There is a risk that construction activities would activate the landslide. Partial revetment removal on the north side of the beach near the northern abutment would also restore some level of natural erosion of the slope caused by wave action. Caltrans would remove what is feasible and safe.

Avoidance, Minimization, and/or Mitigation Measures

The following avoidance and minimization measures would be used:

- WF-1: Caltrans's 2018 revised Standard Specification 7-1.02M(2) will be implemented.
- WF-2: Existing wooden posts will be replaced with steel guardrail posts.

3.3 Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. The Intergovernmental Panel on Climate Change, established by the United Nations and the World Meteorological Organization in 1988, is devoted to greenhouse gas emissions reduction and climate change research and policy. Climate change in the past has generally occurred gradually over millennia or more suddenly in response to cataclysmic natural disruptions. The research of the Intergovernmental Panel on Climate Change and other scientists over recent decades, however, has unequivocally attributed an accelerated rate of climatological changes over the past 150 years to greenhouse gas emissions generated from the production and use of fossil fuels.

Human activities generate greenhouse gases consisting primarily of carbon dioxide, methane, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, and various hydrofluorocarbons. Carbon dioxide is the most abundant greenhouse gas; while it is a naturally occurring and necessary component of Earth's atmosphere, fossil-fuel combustion is the main source of additional, human-generated carbon dioxide that is the main driver of climate change. In the U.S. and in California, transportation is the largest source of greenhouse gas emissions, mostly carbon dioxide.

The impacts of climate change are already being observed in the form of sea level rise, drought, more intense heat, extended and severe fire seasons, and historic flooding from changing storm patterns. Both mitigation and adaptation strategies are necessary to address these impacts. The most important mitigation strategy is to reduce greenhouse gas emissions. In the context of climate change (as distinct from CEQA and NEPA), "mitigation" involves actions to reduce greenhouse gas emissions or to enhance the "sinks" that store them (such as forests and soils) to lessen adverse impacts. "Adaptation" is planning for and responding to impacts to reduce vulnerability to harm, such as by adjusting transportation design standards to withstand more intense storms, heat, and higher sea levels. This analysis will include a discussion of both in the context of this transportation project.

The information presented in this chapter is based on the Climate Change Technical Report: Limekiln Creek Bridge Replacement prepared by Caltrans, dated August 17, 2023.

3.3.1 Regulatory Setting

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

Federal

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

The National Environmental Policy Act (NEPA) (42 U.S. Code Part 4332) requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project.

The Federal Highway Administration recognizes the threats that extreme weather, sea-level change, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. The Federal Highway Administration, therefore, supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset management, project development and design, and operations and maintenance practices (Federal Highway Administration, 2022). This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—“the triple bottom line of sustainability” (Federal Highway Administration, no date). Program and project elements that foster sustainability and resilience also support economic vitality and global efficiency, increase safety and mobility, enhance the environment, promote energy conservation, and improve the quality of life.

The federal government has taken steps to improve fuel economy and energy efficiency to address climate change and its associated effects. The most important of these was the Energy Policy and Conservation Act of 1975 (42 U.S. Code Section 6201) as amended by the Energy Independence and Security Act of 2007 and the Corporate Average Fuel Economy Standards. This act established fuel economy standards for on-road motor vehicles sold in the U.S. The U.S. Department of Transportation’s National Highway Traffic and Safety Administration sets and enforces the Corporate Average Fuel Economy standards based on each manufacturer’s average fuel economy for the portion of its vehicles produced for sale in the U.S. The Environmental Protection Agency calculates average fuel economy levels for manufacturers and also sets related greenhouse gas emissions standards under the Clean Air Act. Raising Corporate Average Fuel Economy standards leads automakers to create a more fuel-efficient fleet, which improves our nation’s energy security, saves consumers money at the pump, and reduces greenhouse gas emissions (U.S. DOT 2014).

The U.S. Environmental Protection Agency published a final rulemaking on December 30, 2021, that raised federal greenhouse gas emissions standards for passenger cars and light trucks for model years 2023 through 2026, increasing in stringency each year. The updated greenhouse gas emissions standards will avoid more than 3 billion tons of greenhouse gas emissions through 2050. In April 2022, the National Highway Traffic Safety Administration announced corresponding new fuel economy standards for model years 2024 through 2026, which will reduce fuel use by more than 200 billion gallons through 2050 compared to the old standards and reduce fuel costs for drivers (U.S. Environmental Protection Agency 2022a; National Highway Traffic Safety Administration 2022).

State

California has been innovative and proactive in addressing greenhouse gas emissions and climate change by passing multiple Senate and Assembly bills and executive orders, including, but not limited to, the following:

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

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

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

Senate Bill 375, Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires the California Air Resources Board to set

regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization for each region must then develop a “Sustainable Communities Strategy” that integrates transportation, land-use, and housing policies to plan how it will achieve the emissions target for its region.

Senate Bill 391, Chapter 585, 2009, California Transportation Plan: This bill requires the State’s long-range transportation plan to identify strategies to address California’s climate change goals under Assembly Bill 32.

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

Executive Order B-30-15 (April 2015) establishes an interim statewide greenhouse gas emission reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing greenhouse gas emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of greenhouse gas emissions to implement measures, pursuant to statutory authority, to achieve reductions of greenhouse gas emissions to meet the 2030 and 2050 greenhouse gas emissions reduction targets. It also directs the California Air Resources Board to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent. Greenhouse gases differ in how much heat each trap in the atmosphere, called global warming potential. Carbon dioxide is the most important greenhouse gas, so amounts of other gases are expressed relative to carbon dioxide using a metric called “carbon dioxide equivalent.” The global warming potential of carbon dioxide is assigned a value of 1, and the global warming potential of other gases is assessed as multiples of carbon dioxide. Finally, it requires the Natural Resources Agency to update the state’s climate adaptation strategy, Safeguarding California, every three years and to ensure that its provisions are fully implemented.

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

Senate Bill 1386, Chapter 545, 2016, declared “it to be the policy of the state that the protection and management of natural and working lands... is an important strategy in meeting the state’s greenhouse gas reduction goals, and would require all state agencies, departments, boards, and commissions to consider this policy when revising, adopting, or establishing policies, regulations, expenditures, or grant criteria relating to the protection and management of natural and working lands.”

Senate Bill 743, Chapter 386 (September 2013): This bill changes the metric of consideration for transportation impacts pursuant to CEQA from a focus on automobile delay to alternative methods focused on vehicle miles traveled to promote the state's goals of reducing greenhouse gas emissions and traffic-related air pollution and promoting multimodal transportation while balancing the needs of congestion management and safety.

Senate Bill 150, Chapter 150, 2017, Regional Transportation Plans: This bill requires the California Air Resources Board to prepare a report that assesses progress made by each metropolitan planning organization in meeting its established regional greenhouse gas emission reduction targets.

Executive Order B-55-18 (September 2018) sets a new statewide goal to achieve and maintain carbon neutrality no later than 2045. This goal is in addition to existing statewide targets for reducing greenhouse gas emissions.

Assembly Bill 1279, Chapter 337, 2022, The California Climate Crisis Act: This bill mandates carbon neutrality by 2045 and establishes an emissions reduction target of 85 percent below 1990 levels as part of that goal. This bill solidifies a goal included in Executive Order B-55-18. It requires the California Air Resources Board to work with relevant state agencies to ensure that updates to the scoping plan identify and recommend measures to achieve these policy goals and to identify and implement a variety of policies and strategies that enable carbon dioxide removal solutions and carbon capture, utilization, and storage technologies in California, as specified.

3.3.2 Environmental Setting

The proposed Limekiln Creek Bridge Replacement project in Monterey County is on State Route 1 on the Big Sur Coast, a rural area with a primarily natural resources-based agricultural and tourism economy. State Route 1 is a State Scenic Route, a National Scenic Byway, an All-American Road, and is on the Pacific Coast Bicycle Route.

The project site is within a state-designated Coastal Zone and lies entirely within Limekiln State Park. The area features a typical Mediterranean climate with mild year-round temperatures, dry summers, and rainy winters. The average annual precipitation in the area is approximately 41 inches. Coastal fog is common in the spring and summer.

Within the project area, State Route 1 is a two-lane undivided highway with two 10- to 12-foot lanes and 0- to 4-foot non-standard shoulders. The posted speed limit is 55 miles per hour. Traffic counts in the project area are high year-round, particularly during the summer tourism season. The nearest alternate route is U.S. 101, located approximately 33 miles to the east in the Salinas River valley. However, direct transportation options between the Big Sur area and U.S. 101 are extremely limited.

Over decades, access to and through the project area has frequently been interrupted by natural hazards, including wildfires, flooding, and landslides that have closed State Route 1. Because State Route 1 is the main transportation route to and through the area for both passenger and commercial vehicles, many area residents and businesses depend on the highway as the sole access to their property as well as the primary transportation corridor driving economic activity in the area.

Transportation development and greenhouse gas reduction policies in the project area are guided by the Association of Monterey Bay Area Governments, the Transportation Agency for Monterey County, the Monterey County General Plan, and other planning efforts such as the Caltrans Big Sur Highway 1 Sustainable Transportation Demand Management Plan.

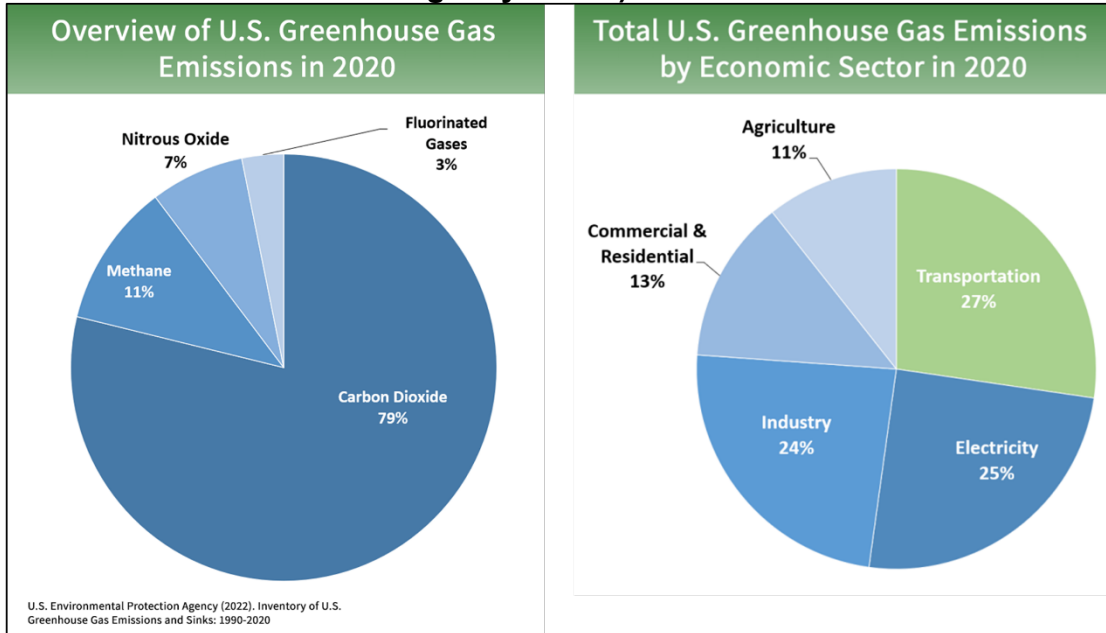
Greenhouse Gas Inventories

A greenhouse gas emissions inventory estimates the amount of greenhouse gases discharged into the atmosphere by specific sources over a period of time, such as a calendar year. Tracking annual greenhouse gas emissions allows countries, states, and smaller jurisdictions to understand how emissions are changing and what actions may be needed to attain emission reduction goals. The U.S. Environmental Protection Agency is responsible for documenting greenhouse gas emissions nationwide, and the California Air Resources Board does so for the state, as required by Health and Safety Code Section 39607.4. Cities and other local jurisdictions may also conduct local greenhouse gas inventories to inform their greenhouse gas reduction or climate action plans.

National Greenhouse Gas Inventory

The annual greenhouse gas inventory submitted by the U.S. Environmental Protection Agency to the United Nations provides a comprehensive accounting of all human-produced sources of greenhouse gases in the U.S. Total greenhouse gas emissions from all sectors in 2020 were 5,222 million metric tons, factoring in deductions for carbon sequestration in the land sector. Of these, 79 percent were carbon dioxide, 11 percent were methane, and 7 percent were nitrous oxide; the balance consisted of fluorinated gases. Total greenhouse gases in 2020 decreased by 21 percent from 2005 levels and 11 percent from 2019. The change from 2019 resulted primarily from less demand in the transportation sector during the COVID-19 pandemic. The transportation sector was responsible for 27 percent of total U.S. greenhouse gas emissions in 2020, more than any other sector (Figure 32), and for 36 percent of all carbon dioxide emissions from fossil fuel combustion. Transportation carbon dioxide emissions for 2020 decreased by 13 percent from 2019 to 2020 but were 7 percent higher than transportation carbon dioxide emissions in 1990 (Figure 32).

Figure 32 United States 2022 Greenhouse Gas Emissions (Source: U.S. Environmental Protection Agency 2022b)



State Greenhouse Gas Inventory

The California Air Resources Board collects greenhouse gas emissions data for transportation, electricity, commercial/residential, industrial, agricultural, and waste management sectors each year. It then summarizes and highlights major annual changes and trends to demonstrate the state’s progress in meeting its greenhouse gas reduction goals. The 2022 edition of the greenhouse gas emissions inventory reported emissions trends from 2000 to 2020. Total California greenhouse gas emissions in 2020 were 369.2 million metric tons of carbon dioxide equivalent, a reduction of 35.3 million metric tons of carbon dioxide equivalent from 2019 and 61.8 million metric tons of carbon dioxide equivalent below the 2020 statewide limit of 431 million metric tons of carbon dioxide equivalent. Much of the decrease from 2019 to 2020, however, is likely due to the effects of the COVID-19 pandemic on the transportation sector, during which vehicle miles traveled declined under stay-at-home orders and reductions in goods movement. Nevertheless, transportation remained the largest source of greenhouse gas emissions, accounting for 37 percent of statewide emissions (Figure 33). (Including upstream emissions from oil extraction, petroleum refining, and oil pipelines in California, transportation was responsible for about 47 percent of statewide emissions in 2020; however, those emissions are accounted for in the industrial sector.) California’s gross domestic product and greenhouse gas intensity (greenhouse gas emissions per unit of gross domestic product) both declined from 2019 to 2020 (Figure 33). It is expected that total greenhouse gas emissions will increase as the economy recovers over the next few years (California Air Resources Board, 2022a).

Figure 33 California 2022 Greenhouse Gas Emissions by Scoping Plan Category (Source: California Air Resources Board, 2022a)

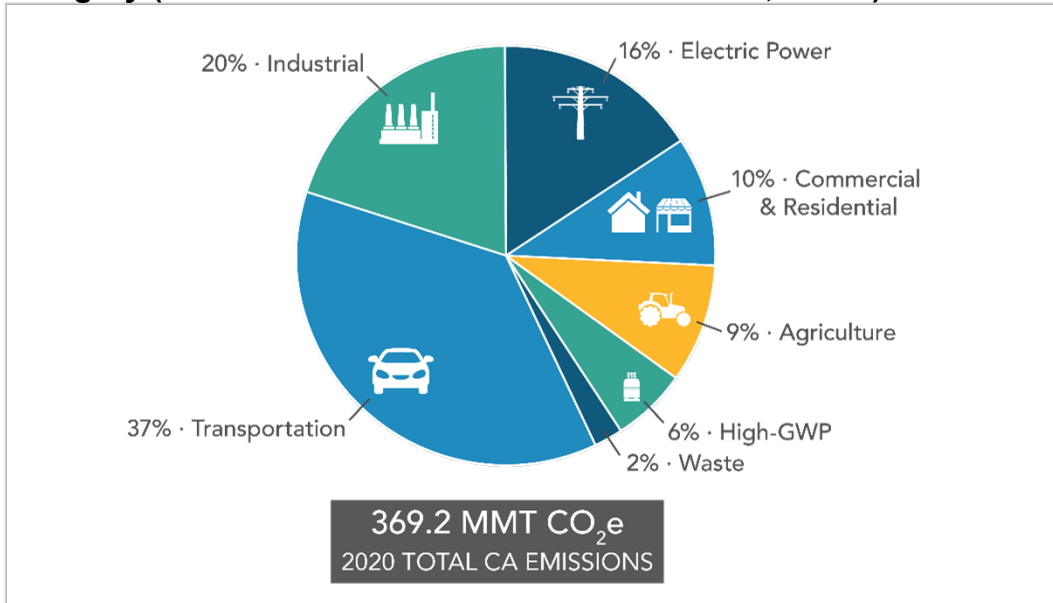
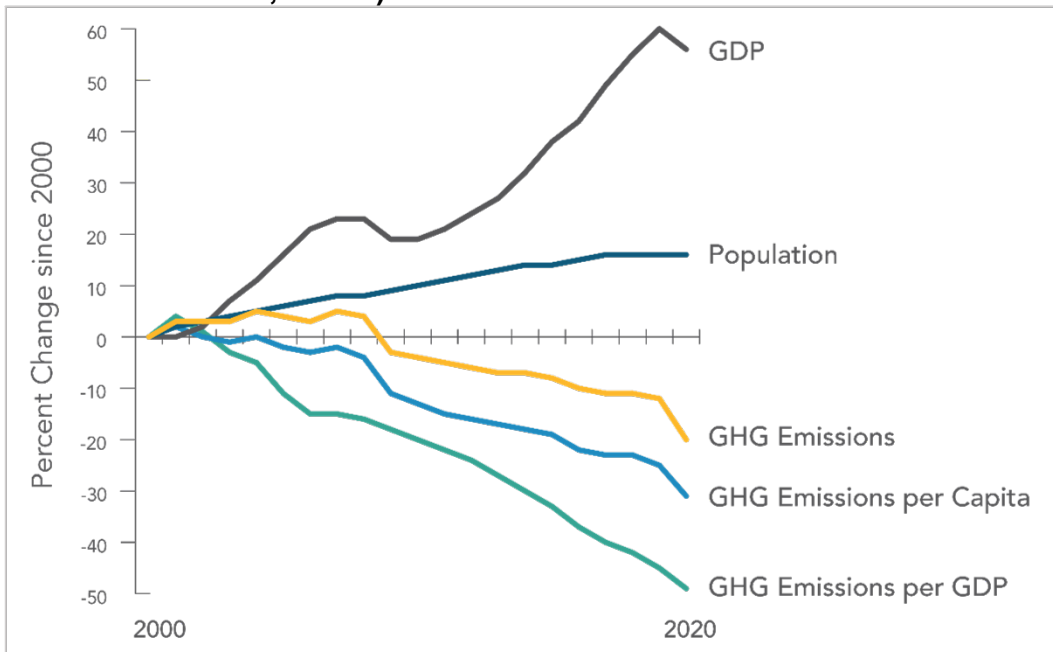


Figure 34 Change in California Gross Domestic Product, Population, and Greenhouse Gas Emissions Since 2000 (Source: California Air Resources Board, 2022a)



Assembly Bill 32 required the California Air Resources Board to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing greenhouse gas emissions to 1990 levels by 2020 and to update it every 5 years. The California Air Resources Board adopted the first scoping plan in 2008. The second updated plan, California’s 2017 Climate Change Scoping Plan, adopted on December 14, 2017, reflects the 2030

target established in Executive Order B-30-15 and Senate Bill 32. The draft 2022 Scoping Plan Update additionally lays out a path to achieving carbon neutrality by 2045 (California Air Resources Board 2022b).

Regional Plans

The California Air Resources Board sets regional greenhouse gas reduction targets for California's 18 Metropolitan Planning Organizations to achieve through planning future projects that will cumulatively achieve those goals and reporting how they will be met in the Regional Transportation Plan/Sustainable Communities Strategy. Targets are set at a percent reduction of passenger vehicle greenhouse gas emissions per person from 2005 levels.

The proposed project falls within the jurisdiction of the Association of Monterey Bay Area Governments. The Association of Monterey Bay Area Governments is the Metropolitan Planning Organization for the region and oversees the Metropolitan Transportation Plan/Sustainable Communities Strategy for the counties of Monterey, San Benito, and Santa Cruz. This organization's regional greenhouse gas reduction target is 6 percent by 2035.

The project is also within the jurisdiction of the Transportation Agency for Monterey County, which is the state-designated Regional Transportation Agency for the county, and produced the 2022 Monterey County Regional Transportation Plan, included as part of the Metropolitan Transportation Plan/Sustainable Communities Strategy. The Regional Transportation Plan incorporates State sustainability and climate action planning goals to reduce greenhouse gas emissions and vehicle miles traveled while improving safe, effective multimodal access to jobs, housing, education, tourism destinations, and many other essential resources. The transportation agency updates the Regional Transportation Plan every four years in coordination with the Association of Monterey Bay Area Governments.

The proposed project is consistent with the Transportation Agency for Monterey County's mission statement to develop and maintain a multimodal transportation system that enhances mobility, safety, access, environmental quality, and economic activities in Monterey County. The project is also consistent with Caltrans' Big Sur Coast Highway Management Plan and Big Sur Highway 1 Sustainable Transportation Demand Management Plan.

The Monterey County General Plan's Conservation and Open Space Element calls for a variety of greenhouse gas emissions reduction actions. Please refer to Table 10, which lists greenhouse gas reduction plans in the local and regional vicinity of the proposed project.

Table 10 Alternative 4B Construction Phase Greenhouse Gas Emission Estimates

Plan Title	Greenhouse Gas Reduction Policies or Strategies
<p>Association of Monterey Bay Area Governments. Moving Forward Monterey Bay 2045: Metropolitan Transportation Plan/Sustainable Communities Strategy and Regional Transportation Plans for Monterey, San Benito, and Santa Cruz counties (adopted June 2022)</p>	<p>These plans seek to reduce greenhouse gas emissions by:</p> <ul style="list-style-type: none"> • Developing an integrated, multimodal, equitable transportation system • Expanding the public transit network • Adding strategic capacity and technology enhancements to existing highways • Identifying a list of projects that will add and enhance walking and biking facilities • Adding improved Transportation Systems Management measures • Improving Transportation Demand Management
<p>Caltrans Big Sur Highway 1 Sustainable Transportation Demand Management Plan (February 2020)</p>	<p>This plan includes greenhouse gas emissions reduction recommendations pertaining to:</p> <ul style="list-style-type: none"> • Electric vehicle charging stations: Place fast chargers at regular intervals along the SR 1 corridor, at lodgings, and in commercial or publicly accessible areas with activities. • Active transportation: Develop paved, shared-use shoulders and paths; complete the California Coastal Trail; develop new pedestrian facilities. • Transit and shuttles: Options include shuttles to popular destinations, a local circulator shuttle, and restarting regional transit service to/from Big Sur.

Plan Title	Greenhouse Gas Reduction Policies or Strategies
<p>County of Monterey. General Plan – Conservation and Open Space Element (amended as of December 15, 2020)</p>	<p>Monterey County’s Conservation and Open Space Element, Policy OS-10.11, calls for the creation of a county climate action plan that would include the following activities:</p> <ul style="list-style-type: none"> • Establish a current inventory of greenhouse gas emissions in the County of Monterey, including but not limited to residential, commercial, industrial, and agricultural emissions. • Review progress made between 2010 and 2020 to reduce greenhouse gas emissions. • Forecast greenhouse gas emissions for 2030 for county operations. • Forecast greenhouse gas emissions for areas within the jurisdictional control of the county for “business as usual” conditions. • Identify strategies to reduce and sequester greenhouse gas emissions and set performance indicators for each strategy. • Quantify the reductions in greenhouse gas emissions from the identified strategies and evaluate the social and health impacts that may result from their implementation. • Quantify carbon sequestration in agricultural soils and crops. • Establish requirements for monitoring and reporting of indicators. • Establish a schedule of actions for implementation. • Identify funding sources for implementation and • Identify a reduction goal for 2045.
<p>Transportation Agency of Monterey County. Active Transportation Plan for Monterey County (adopted June 2018)</p>	<p>The primary goal of this plan is to increase the proportion of trips accomplished by biking and walking throughout Monterey County. Other goals include improving safety, connectivity, and equity; increasing public outreach; and improving bike and pedestrian facilities. The plan contains numerous objectives and programs (strategies or actions) to achieve these goals.</p>

3.3.3 Project Analysis

Greenhouse gas emissions from transportation projects can be divided into those produced during the operation of the State Highway System (operational emissions) and those produced during construction. The main greenhouse gases produced by the transportation sector are carbon dioxide, methane, nitrous oxide, and hydrofluorocarbons. Carbon dioxide emissions are a product of burning gasoline or diesel fuel in internal combustion engines, along with relatively small amounts of methane and nitrous oxide. A small amount of hydrofluorocarbon emissions related to refrigeration is also included in the transportation sector.

The CEQA Guidelines generally address greenhouse gas emissions as a cumulative impact due to the global nature of climate change (Public Resources Code, Section 21083(b)(2)). As the California Supreme Court explained, “because of the global scale of climate change, any one project’s contribution is unlikely to be significant by itself.” (Cleveland National Forest Foundation v. San Diego Assn. of Governments (2017), 3 Cal. 5th 497, 512). In assessing cumulative impacts, it must be determined if a project’s incremental effect is “cumulatively considerable” (CEQA Guidelines Sections 15064(h)(1) and 15130).

To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. Although climate change is ultimately a cumulative impact, not every individual project that emits greenhouse gases must necessarily be found to contribute to a significant cumulative impact on the environment.

Operational Emissions

The purpose of the proposed project is to replace the Limekiln Creek Bridge, which suffers from bridge deterioration and slope stability issues. Neither of the proposed build alternatives would increase the vehicle capacity of the roadway. While some greenhouse gas emissions during the construction period would be unavoidable, no increase in operational greenhouse gas emissions is expected to occur as a result of project implementation.

Construction Emissions

Construction greenhouse gas emissions would result from material processing and transportation, on-site construction equipment, and traffic delays due to construction. These emissions would 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.

The use of long-life pavement, improved traffic management plans, and changes in materials can also help offset emissions produced during

construction by allowing longer intervals between maintenance and rehabilitation activities.

An Air Quality, Greenhouse Gas, and Noise Updated Technical Memo was prepared for the project. The estimated duration of project construction activities is 800 working days for Alternative 4B and 821 working days for Alternative 6.

The Caltrans Construction Emissions Tool was used to calculate construction-related greenhouse gas emissions for the project, using the model's default settings for a Bridge Construction and Preservation project. The Caltrans Construction Emissions Tool estimates for carbon dioxide, methane, nitrous oxide, and hydrofluorocarbons for each alternative are presented below in Tables 11 and 12. These estimates are based on assumptions made during the environmental planning phase of the project and are considered “ballpark” energy usage projections.

Table 11 Alternative 4B Construction Phase Greenhouse Gas Emission Estimates

Averages	Carbon Dioxide	Methane	Nitrous Oxide	Hydrofluorocarbon
Daily Average (Pounds per Day)	3707	0.113	0.201	0.142
Max Daily Average (Pounds per Day)	6963	0.226	0.323	0.273
Annual Average (Tons per Year)	371	0.011	0.020	0.014

Table 12 Alternative 6 Construction Phase Greenhouse Gas Emission Estimates

Averages	Carbon Dioxide	Methane	Nitrous Oxide	Hydrofluorocarbon
Daily Average (Pounds per Day)	4458	0.100	0.209	0.193
Max Daily Average (Pounds per Day)	7991	0.216	0.333	0.381
Annual Average (Tons per Year)	457	0.010	0.021	0.020

All construction contracts include Caltrans Standard Specifications related to air quality. Sections 7-1.02A and 7-1.02C, Emissions Reduction, require contractors to comply with all laws applicable to the project and to certify they are aware of and will comply with all Air Resources Board emission reduction regulations. Section 14-9.02, Air Pollution Control, requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. Certain common regulations, such as equipment idling restrictions, that reduce construction vehicle emissions also help reduce greenhouse gas emissions.

Fuel Consumption

The Caltrans Construction Emissions Tool model also calculates construction-phase fuel consumption. The results of these calculations may be reported in a project's climate change environmental documentation (for

example, an environmental impact report) because the amounts and types of fuel consumed directly influence the amount of exhaust released and types of pollutants produced, including greenhouse gases.

Projected fuel consumption for the construction phase of this project was calculated using the Caltrans Construction Emissions Tool and reported in the Air Quality, Greenhouse Gas, and Noise Updated Technical Memo (August 4, 2023). The estimated duration of project construction activities is 800 working days for Alternative 4B and 821 working days for Alternative 6.

The Caltrans Construction Emissions Tool estimates for consumption of diesel and gasoline fuel for each alternative are presented below in Tables 13 and 14. As with the emissions estimates provided above, these numbers are based on assumptions made during the environmental planning phase of the project and are considered “ballpark” energy usage projections.

Table 13 Alternative 4B Construction Phase Fuel Consumption Estimates

Averages	Diesel Fuel	Gasoline Fuel
Daily Average (Gallons of Fuel per Day)	136	41
Maximum Daily Average (Gallons of Fuel per Day)	282	83
Annual Average (Gallons of Fuel per Year)	29,173	8,902

Table 14 Alternative 6 Construction Phase Fuel Consumption Estimates

Averages	Diesel Fuel	Gasoline Fuel
Daily Average (gallons of fuel per day)	144	45
Maximum Daily Average (gallons of fuel per day)	294	89
Annual Average (gallons of fuel per year)	29,541	9,247

CEQA Conclusion

Although the proposed project would result in greenhouse gas emissions during construction, it is anticipated that the project would not result in any increase in operational greenhouse gas emissions. The proposed project does not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. With the implementation of greenhouse gas reduction measures during the construction phase, the impact would be less than significant.

Caltrans is firmly committed to implementing measures to help reduce greenhouse gas emissions. These measures are outlined in the following section.

3.3.4 Greenhouse Gas Reduction Strategies

Statewide Efforts

In response to Assembly Bill 32, California is implementing measures to achieve emission reductions of greenhouse gases that cause climate change. Climate change programs in California are effectively reducing greenhouse gas emissions from all sectors of the economy. These programs include regulations, market programs, and incentives that will transform transportation, industry, fuels, and other sectors to take California into a sustainable, low-carbon, and cleaner future while maintaining a robust economy (California Air Resources Board 2022d).

Major sectors of the California economy, including transportation, will need to reduce emissions to meet the 2030 and 2050 greenhouse gas emissions targets. The Governor's Office of Planning and Research identified five sustainability pillars in a 2015 report: (1) increasing the share of renewable energy in the state's energy mix to at least 50 percent by 2030; (2) reducing petroleum use by up to 50 percent by 2030; (3) increasing the energy efficiency of existing buildings by 50 percent by 2030; (4) reducing emissions of short-lived climate pollutants; and (5) stewarding natural resources, including forests, working lands, and wetlands, to ensure that they store carbon, are resilient, and enhance other environmental benefits (Office of Planning and Research 2015). The Office of Planning and Research later added strategies related to achieving statewide carbon neutrality by 2045 in accordance with Executive Order B-55-18 and Assembly Bill 1279 (Office of Planning and Research 2022).

The transportation sector is integral to the people and economy of California. To achieve greenhouse gas emission reduction goals, it is vital that the state build on past successes in reducing criteria and toxic air pollutants from transportation and goods movement.

Greenhouse gas emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and a reduction in vehicle miles traveled. Reducing today's petroleum use in cars and trucks by 50 percent is a key state goal for reducing greenhouse gas emissions by 2030 (California Environmental Protection Agency, 2015).

In addition, Senate Bill 1386 (Wolk 2016) established as state policy the protection and management of natural and working lands and requires state agencies to consider that policy in their own decision-making. Trees and vegetation in forests, rangelands, farms, and wetlands remove carbon dioxide from the atmosphere through biological processes and sequester the carbon in above-ground and below-ground matter.

Subsequently, Governor Gavin Newsom issued Executive Order N-82-20 to combat the crises in climate change and biodiversity. It instructs state

agencies to use existing authorities and resources to identify and implement near- and long-term actions to accelerate the natural removal of carbon and build climate resilience in our forests, wetlands, urban greenspaces, agricultural soils, and land conservation activities in ways that serve all communities, and in particular low-income, disadvantaged, and vulnerable communities. To support this order, the California Natural Resources Agency (2022a) released the Natural and Working Lands Climate Smart Strategy, with a focus on nature-based solutions.

Caltrans Activities

Caltrans continues to be involved on the Governor's Climate Action Team as the California Air Resources Board works to implement Executive Orders S-3-05 and S-01-07 and help achieve the targets set forth in Assembly Bill 32. Executive Order B-30-15, issued in April 2015, and Senate Bill 32 (2016) set an interim target to cut greenhouse gas emissions to 40 percent below 1990 levels by 2030. The following major initiatives are underway at Caltrans to help meet these targets:

Climate Action Plan for Transportation Infrastructure

The California Action Plan for Transportation Infrastructure builds on executive orders signed by Governor Newsom in 2019 and 2020 targeted at reducing greenhouse gas emissions in transportation, which account for more than 40 percent of all polluting emissions, to reach the state's climate goals. Under the California Action Plan for Transportation Infrastructure, where feasible and within existing funding program structures, the state will invest discretionary transportation funds in sustainable infrastructure projects that align with its climate, health, and social equity goals (California State Transportation Agency, 2021).

California Transportation Plan

The California Transportation Plan is a statewide, long-range transportation plan to meet our future mobility needs and reduce greenhouse gas emissions. It serves as an umbrella document for all the other statewide transportation planning documents. The California Transportation Plan 2050 presents a vision of a safe, resilient, and universally accessible transportation system that supports vibrant communities, advances racial and economic justice, and improves public and environmental health. The plan's climate goal is to achieve statewide greenhouse gas emissions reduction targets and increase resilience to climate change. It demonstrates how greenhouse gas emissions from the transportation sector can be reduced through advancements in clean fuel technologies, continued shifts toward active travel, transit, and shared mobility, more efficient land use and development practices, and continued shifts to telework (Caltrans 2021a).

Caltrans Strategic Plan

The Caltrans 2020–2024 Strategic Plan includes goals of stewardship, climate action, and equity. Climate action strategies include developing and implementing a Caltrans Climate Action Plan; a robust program of climate action education, training, and outreach; partnership and collaboration; a vehicle miles traveled monitoring and reduction program; and engaging with the most vulnerable communities in developing and implementing Caltrans climate action activities (Caltrans 2021b).

Caltrans Policy Directives and Other Initiatives

Caltrans Director's Policy 30 Climate Change (June 22, 2012) established a department policy to ensure coordinated efforts to incorporate climate change into departmental decisions and activities. Caltrans' Greenhouse Gas Emissions and Mitigation Report (Caltrans 2020) provides a comprehensive overview of Caltrans' emissions. The report documents and evaluates current Caltrans procedures and activities that track and reduce greenhouse gas emissions and identifies additional opportunities for further reducing greenhouse gas emissions from department-controlled emission sources in support of departmental and state goals.

Project-Level Greenhouse Gas Reduction Strategies

The following measures would be implemented during the construction phase of the project to reduce greenhouse gas emissions and potential climate change impacts from the project:

- GHG-1: Reduce construction waste and maximize the use of recycled materials, including but not limited to stockpiling pavement grindings for future use, salvaging rebar from demolished concrete, replacing drainage pipes, and processing waste to create usable fill material.
- GHG-2: Operate construction equipment with improved fuel efficiency by:
 - Properly tuning and maintaining equipment
 - Limiting idling to five minutes for delivery and dump trucks and other diesel-powered equipment
 - Using the right-sized equipment for the job
 - Using alternative fuels, such as renewable diesel, as feasible
 - Producing hot-mix asphalt with warm-mix technology
- GHG-3: Schedule traffic control with traffic handling plans and stage construction.
- GHG-4: Reduce water consumption during construction and prioritize the use of recycled water for construction needs.

- GHG-5: Conduct construction environmental training to provide construction personnel with information regarding methods to reduce greenhouse gas emissions related to construction.
- GHG-6: Select pavement materials that lower the rolling resistance of highway surfaces as much as possible while still maintaining design and safety standards.
- GHG-7: Maintain bicycle, pedestrian, and transit access throughout construction.

3.3.5 Adaptation

Reducing greenhouse gas emissions is only one part of an approach to addressing climate change. Caltrans must plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, storm surges and their intensity, and in the frequency and intensity of wildfires. Flooding and erosion can damage or wash out roads; longer periods of intense heat can buckle pavement and railroad tracks; and storm surges combined with a rising sea level can inundate highways. Wildfires can directly burn facilities and indirectly cause damage when rain falls on denuded slopes that landslide after a fire. Effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. Accordingly, Caltrans must consider these types of climate stressors in how highways are planned, designed, built, operated, and maintained.

Federal Efforts

Under NEPA assignment, Caltrans is obligated to comply with all applicable federal environmental laws and Federal Highway Administration NEPA regulations, policies, and guidance.

The *Fourth National Climate Assessment*, published in 2018, presents the foundational science and the “human welfare, societal, and environmental elements of climate change and variability for 10 regions and 18 national topics, with particular attention paid to observed and projected risks, impacts, consideration of risk reduction, and implications under different mitigation pathways.”

The U.S. Department of Transportation Policy Statement on Climate Adaptation in June 2011 committed the federal Department of Transportation to “integrate consideration of climate change impacts and adaptation into the planning, operations, policies, and programs of the U.S. Department of Transportation in order to ensure that taxpayer resources are invested wisely and that transportation infrastructure, services, and operations remain effective in current and future climate conditions” (U.S. DOT 2011). The U.S. Department of Transportation Climate Action Plan of August 2021 followed up

with a statement of policy to “accelerate reductions in greenhouse gas emissions from the transportation sector and make our transportation infrastructure more climate change resilient now and in the future,” following this set of guiding principles (U.S. DOT 2021):

- Use the best available science
- Prioritize the most vulnerable
- Preserve ecosystems
- Build community relationships
- Engage globally

The U.S. Department of Transportation developed its climate action plan pursuant to federal Executive Order 14008, Tackling the Climate Crisis at Home and Abroad (January 27, 2021). Executive Order 14008 recognized the threats of climate change to national security and ordered federal government agencies to prioritize actions on climate adaptation and resilience in their programs and investments (White House 2021).

Federal Highway Administration Order 5520 (Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events, December 15, 2014) established Federal Highway Administration policy to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. The Federal Highway Administration has developed guidance and tools for transportation planning that foster resilience to climate effects and sustainability at the federal, state, and local levels (Federal Highway Administration 2019).

State Efforts

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system. A number of state policies and tools have been developed to guide adaptation efforts.

California’s Fourth Climate Change Assessment (Fourth Assessment) (2018) is the state’s effort to “translate the state of climate science into useful information for action.” It provides information that will help decision-makers across sectors and at state, regional, and local scales protect and build the resilience of the state’s people, infrastructure, natural systems, working lands, and waters. The state’s approach recognizes that the consequences of climate change occur at the intersections of people, nature, and infrastructure. The Fourth Assessment reports that if no measures are taken to reduce greenhouse gas emissions by 2021 or sooner, the state is projected to experience a 2.7 to 8.8 degrees Fahrenheit increase in average annual maximum daily temperatures, with impacts on agriculture, energy demand, natural systems, and public health; a two-thirds decline in water supply from snowpack and water shortages that will impact agricultural production; a 77

percent increase in average area burned by wildfire, with consequences for forest health and communities; and large-scale erosion of up to 67 percent of Southern California beaches and inundation of billions of dollars' worth of residential and commercial buildings due to sea level rise (State of California 2018).

Sea level rise is a particular concern for transportation infrastructure in the coastal zone. Major urban airports will be at risk of flooding from sea level rise combined with storm surge as early as 2040; San Francisco International Airport is already at risk. Miles of coastal highways vulnerable to flooding in a 100-year storm event will triple to 370 by 2100, and 3,750 miles will be exposed to temporary flooding. The Fourth Assessment's findings highlight the need for proactive action to address the current and future impacts of climate change.

In 2008, then-governor Arnold Schwarzenegger recognized the need when he issued Executive Order S-13-08, which focused on sea level rise. Technical reports on the latest sea level rise science were first published in 2010 and updated in 2013 and 2017. The 2017 projections of sea level rise and a new understanding of processes and potential impacts in California were incorporated into the State of California Sea-Level Rise Guidance Update in 2018. This executive order also gave rise to the California Climate Adaptation Strategy (2009), updated in 2014 as *Safeguarding California: Reducing Climate Risk (Safeguarding California Plan)*, which addressed the full range of climate change impacts and recommended adaptation strategies. The *Safeguarding California Plan* was updated in 2018 and again in 2021 as the California Climate Adaptation Strategy, incorporating key elements of the latest sector-specific plans such as the Natural and Working Lands Climate Smart Strategy, Wildfire and Forest Resilience Action Plan, Water Resilience Portfolio, and the Climate Action Plan for Transportation Infrastructure (described above). Priorities in the 2021 California Climate Adaptation Strategy include acting in partnership with California Native American Tribes, strengthening protections for climate-vulnerable communities that lack capacity and resources, nature-based climate solutions, the use of the best available climate science, and partnering and collaboration to best leverage resources (California Natural Resources Agency 2022b).

Executive Order B-30-15: This order was signed in April 2015 and requires state agencies to factor climate change into all planning and investment decisions. This order recognizes that the effects of climate change, in addition to sea level rise, also threaten California's infrastructure. At the direction of Executive Order B-30-15, the Office of Planning and Research published *Planning and Investing for a Resilient California: A Guidebook for State Agencies* in 2017 to encourage a uniform and systematic approach.

Assembly Bill 2800 (Quirk 2016): This bill created the multidisciplinary Climate-Safe Infrastructure Working Group to help actors throughout the state

address the findings of California’s Fourth Climate Change Assessment. It released its report, *Paying it Forward: The Path Toward Climate-Safe Infrastructure in California*, in 2018. The report provides guidance to agencies on how to address the challenges of assessing risk in the face of inherent uncertainties still posed by the best available science on climate change. It also examines how state agencies can use infrastructure planning, design, and implementation processes to address the observed and anticipated impacts of climate change (Climate Change Infrastructure Working Group 2018).

Caltrans Adaptation Efforts

Caltrans Vulnerability Assessments

Caltrans completed climate change vulnerability assessments to identify segments of the State Highway System vulnerable to climate change effects of precipitation, temperature, wildfire, storm surge, and sea level rise.

The climate change data in the assessments were developed in coordination with climate change scientists and experts at federal, state, and regional organizations at the forefront of climate science. The findings of the vulnerability assessments guide the analysis of at-risk assets and the development of Adaptation Priority Reports as a method to make capital programming decisions to address identified risks.

Project Adaptation Analysis

The Governor’s Office of Planning and Research prepared *Planning and Investing for a Resilient California* (OPR 2017), a guidebook for state agencies performing climate risk analyses to determine how to integrate climate considerations into planning or investment decisions. Assessing the scale, scope, and context of climate disruption for the project means considering the timeframe/lifetime, adaptive capacity, and risk tolerance of the project areas. Ensuring that the climate change analysis adequately addresses a project’s coastal impacts and vulnerability reduces the risk of project delays.

The first step in the process is to identify how climate change could affect a project or plan by identifying impacts of concern and assessing the scale, scope, and context of climate disruption. Next, a climate risk analysis can be conducted by selecting climate change scenarios for analysis and selecting an analytical approach. Following that, a climate-informed decision can be made by evaluating the alternatives and designs and applying resilient decision principles. Finally, the agency can track and monitor progress by evaluating determined metrics and adjusting as needed. The adaptation analysis evaluates the first two steps to inform a decision for the project.

In the following sections, the extreme impacts of climate change-based sea level rise, flooding, wildfires, and temperature on the proposed Limekiln

Bridge Replacement project are addressed. Although climate-change risk analysis inherently involves uncertainties as to the timing and intensity of potential risks, the present analysis uses the best available science. The proposed project, which involves the construction of a new bridge over Limekiln Creek on State Route 1 in Monterey County, is expected to last for many decades, so the impacts of extreme events are considered to ensure that planning and investment decisions reflect current and future climate conditions.

Sea Level Rise

The proposed project is located within the coastal zone that is managed by Monterey County's Local Coastal Program. This program was certified in 1988 and is split up into four segments, with the entire project limits falling within the Big Sur Land Use Plan Segment. Because the project is within the coastal zone, the project location must be analyzed for potential vulnerabilities to the effects of global sea level rise.

The State of California 2018 Sea-Level Rise Guidance Document (OPR 2018) provides probabilistic projections for the height of sea level rise along the California coastline using the most current data from the California Ocean Protection Council. This guidance document outlines a five-step approach for evaluating the risks associated with sea level rise at a given location.

The first step is identifying the nearest tide gauge, which is in Monterey, for this project. The second and third steps involve identifying the project lifespan and evaluating the range of sea-level rise projections for the project lifespan at the nearest tide gauge. Given an estimated project lifespan of approximately 80 years for the bridge improvements and a construction start year of 2025, sea level rise projections for the year 2100 were considered. The fourth and fifth steps involve assigning the risk and tolerance for the site.

The project was evaluated using the Monterey Tide Gauge under a high-emissions scenario, resulting in a finding of medium-high risk (0.5 percent probability) that sea level rise will meet or exceed 6.9 feet by the year 2100. Also considered is the Extreme Risk Aversion, also known as the H++ scenario (no associated probability), which projects that sea level rise would meet or exceed 10.1 feet by the year 2100. Sea level rise projections for the Monterey Tide Gauge from the year 2030 to 2100 are shown in Table 15.

Table 15 Projected Levels of Sea Level Rise at Project Site Under High Emission Scenarios, as Reported in the 2018 State of California Sea Level Rise Guidance

Year	Low Risk Aversion (Feet/66 Percent Probability)	Medium-High Risk Aversion (Feet/0.5 Percent Probability)	Extreme Risk Aversion (Feet/No Associated Probability)
2030	0.5	0.8	1.0
2040	0.8	1.2	1.7
2050	1.1	1.9	2.7
2060	1.4	2.6	3.8
2070	1.8	3.4	5.1
2080	2.3	4.4	6.6
2090	2.8	5.5	8.2
2100	3.3	6.9	10.1

As modeled by the National Oceanic and Atmospheric Administration Sea Level Rise Viewer, 10 feet of sea level rise at the project location would cause the Pacific Ocean to encroach on the lower elevation portions of the coastline, including the mouth of Limekiln Creek, as shown in Figure 35.

However, the proposed project is not expected to be vulnerable to the effects of sea level rise, such as beach erosion, wave action, coastal or riverine flood hazards, tsunami inundation/run-up, sea level rise, or loss of sediment/sand supply to the beach and near-shore environment. The highway and bridge deck are elevated high enough above the coast (approximately 110 feet above current sea level) that the roadway, shoulders, and associated infrastructure would not be inundated under even the extreme H++ climate scenarios. Although the adjacent hillsides are expected to continue naturally eroding, the replacement bridge has been designed to allow sliding hillslope materials to pass underneath, leaving the bridge unaffected.

Furthermore, the new bridge pier would be anchored in bedrock far below the existing sea level, and the construction materials used would be chosen to resist the effects of chloride intrusion caused by salt-laden fog. This phenomenon is a primary factor in the steel corrosion and concrete cracking/spalling affecting the existing bridge deck, superstructure, and substructure. The use of corrosion-resistant materials, such as epoxy coatings and/or supplementary cementitious materials, as discussed in the 2018 Caltrans Standard Specifications, would help prevent these effects on the new bridge structure.

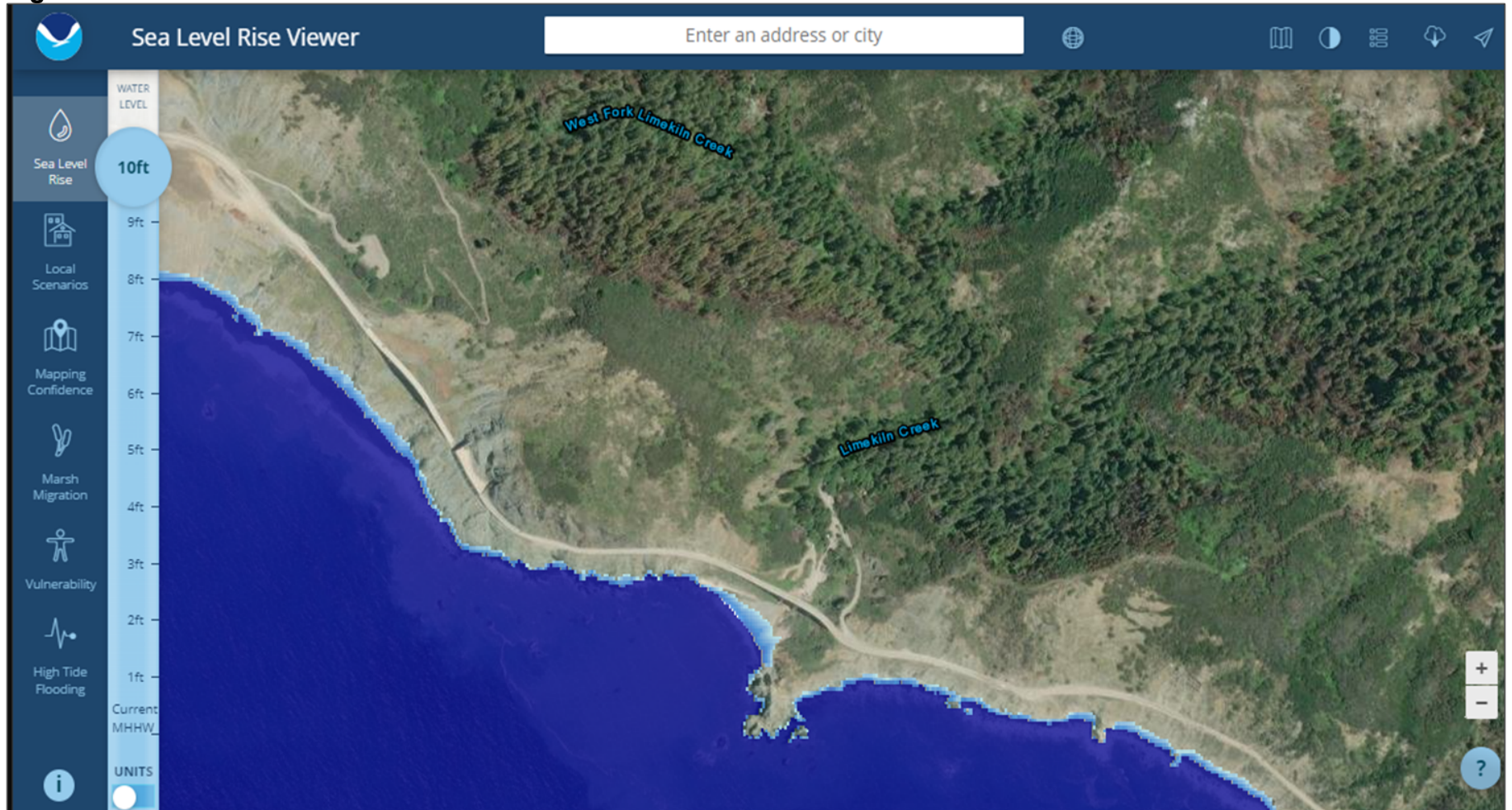
Additionally, the project is not expected to increase the vulnerability of the natural environment to the coastal conditions listed above (beach erosion, wave action, etc.). The project may, in fact, reduce these effects as compared to existing conditions because the multiple existing bridge piers would be removed and replaced by a single new pier. While part of the existing Limekiln Beach revetment (crib walls and large rock slope protection) would be removed to comply with a 2010 Coastal Development Permit condition, a portion of the revetment would remain and would continue to provide

protection against wave action beneath the bridge. Once part of the revetment is removed, it is likely that the slope will continue to naturally erode.

Taken together, these factors are expected to help the project resist the type of bridge abutment deterioration from wave and storm effects that have necessitated this work, even under aggressive sea level rise conditions, while simultaneously ensuring that the project would avoid damaging the coastal environment in the project area.

Please refer to the Precipitation and Flooding discussion below for further discussion regarding coastal flooding as it relates to the proposed project, as well as a floodplain evaluation.

Figure 35 Sea Level Rise Viewer



Precipitation and Flooding

Climate change modeling shows that the southwestern United States is likely to experience less total precipitation in the coming decades but that the potential for heavier individual rainstorms may increase. Heavy rain events can affect highways by causing flooding, landslides, washouts, or structural damage. These effects can be exacerbated in the aftermath of wildfires on steep slopes, such as those in the Limekiln Creek area.

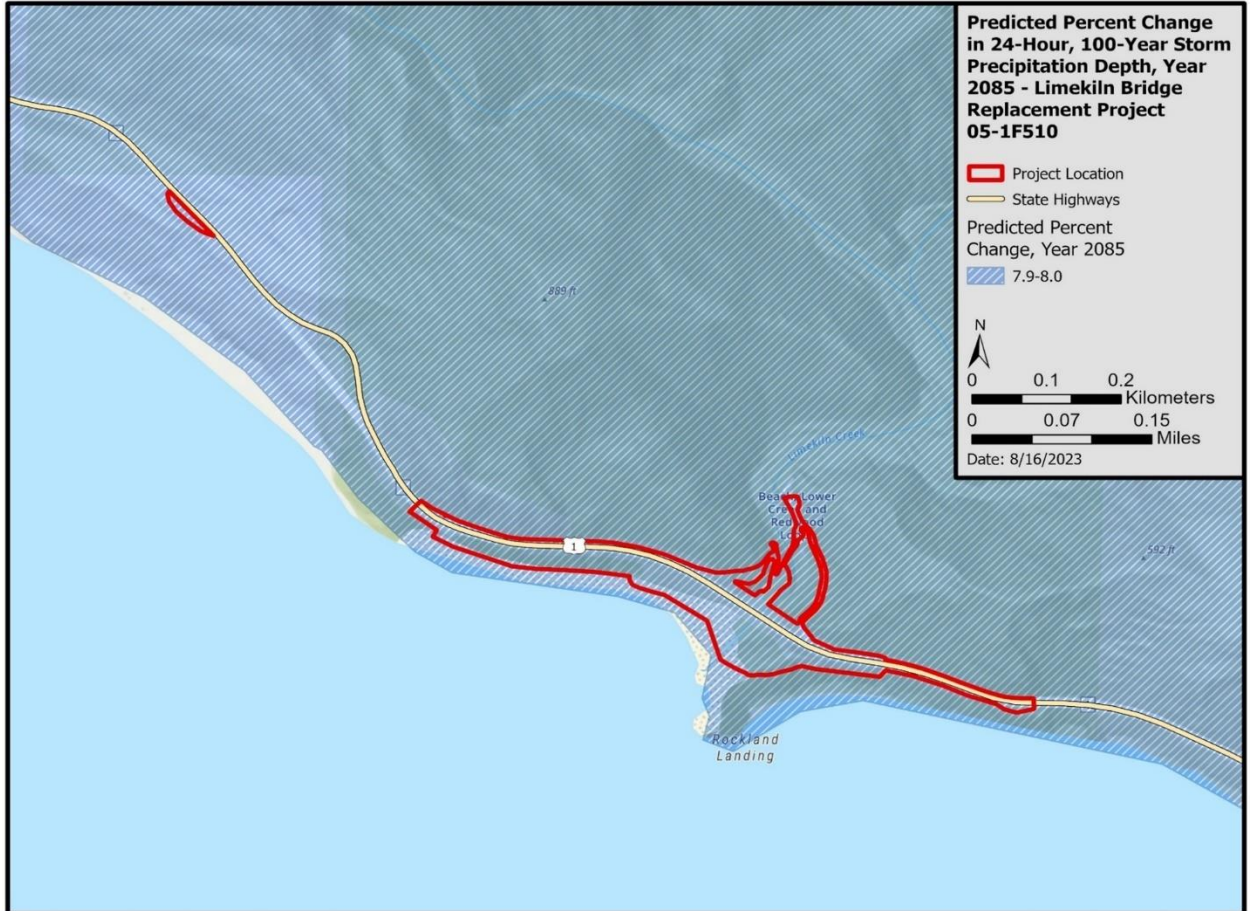
A review of State of California natural resources Geographic Information Systems (GIS) databases and the Caltrans Climate Change Vulnerability Assessment-District 5 Technical Report (Caltrans 2019) indicates that in the Limekiln Creek watershed, the 24-hour precipitation depth for a 100-year storm event is anticipated to increase by 7.9 to 8 percent (approximately 3.3 inches) over historical conditions by 2085 if high greenhouse gas emissions continue to the end of the century (the “RCP 8.5” scenario) (Figure 36). This increase in precipitation would result in increased seasonal stream flow under the Limekiln Creek Bridge.

However, construction of the proposed project is not expected to increase the vulnerability of any roadway or other infrastructure along State Route 1 to undesirable effects from increased precipitation or flooding because:

- The project does not encroach into any Federal Emergency Management Agency (FEMA) 100-year base floodplain as defined in the Code of Federal Regulations, Title 23, Section 650.105(q).
- The new bridge pier and all other structures would be located outside the creek banks.
- Drainage systems on the new bridge and roadway at each end would prevent rainwater accumulation on the driving surface and convey the water safely to the surrounding slopes and the ocean.
- The height of the bridge and roadway, at approximately 110 feet above existing sea level, minimizes the potential for undesirable flooding-related effects on the roadway (see previous document section, “Sea Level Rise”).
- The project would not significantly increase the impervious surface in the watershed. Under build alternative 6, a one-lane temporary bridge would be constructed to the east of the existing bridge to accommodate highway traffic during construction. However, the temporary bridge would be removed upon project completion.
- There are no other known, anticipated land use changes in the Limekiln Creek watershed that would increase the amount of impervious surface and, therefore, affect flood magnitude and frequency in the creek drainage.

For these reasons, climate change-related increases in precipitation and flooding are not expected to be a concern with the project.

Figure 36 Predicted Percent Change in 100-Year Storm Precipitation Depth, Year 2085



Wildfire

The steep terrain and thick vegetation of the Limekiln Creek watershed lend themselves to wildfire. Notable examples of recent wildfires include the 56,157-acre Gorda-Rat Fire (1985), the 16,265-acre Chalk Fire (2008), and the 124,527-acre Dolan Fire (2020) (California Department of Forestry and Fire Protection, 2019).

Wildfires can directly damage asphalt roads by causing damage such as cracking and melting. Fire can also accelerate erosion by denuding the land of its protective vegetation cover, burning roots that hold soil in place, and, in some cases, causing native plants to release hydrophobic (water-repelling) chemicals into the soil. These conditions greatly increase the potential for destructive flooding, rockfall, and earth movement on steep slopes during periods of heavy precipitation that occur months to years after a fire. The hotter, drier weather conditions and increase in periodic heavy storm events

that are predicted in California by climate change models are expected to continue exacerbating both wildfire and post-fire flooding/landslide hazards.

According to the CalFire Fire Hazard Severity Zone online mapping website, the project site and the Limekiln Creek watershed above the site are located in a Very High Fire Hazard Severity Zone within the State Responsibility Area (Section 3.5, Figure 26). (Note that the uncrosshatched land shown in Figure 26 to the east of the project area does not imply reduced fire hazard; that area is simply outside the State Responsibility Area, and fire hazard GIS data were not immediately available for that area.)

In addition, the Caltrans District 5 climate change vulnerability online mapping tool identifies State Route 1 in the vicinity of the project site as a roadway that has a high vulnerability to wildfire impacts and is expected to remain in that classification if greenhouse gas emissions continue to rise through the 21st century.

During construction, Caltrans' 2018 revised Standard Specification 7-1.02M(2) mandates fire prevention procedures, including a fire prevention plan, to avoid accidental fire starts. The project will feature steel guardrail posts instead of wooden posts to reduce the risk of infrastructure damage from wildfire.

Temperature

Changes in daily temperature can affect pavement quality and durability. The two temperature inputs to consider when selecting a pavement design are the average maximum temperature over seven consecutive days and the absolute minimum air temperature. Per the Caltrans Highway Design Manual, the pavement design for new construction and reconstruction shall be no less than 40 years, or about 2065, for this proposed project.

The District Climate Change Vulnerability Assessment does not indicate temperature changes during the project's design life that would require adaptive changes in pavement design or maintenance practices.

Chapter 4 **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, as well as identify potential impacts, avoidance, minimization, and/or mitigation measures and related environmental requirements. Agency and tribal consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including interagency coordination meetings, public meetings, public notices, and Project Development Team (PDT) meetings (continue list as needed). This chapter summarizes the results of Caltrans' efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

A Notice of Preparation was publicly published to the State Clearinghouse on September 10, 2018. Resource agencies included: the California Coastal Commission, Department of Conservation, Department of Fish and Wildlife, Region 4, Department of Parks and Recreation, Department of Water Resources, California Native American Heritage Commission, State Lands Commission, California Highway Patrol, Air Resources Board-Transportation Projects, Regional Water Quality Control Board-Region 3, State Water Resources Control Board-Division of Drinking Water, and Department of Toxic Substances Control.

An open house was held on January 15, 2019, at the Big Sur Lodge. Comments were received from the president of the Big Sur Chamber of Commerce and the California Native American Heritage Commission. There were eight attendees. One comment was collected on a written comment card at the meeting requesting brown guardrail similar to Pfeiffer Canyon, emergency access, and notifications made to public safety officials. A comment letter was received that questioned the need to remove the existing rock slope protection and crib wall. An email comment was received requesting a similar design aesthetic to Pitkins Curve, consistent updates, the opportunity to participate in the traffic management plan, and design features with arches and guardrails.

Public Agency Coordination

A meeting with Caltrans and the California Coastal Commission was held on August 25, 2021, to discuss the Coastal Development Permit and revetment removal as a part of a previous permit. At this meeting, the California Coastal Commission expressed concerns about the placement of the proposed bridge (Alternative 4) and partial revetment removal.

A series of multiagency meetings were held with Caltrans, California State Parks, and the California Coastal Commission beginning January 18, 2022. At this meeting, California State Parks expressed concerns about coastal access, safe recreation activities along the beach area, and responsibilities for future maintenance of the revetment. The California Coastal Commission questioned the monitoring and maintenance of the revetment as well. Coastal questioned if there would be reduced cultural and biological impacts by locating the southern abutment closer to its existing alignment.

An on-site meeting was held on February 25, 2022, with all three agencies to further discuss concerns and view the existing project site.

A multiagency meeting was held on July 1, 2022. California State Parks collaborated on a list of viewpoints and photos wanted for visual simulations and requested park areas and facilities needed during construction.

The next meeting was held on July 14, 2022. There was a discrepancy in mapping regarding cultural resources between California State Parks and Caltrans staff. California State Parks expressed that it wanted to avoid cultural impacts where possible. Caltrans Design staff provided highway closure timeline estimates for alternatives that would stay on the same alignment but close the highway for construction. All agencies mentioned the importance of public engagement, and California State Parks recommended presenting at the Big Sur Multi-Agency Advisory Council meeting. Caltrans sent representatives to a meeting and agreed that releasing the draft environmental document would be the next step for public engagement and feedback.

A meeting was held on August 4, 2022. Caltrans discussed the feasibility of temporarily rerouting traffic through Limekiln State Park as an attempt to keep the highway open and maintain the same alignment. Caltrans proposed two potential alternatives that included building a temporary one-lane bridge, keeping the same location of the southern abutment, and curving the bridge slightly inland. The other involved location is the southern abutment, approximately 12 to 14 feet seaward of the existing alignment.

The next two meetings (August 19, 2022, and September 19, 2022) discussed potential impacts based on these changes and how they would affect the project schedule. These alternatives were known as the “34-foot” alternative, the “temporary bridge” alternative, and the “temporary reroute” alternative.

On October 7, 2022, the California Coastal Commission sent out an email stating it preferred either the “temporary bridge” alternative or the “temporary reroute” alternative based on avoiding impacts on the beachgoing experience and cultural sites. They requested these two alternatives—closing the

highway during construction and aligning the new bridge inland with the existing bridge—to be discussed in the draft environmental document.

Following this, Caltrans designed two new alternatives, but these were ultimately considered unfeasible due to geotechnical concerns and safety concerns. Traffic operations objected to closing the highway for the duration of construction unless there was strong public support. Moving the bridge inland has been reviewed in years prior but ultimately deemed unfeasible due to geotechnical concerns.

The Caltrans Design Team was then tasked with creating a feasible alternative to meet everyone's goals. Alternative 6 was designed and shared at a multiagency meeting with Caltrans, the California Coastal Commission, and California State Parks on July 17, 2023. Both the California Coastal Commission and California State Parks thanked Caltrans for its efforts. Compensatory mitigation/Section 4(f) was discussed with the agencies regarding the Coastal Development Permit and using California State Parks land. The revetment was discussed again, and California State Parks stated that safety was its main priority for beachgoers and members of the public, which coincides with the California Coastal Commission's goal of maintaining public access to the beach.

California Native American Heritage Commission

On January 31, 2017, the author of the Historic Property Survey Report submitted a Sacred Lands Records Search to the California Native American Heritage Commission.

On February 8, 2017, a letter of the results revealed the location is negative for resources of cultural importance to the Native American community.

Native American Tribes, Groups and Individuals

In February 2017, the District 5 Native American Coordinator, Terry I. Joslin, contacted the Salinan community members to apprise them of the project, initiate the Section 106 process, and provide AB 52 notification.

In October 2019, the consultation group was provided with a copy of the draft extended phase 1 and archaeology evaluation proposal.

Patti Dutton, representing the Salinan Tribe of Monterey and San Luis Obispo counties, asked for continued consultation and monitoring during all aspects of the project.

During the excavation program (February 19–23, 2020), Robert Patti represented the Salinan Tribe of Monterey and San Luis Obispo counties and monitored the effort. He was provided with copies of the archaeological

survey report, final extended phase 1, and archaeology evaluation proposal before initiating the testing program.

In March 2020, all members of the Salinan consultation group were provided with copies of the Post-Field Summary of Phase 2 Excavations for the Limekiln Creek Bridge Replacement Project.

In November 2020, the draft archaeological report was sent to all members of the consultation group. No comments were received, and before the document was finalized, Terry Joslin called Robert Patti to ensure his comments, if any, were incorporated. A voicemail message was left, and no calls were returned.

State Historic Preservation Office

On June 1, 2021, Caltrans Senior Environmental Planner Krista Kiaha sent a letter to Julianne Polanco, State Historic Preservation Officer, requesting concurrence that CA-MNT-1892 is eligible for the National Register of Historic Places under Criterion D and that the Rockland Lime and Lumber Company Historic Landscape District is eligible for the National Register of Historic Places under Criteria A, C, and D.

On July 8, 2021, Julianne Polanco concurred with the determination.

Agency Coordination for Biological Resources

Agency coordination for the Natural Environment Study was led by Caltrans Associate Environmental Planner Stephanie Herbert through May 14, 2020, which was conducted when Alternative 3 was considered the viable alternative and Alternatives 4B and 6 had not yet been considered. Coordination was conducted under the assumption that the project would be more biologically impactful, including additional piers for the new bridge and the complete removal of the revetement. Technical assistance with resource agencies resumed in 2021 with biologist Alexandra Thiel using the most recent alternatives available at the time and ultimately, Alternatives 4B and 6.

July 27, 2018: Caltrans biologist Stephanie Herbert contacted Senior Park and Recreation Specialist Stephen Bachman via email to ask whether or not any species data had been collected at Limekiln State Park for historic or recent populations of snowy plovers.

July 27, 2018: Mr. Bachman replied to Stephanie's email regarding snowy plover surveys by providing the contact information for two California State Parks project biologists, Amy Palkovic and Jeff Frey. He also mentioned that any impacts to the riparian area in the project footprint would require mitigation to reestablish any lost riparian habitat.

July 27, 2018: Stephanie Herbert responded to Mr. Bachman's email, explaining that the project plans did not yet show specific impacts on the

riparian area but that in the future, Caltrans staff would be in coordination with the Parks Service if the riparian area is going to be impacted.

July 27, 2018: Stephanie Herbert reached out to Amy Palkovic to gather data on any snowy plover surveys that may have been done at Limekiln State Park.

July 30, 2018: Amy Palkovic responded to Stephanie's email stating that western snowy plovers are not known to occur at or near Limekiln State Park and that surveys were not being conducted by the Parks Service to provide any absence data.

April 18, 2019: Stephanie Herbert reached out to Jeff Frey via email regarding any records or survey information of least Bell's vireo in or near Limekiln State Park. Stephanie explained that her understanding was that the species was limited to Andrew Molera State Park and the Salinas River but not Limekiln State Park. This email was not answered.

April 30, 2019: Stephanie Herbert reached out to Elena Meza of the National Marine Fisheries Service and Steve Lonhart of the National Oceanic and Atmospheric Administration to discuss the presence of black abalone final critical habitat and the potential for black abalone individuals at Limekiln State Park. Stephanie explained that after conducting a marine intertidal habitat assessment, it appears that primary constituent elements support the claim that black abalone are present, but no individuals were seen during surveys. Stephanie asked if Ms. Meza or Mr. Lonhart had any information on the potential presence of black abalone in the area in and around Limekiln State Park.

May 1, 2019: Steve Lonhart replied to Stephanie's email regarding black abalone at Limekiln State Park. Mr. Lonhart explained that he was the local federal agency that would be most involved with black abalone consultation in Big Sur under Monterey Bay National Marine Sanctuary jurisdiction and that he would be happy to coordinate with a permitted black abalone specialist and conduct a site visit in the near future. He also introduced Susan Wang from the National Oceanic and Atmospheric Administration to the conversation.

May 1, 2019: Stephanie Herbert responded to Mr. Lonhart's email, explaining that, at this time, it may be too early to reach out to a black abalone specialist to conduct surveys. At this time, Stephanie was reaching out to explain the results of habitat assessments in the area, and was looking for the existence of data collected from existing monitoring efforts at Limekiln State Park. Stephanie also agreed to a field visit with Mr. Lonhart in the future.

May 1, 2019: Mr. Lonhart agreed to ask local researchers at UC Santa Cruz, which established a monitoring site that was closest to Limekiln State Park.

Stephanie and Mr. Lonhart coordinated a time to visit Limekiln State Park together.

May 13, 2019: Steve Lonhart and Stephanie Herbert met in the field at Limekiln State Park to look for black abalone and characterize the critical habitat on-site. In the field, Mr. Lonhart suggests that Caltrans reach out to a survey team to conduct presence/absence surveys and a habitat assessment for black abalone. Mr. Lonhart explained that the habitat for the black abalone at Limekiln State Park could support the species but was marginal habitat due to existing sedimentation and heavy wave action. Stephanie and Mr. Lonhart agreed that having quantitative data would provide a more thorough understanding of black abalone in the area and would, therefore, help during consultation for a Biological Opinion.

May 24, 2019: An official list of threatened and endangered species was obtained from the U.S. Fish and Wildlife Service iPAC (Information for Planning and Consultation) database.

May 24, 2019: A California Natural Diversity Database report was generated for the project area and a half-mile buffer.

May 24, 2019: A California Native Plant Society inventory of potentially affected rare plants was generated for the action area.

May 24, 2019: An official National Marine Fisheries Service inventory of potentially affected marine species was generated for the action area.

July 11, 2019: Stephanie Herbert reached out to Jacob Martin, senior fish and wildlife biologist with the U.S. Fish and Wildlife Service, regarding the presence of Smith's blue butterfly at Limekiln State Park. Stephanie explained that two Smith's blue butterfly females were found in stands of Seacliff buckwheat during surveys and that Caltrans anticipated conducting formal consultations in the future.

July 11, 2019: Jacob Martin responded to Stephanie's email, thanking her for the information.

July 17, 2019: Stephanie sent Jacob Martin datasheets for Smith's blue butterfly surveys for the Limekiln Creek Bridge Replacement Project Area of Potential Impact via email. Stephanie explained that due to the number of plants still yet to have bloomed for the season, Caltrans would be conducting buckwheat counts in August to ensure accurate counts for density estimates.

July 17, 2019: Jacob Martin responded, thanking Stephanie for the early coordination and explaining that Caltrans was prepared to initiate formal consultation to send a hard copy to Leilani Takano.

July 17, 2019: Stephanie Herbert reached out to Steve Lonhart, Elena Meza, and Susan Wong via email. Stephanie provided a summary of the field outing with Mr. Lonhart that was conducted on May 13, 2019. She also explained that because of the conversations in the field, Caltrans was pursuing a contract through ICF (a consulting company) to hire the Raimondi Lab to conduct black abalone presence and absence surveys and a habitat assessment of critical habitat. Stephanie asked if everyone on the email thread felt comfortable with that course of action.

July 17, 2019: Steven Lonhart replied, thanking Stephanie for the update.

August 12, 2019: Stephanie Herbert reached out again to Jeff Frey and Amy Palkovic regarding any information or records the Parks Service may have on least Bell's vireo in or near Limekiln State Park.

August 12, 2019: Amy Palkovic responded that she did not have any information on the presence of least Bell's vireo in Limekiln State Park.

September 13, 2019: Stephanie Herbert and Jacob Martin had a conference call to discuss the project's ability to be covered under the existing Programmatic Biological Opinion for Smith's blue butterfly. Mr. Martin suggested that the project could be covered under the existing programmatic permit because the project, as it is currently designed, is not anticipated to exceed the limits of take, and the project will have ample ability to replace any buckwheat that cannot be avoided through the project's restoration plans. Stephanie agreed to move forward under the Programmatic Biological Opinion for formal consultation in the future.

October 4, 2019: Stephanie Herbert reached out to Elena Meza, Steve Lonhart, and Susan Wang, explaining that Caltrans was having difficulty finding a permitted expert biologist to conduct presence/absence surveys for black abalone. Stephanie asked for a list of qualified biologists who may be able to do the work.

October 4, 2019: Susan Wang with the National Oceanic and Atmospheric Administration responded with a short list of permit holders and co-investigators that may be available to conduct the work.

October 22, 2019: Stephanie Herbert contacted Elena Meza, Susan Wang, and Steve Lonhart, asking for the approval of a potential team to conduct surveys for black abalone.

October 23, 2019: Susan Wang with the National Oceanic and Atmospheric Administration replied with confirmation that the team was covered for survey activities.

November 5, 2019: Stephanie Herbert contacted Elena Meza, Susan Wang, and Steve Lonhart, asking again for a list of co-investigators that are qualified

to conduct black abalone surveys, as the previously approved team dropped out.

November 5, 2019: Susan Wang responded with a list of other co-investigators and groups that would be approved to conduct visual abalone surveys.

November 13, 2019: Stephanie Herbert responded to Susan Wang, requesting confirmation that visual/observational surveys would be sufficient to determine the presence or absence of black abalone in the project area.

November 14, 2019: Susan Wang confirmed that visual/observational surveys would be sufficient to determine the presence or absence in the project area.

January 2, 2020: Stephanie Herbert reached out to Elena Meza, Susan Wang, and Steve Lonhart, confirming that the suggested team of biologists approved to do visual/observational surveys would be working with Caltrans to conduct presence/absence surveys in late January and early February and that Stephanie would follow up with the group when survey results were finalized.

January 3, 2020: Susan Wang responded to Stephanie, explaining that the principal biologist on the team was added to the Federal Endangered Species Act permit as a co-investigator in late 2019 and is now permitted to count and measure black abalone during the surveys.

January 3, 2020: Stephanie responded to Susan Wang, thanking her for the ongoing coordination.

February 10, 2020: Steve Lonhart, National Oceanic and Atmospheric Administration Scientist, provided a summary of his surveys with the Black Abalone crew to Susan Wang, Elena Meza, and Stephanie Herbert.

February 11, 2020: Stephanie Herbert shared initial survey results from Limekiln Black Abalone Surveys with Susan Wang, Elena Meza, and Steve Lonhart and suggested a conference call be set up to better analyze the project in response to finding black abalone. Susan concurred and requested additional project information.

February 18, 2020: Stephanie Herbert sent an email discussing project impacts, photographs, and project history to Susan Wang and Steve Lonhart in anticipation of a conference call the next day.

February 19, 2020: Stephanie Herbert, Steve Lonhart, Karen Holmes, and Susan Wang attended a conference call to discuss project impacts on the black abalone. Stephanie sent out a coordination email to the group summarizing the call. Stephanie promised to send the results of the black abalone studies when they were completed. She also said that she would

look into potential remote sensing surveys to better map offshore currents to include in the discussion of black abalone critical habitat. Stephanie also agreed to create and propose a long-term monitoring plan to include with the Biological Assessment that would be submitted. The group agreed that long-term monitoring would be best to understand how a population of black abalone can respond to the naturalization of the coastline, a typically unmonitored natural disaster. Stephanie also proposed an in-person field visit. The group agreed that the project will likely not have any direct impacts on the black abalone, but the sedimentation from removing the sea wall and returning the coastline to its natural state may have indirect effects on black abalone individuals and critical habitat. These impacts may be offset through a monitoring program that will help to understand how black abalone responds to sedimentation after the removal of the rock slope protection.

February 20, 2020: Steve Lonhart responded to the email with the following: “1. If there is a way to capture surface imagery of the area and out to sea about 1 km, this would help with understanding local circulation patterns. This could be with a drone or a stationary system taking photos/video on a regular basis, as long as the glare is not too bad, etc. 2. Monitoring the population of black abalone at the north end of the impact area will be really informative to determine natural trends, any impacts that might occur during construction, and then the big one—what will happen once the sediment behind the rock slope protection is allowed to mobilize with natural events. At this stage, I do not know if leaving such rock slope protection in place is better, no different, or worse for the black abalone. This could be an important piece of thinking when considering future rock slope protection removals in areas with black abalone populations adjacent. 3. In terms of impacts, as currently described, if no material heads down the slope and onto the black abalone population and designated critical habitat, then there should be no impact from that aspect of grading along the roadbed and subsequent pile drilling and installation. Work in the intertidal to remove the rock slope protection will likely generate new turbidity, and it is unclear to me how that will or will not impact the black abalone, hence the need for number 2 above. And for number 1, see what is mobilized as a result of the intertidal work. 4. My main concern is related to reduced water clarity. This stretch has not had great water clarity for a while, and work on Paul’s slide just north has contributed to this in some way. This whole area is sliding into the ocean no matter what we do. My main concern is not adding to/exacerbating natural processes where they can be avoided.”

February 20, 2020: Elena Meza responded to the group that she appreciated being kept in the loop so that she has a project background once consultation begins.

February 27, 2020: Stephanie Herbert shared the draft report for the black abalone survey effort with the National Marine Fisheries Service.

March 3, 2020: Susan Wang emailed Stephanie Herbert to set up a site visit on March 9, 2020.

March 9, 2020: Stephanie Herbert and Susan Wang met in the field to discuss project impacts and potential mitigation through monitoring for impacts on black abalone and worked through the project design features on the ground.

May 14, 2020: Stephanie Herbert sent the final monitoring report to Steve Lonhart, Susan Wang, and Elena Meza.

June 6, 2022: Caltrans Biologist Ali Thiel and Senior Biologist Jennifer Moonjian met with National Oceanic and Atmospheric Administration scientists Joel Casagrande, Steve Lonhart, and Sophie DeBeukelaer to conduct technical assistance for Alternative 4A on proposed Federal Endangered Species Act effects determinations, Essential Fish Habitat impact assessment, Marine Mammal Protection Act, and the Monterey Bay National Marine Sanctuary. Ali confirmed that formal consultation would be initiated for black abalone, South-Central California Coast steelhead, and their associated critical habitats after the completion of the Final Environmental Document.

June 22, 2022: Ali Thiel and Caltrans Environmental Coordinator Hannah Butler met with National Oceanic and Atmospheric Administration Marine Mammal Protection Act representatives Benjamin Laws and Chiharu Mori to discuss potential effects on marine mammals for Alternative 4A. As proposed, the group had no concerns regarding the potential for harassment of marine mammals and agreed that a no effect determination seemed appropriate.

July 15, 2022: Ali Thiel met with California Department of Fish and Wildlife biologist Javier Mendez to provide a project overview and receive initial feedback for Alternative 4A.

July 21, 2022: Ali Thiel met with U.S. Fish and Wildlife Service Biologist Debora Kirkland to conduct technical assistance on proposed Federal Endangered Species Act effects determinations for Alternative 4A and discuss the use of the Caltrans Programmatic Biological Opinion for effects on Smith's blue butterfly. Debora did not express any concerns with the anticipated use of the Programmatic Biological Opinion. Debora and Ali determined that more coordination will be needed for potential project effects on the southern sea otter, California red-legged frog, least Bell's vireo, and southwestern willow flycatcher.

August 17, 2022: U.S. Fish and Wildlife Service Biologist Debora Kirkland provided measures for the southern sea otter to Ali Thiel via email. Other U.S. Fish and Wildlife Service and National Marine Fisheries Service species were also discussed in preparation for future site visits.

August 18, 2022: Ali Thiel, Caltrans Biologists Barrett Holland and Jessica Copeland, and Caltrans Environmental Intern Madison Zambo met with U.S. Fish and Wildlife Service Biologist Debora Kirkland at the Limekiln Creek Bridge to conduct a site assessment and discuss project impacts. Ongoing coordination between Ali Thiel and Debora Kirkland continued until the date of the Natural Environment Study, July 2023, regarding Smith's blue butterfly.

October 26, 2022: Ali Thiel met with National Marine Fisheries Service Biologist Elena Meza virtually to discuss the overall project design of Alternative 4A and potential avoidance and minimization measures.

February 9, 2023: Ali Thiel and Caltrans Environmental Scientists Mitch Dallas, Michelle Wilson, and Jennifer Moonjian met virtually with National Marine Fisheries Service Biologist Elena Meza and National Oceanic and Atmospheric Administration Biologists Karen Grimmer and Sophie De Beukelaer to discuss alternatives to be included in the environmental document, the removal of Alternative 4A and the addition of Alternatives 4B and 6, and the Monterey Bay National Marine Sanctuary Permit.

March 1, 2023: Ali Thiel and Jennifer Moonjian met with National Oceanic and Atmospheric Administration Biologists Steve Lonhart and Susan Wang to discuss the addition of Alternatives 4B and 6 and potential concerns related to black abalone. The National Oceanic and Atmospheric Administration suggested that ongoing water quality monitoring of the BSA and surrounding area via aerial imagery be collected prior to construction to gather preconstruction data for postconstruction comparison.

March 14, 2023: Ali Thiel and Jennifer Moonjian met with National Oceanic and Atmospheric Administration Marine Mammals Protection Act Biologists Benjamin Laws and Mori Chiharu to provide project updates related to Alternatives 4B and 6 and discuss the Marine Mammals Protection Act determination of no take. There were no concerns with the Marine Mammals Protection Act determination for National Oceanic and Atmospheric Administration-regulated species.

April 4, 2023: Ali Thiel and Jennifer Moonjian met with U.S. Fish and Wildlife Service Biologist Debora Kirkland to discuss project updates related to Alternatives 4B and 6 and final effects determinations for U.S. Fish and Wildlife Service Federal Endangered Species Act and Marine Mammals Protection Act-regulated species. The group concluded that more discussion was warranted for a Federal Endangered Species Act and Marine Mammals Protection Act determination for the southern sea otter, and Caltrans would supply a draft analysis.

April 24, 2023: Ali Thiel sent an email to U.S. Fish and Wildlife Service biologist Debora Kirkland summarizing the discussion from April 4, 2023, and supplying information on southern sea otter analysis.

May 23, 2023: U.S. Fish and Wildlife Service Biologist Debora Kirkland provided examples of condor avoidance and minimization measures to Ali Thiel via email.

May 30, 2023: U.S. Fish and Wildlife Service Biologist Debora Kirkland provided feedback via email to Ali Thiel on project effects on the southern sea otter. Caltrans responded on June 14, 2023, agreeing that a Not Likely to Adversely Affect determination was appropriate and confirming there would be no take per the Marine Mammals Protection Act.

Chapter 5 **List of Preparers**

Ruben Atilano, Transportation Engineer, M.S., Civil and Environmental Engineering, California Polytechnic State University. B.S. Environmental Engineering, San Francisco State University; 2 years of experience in environmental engineering. Contribution: Water Quality Assessment.

Myles Barker, Editorial Specialist. B.A., Mass Communication and Journalism, California State University, Fresno; 7 years of writing and editing experience. Contribution: Technical Editor.

Hannah Butler, Environmental Scientist. B.S., Environmental Management and Protection, California Polytechnic State University, San Luis Obispo; 4 years of environmental planning experience. Contribution: preparation of the Environmental Impact Report/Environmental Assessment.

Skylar Feltman, Aquatic Resource Biologist. B.S., Wildlife Fish & Conservation Biology, University of California at Davis; 16 years of environmental/biology planning experience. Contribution: Updated Jurisdictional Delineation.

Matthew Fowler, Senior Environmental Planner. B.A., Geography/Methods of Geographic Analysis, San Diego State University, San Diego; 22 years of environmental planning experience. Contribution: oversight of the Environmental Impact Report/Environmental Assessment.

Christopher Hama, Caltrans District 5 Environmental Scientist/Coordinator. B.S., Forestry and Natural Resources Management, M.S., Forestry Sciences, Master of City and Regional Planning, California Polytechnic State University, San Luis Obispo; over 4 years of experience in environmental planning, over 5 years of experience in ecological research, and over 10 years of experience in document control. Contribution: Reviewing technical reports; researching, writing, editing, and proofing sections of the draft environmental document.

Terry Joslin Azevedo, Associate Environmental Planner (Arch). Ph.D., Anthropology, University of California, Santa Barbara; M.A., Anthropology, University of California, Santa Barbara; B.S., Anthropology/Geography, California Polytechnic State University, San Luis Obispo; more than 29 years of archaeology experience. Contribution: wrote Historic Property Survey Report.

Krista Kiaha, Senior Environmental Scientist. M.S., Anthropology, Idaho State University; B.A., Anthropology, University of California, Santa Cruz;

more than 23 years of cultural resources experience. Contribution: oversight for cultural resources process.

Joel Kloth, Engineering Geologist. B.S., Geology, California Lutheran University; more than 33 years of experience in petroleum geology, geotechnical geology, and environmental engineering/geology-hazardous waste. Contribution: Hazardous Waste Studies.

Kristen Langager, Landscape Architect. B.S., Landscape Architecture, California Polytechnic State University, San Luis Obispo; 17 years of Landscape Architecture experience. Contribution: prepared Visual Impact Assessment.

Daniel Leckie, Environmental Scientist/ PQS Principal Architectural Historian. M.S. Historic Preservation, The University of Vermont (2014); B.A., American History & Sociology, State University of New York (SUNY) at Stony Brook (2010); over 9 years of experience in the fields of Architectural History and Historic Preservation Planning. Contribution: Principal Architectural Historian.

Claire Lester, Associate Environmental Planner. B.S., Environmental Management and Protection, California Polytechnic State University, San Luis Obispo; 4 years of environmental planning experience. Contribution: peer and NEPA review of environmental document.

Jennifer Moonjian, Senior Environmental Scientist. B.S. and M.S., Biological Sciences, California Polytechnic State University, San Luis Obispo; 17 years of environmental impact assessment and biological resources experience. Contribution: oversight for biological resources process.

Scott Ostrau, Environmental Scientist. B.S., Environmental Policy Analysis and Planning, University of California, Davis; 6 years of environmental planning experience. Contribution: assisted with writing draft environmental document.

Alexandra Thiel, Environmental Scientist. B.A., Environmental Studies and Biology, University of California, Santa Cruz; 11 years of biology and environmental science experience. Contribution: preparation of the Natural Environment Study.

Chapter 6 **Distribution List**

- John Laird, Senator, District 17 (until 2024 election), California State Senate
- Dawn Addis, Assemblymember, District 30, California State Assembly
- Dianne Feinstein, Senator, U.S. Senate
- Alex Padilla, Senator, U.S. Senate
- Jimmy Panetta, Congressperson, District 19, US House of Representatives
- Monterey District - California State Parks
- Javier Mendez, Region 4, California Department of Fish and Wildlife
- Julie Vance, Regional Manager, Region 4 California Department of Fish and Wildlife
- Tamara Doan, Statewide Transportation Program Analyst, California Coastal Commission
- Marlene Alvarado, Caltrans Liaison, California Coastal Commission
- Brian Bugsch, Land Management Chief, California State Lands Commission
- Sheri Pemberton, External Affairs Chief, California State Lands Commission
- California Air Resources Board
- Scott Morgan, Chief Deputy Director, Office of Planning and Research
- Trish Chapman, Central Coast Regional Manager, California Coastal Conservancy
- Tanisha Taylor, Interim Executive Director, California Transportation Commission
- California State Transportation Agency
- Rachel Peterson, Executive Director, California Public Utilities Commission
- California Highway Patrol, Coastal Division
- California Natural Resources Agency
- State Clearinghouse
- David Shabazian, Director, California Department of Conservation
- Leslie Thelen, Administrative Chief, California Office of Historical Preservation

- George Nunez Jr., Unit Chief, CalFire San Benito-Monterey Unit
- CalEPA
- California Native American Heritage Commission
- Joe Sidor, Monterey County
- Mark Elvin, Caltrans Liaison, U.S. Fish and Wildlife Service
- Ventura Field Office, U.S. Fish and Wildlife Service
- Pacific Southwest Region Headquarters, U.S. Fish and Wildlife Service
- Daniel Breen, San Francisco Caltrans Liaison, U.S. Army Corps of Engineers
- San Francisco District, U.S. Army Corps of Engineers
- Jessica Fischer, Caltrans Liaison Long Beach Office, National Oceanic and Atmospheric Administration/National Marine Fisheries Service
- Long Beach Office, National Oceanic and Atmospheric Administration/National Marine Fisheries Service
- Mandy Ingham, Central Coast Branch Chief, National Oceanic and Atmospheric Administration/National Marine Fisheries Service
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- Mike Godwin, Central Coast Region Caltrans Liaison, Regional Water Quality Control Board
- Phillip Hammer, Central Coast Region Stormwater Unit Chief, Regional Water Quality Control Board
- Chris Stubbs, Forest Supervisor, Los Padres National Forest, U.S. Forest Service
- Jeff Kwasny, Resource Advisor, Los Padres National Forest, U.S. Forest Service
- Christopher Heppe, Central California District Manager, Bureau of Land Management
- Carlos Suarez, State Conservationist, Natural Resources Conservation Service, California State Office
- Antonio Johnson, Director- Planning, Environment, and Right of Way, Federal Highway Administration- California Division
- Alex Katz, Executive Director, Environmental Defense Center
- The Nature Conservancy
- Ag Land Trust
- Jeannette Tuitele-Lewis, President, Big Sur Land Trust

- Steve Birdlebough, Chair, Sierra Club California Conservation Committee on Transportation and Sustainable Communities
- Brandon Dawson, Director, Sierra Club California
- Michael DeLapa, Executive Director, Land Watch Monterey County
- Paul Robins, Executive Director, Resource Conservation District of Monterey County
- Carl Sedoryk, Chief Executive Officer, Monterey-Salinas Transit
- Maura Twomey, Executive Director, Association of Monterey Bay Area Governments
- Richard Stedman, Executive Air Pollution Control Officer, Monterey Bay Air Resources District
- Karen Grimmer, Resource Protection Coordinator, Monterey Bay National Marine Sanctuary
- Todd Muck, Executive Director, Transportation Agency for Monterey County
- Randell Ishii, Director of Public Works, Monterey County Public Works
- Craig Spencer, Chief of Planning Services, Monterey County Planning Division
- Buena Vista Branch, Monterey County Free Libraries
- Big Sur Branch, Monterey County Free Libraries
- Carmel Valley Branch, Monterey County Free Libraries
- Xochitl Marina Camacho, County Clerk, Monterey County Clerk
- Carl Holm, Resource Management Agency Director, Monterey County Resource Management Agency
- Velo Club Monterey
- Mark Readdie, Resident Director, Landels-Hill Big Creek Reserve
- Elizabeth Vasquez, Historic Resources Review Board Clerk, Monterey County Historic Resources Review Board
- Mary Israel, Housing and Community Development Planning Liaison, Big Sur Land Use Advisory Committee
- Deetjen's Big Sur Inn
- Kevin Johnson
- Kate Woods Novoa, Big Sur Kate
- Jeremy and Britney Miebling
- Patti Dutton, Tribal Office Administrator, Salinan Tribe of Monterey and San Luis Obispo counties

- Gregg Castro, Administrator, Salinan Nation Cultural Preservation Association
- Robert Piatti, Salinan Tribe of Monterey and San Luis Obispo counties
- Robert Duckworth, Salinan Tribe
- Point 16 LLC.
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- Alan Perlmutter, River Inn
- Alexandra McCoy, Granite Rock
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- Carolyn Shearer
- Casey Lucius
- Chris Balog, Big Sur International Marathon
- Chris Counts
- Chris Neely
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- Colin Jones
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- Jennifer Short of Senator Laird's office
- Jessica Koning
- Jill Stollmeyer
- Jim Shivers, Caltrans District 5
- Joanna Xiao
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- Julia O’Hern
- Karen Grimmer, Marine Sanctuary
- Karen Nordstrand
- Karen Seppa Nordstrand, MoCo Film Commission
- Kate Daniels
- Kate Mitchell Mehle, Big Sur Land Trust
- Kathleen Lee
- Kelly Cardoza, Captain, CHP
- Kelsey Scanlon – Monterey County Department of Emergency Management
- Ken Ekelund
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- Matt Glazer
- Megan Handy, Treebones
- Melanie Beretti, Housing and Community Development
- Melissa Dailey
- Melissa Morris, GM, Big Sur Roadhouse-Glen Oaks
- Michael Harrington
- Michael Linder
- Michael Wisner
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Appendix A Section 4(f)

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:

1. There is no prudent and feasible alternative to using that land, and
2. 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 coordination with the Department of the Interior and, as appropriate, the involved offices of the Department of Agriculture and the Department of Housing and Urban Development in developing transportation projects and programs that use lands protected by Section 4(f). If historic sites are involved, then coordination with the State Historic Preservation Officer is also needed.

Responsibility for compliance with Section 4(f) has been assigned to Caltrans pursuant to 23 USC 326 and 327, including determinations and approval of Section 4(f) evaluations, as well as coordination with those agencies that have jurisdiction over a Section 4(f) resource that may be affected by a project action.

Description of the Proposed Project

Caltrans proposes to replace the existing concrete Limekiln Creek Bridge, which is in Monterey County on State Route 1 near Lucia. The project is needed due to chloride intrusion in the concrete of Limekiln Creek Bridge. Within the limits of the proposed project, State Route 1 is a two-lane undivided highway with two 10- to 12-foot lanes and 0- to 4-foot non-standard shoulders. The proposed project lies exclusively within the Limekiln State Park property. The existing bridge consists of eight piers and two abutments and is approximately 580 feet long and experiencing deterioration. The purpose of this project is to ensure the reliability of State Route 1 for the

traveling public, support the movement of essential goods and services, and maintain coastal access along this section of the Big Sur Coast by addressing chloride intrusion in Limekiln Creek Bridge and slope stability problems. More information can be found in the purpose and need section of Chapter 1.

Two build alternatives are proposed, which include Alternative 4B and Alternative 6. More information on these alternatives can be found in Section 1.5 of the draft Environmental Impact Report/Environmental Assessment.

Alternative 4B

Alternative 4B proposes an approximately 900-foot-long, two-span cast-in-place post-tensioned box girder bridge with 12-foot lanes and 4-foot shoulders. The alignment will shift approximately 65 feet west of the existing bridge and conform to the existing highway at both ends. The new alignment has been designed to stay west of the steep slopes above the roadway to avoid cutting into unstable soils and potential ground slipping. This will allow most of the new bridge to be constructed while leaving the existing bridge intact to allow traffic flow. Due to the shift in alignment west, the rocky outcropping to the west of the southern bridge abutment will need to be partially graded to serve as the location of the new bridge's southern abutment. Right-of-way acquisition will be required.

The slope above and below the existing north abutment is an active landslide. At the base of the slope, along Limekiln Beach, is a revetment consisting of crib walls and large rock slope protection. The revetment is continuously eroding from wave action, causing Caltrans Maintenance to add additional rock slope protection, concrete slurry, and other treatments. An existing Coastal Development Permit from 2010 included a condition to restore the beach to its natural condition. The project proposes removing part of this revetment once the new bridge is complete. Full removal would be unsafe for the workers and could expose the public access beach to unstable slopes. Crib walls will be removed to the extent that is safe. Discussion is ongoing regarding future maintenance of the residual revetment.

Some, or all, of the distressed retaining walls between Limekiln Creek Bridge and Rain Rocks Sidehill Viaduct will be replaced to support the highway. Drainage improvements are anticipated to account for the new structure. Throughout the project, including along the new bridge, all roadway runoff would be directed to adjacent soils and would not flow directly to open water.

Two viaducts are proposed north of the bridge to replace distressed retaining walls. The first will be a 360-foot, half-width viaduct beginning north of the new bridge with 12-foot lanes and 4-foot shoulders. The second viaduct is proposed north of the first and will be a 185-foot viaduct due to alignment and steep terrain. To prevent the landslide from moving under the viaducts, a 160-foot-long soldier pile wall will be constructed below the highway along the east side of the first viaduct.

Alternative 6

Alternative 6 proposes an approximately 900-foot-long, two-span cast-in-place post-tensioned box girder bridge with 12-foot lanes and 4-foot shoulders. This proposed structure is similar to Alternative 4B, but the proposed bridge would begin at the existing southern abutment and follow the existing alignment as closely as feasible without needing excessive excavation in the landslide area north of the bridge. The bridge would be approximately 50 feet west of the existing alignment at the furthest point. The northern abutment will be shifted approximately 80 feet northwest. A temporary 200-foot-long retaining wall will be required along the new northern abutment. Right-of-way acquisition will be required.

To accommodate traffic during construction, a one-lane temporary bridge will be constructed to the east of the existing bridge. The temporary bridge is anticipated to be a three-span, 400-foot-long, 20-foot-wide structure, allowing for one-way reversing traffic. The temporary bridge abutments will conform to State Park access roads directly adjacent to the highway. This will allow traffic to be detoured while the existing bridge is being demolished and the new bridge is being constructed partially on the same alignment.

As described for Alternative 4B, Alternative 6 would also partially remove the revetment along Limekiln Beach, replace retaining walls between Limekiln Creek Bridge and Rain Rocks Sidehill Viaduct, and install drainage improvements. Two viaducts and a soldier pile wall are also proposed north of the bridge to replace distressed retaining walls, as described for Alternative 4B. More information regarding the project description and construction staging can be found in Chapter 1.

Individual Evaluation for Limekiln State Park

Description

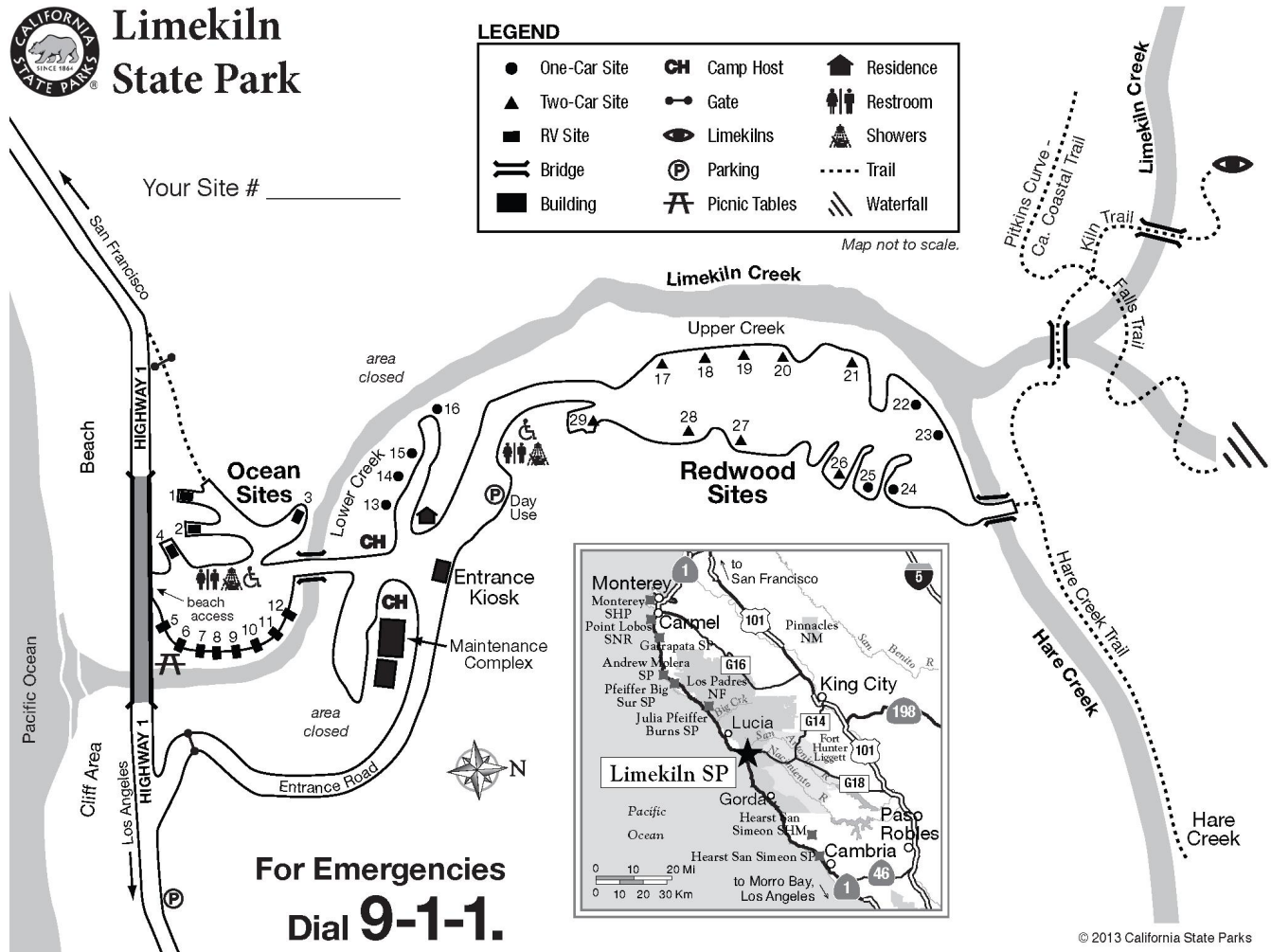
Limekiln State Park is a Section 4(f) property because it is a public park owned by the State of California. The proposed bridge replacement is entirely within the park. Limekiln State Park is one of the few areas in Big Sur with beach access and is a popular park for camping, day trips, and hiking. The roughly 700-acre park is owned and operated by California State Parks. The park is usually open year-round, dependent on road closures, which is common due to the unpredictability of landslides along the Big Sur Coast. For example, the park is currently closed due to a road closure from Paul's Slide, which closed Highway 1 in January 2023. The highway is not anticipated to reopen until late spring 2024.

Within the park, there are 29 campsites. There are 12 near the beach, four near the entrance kiosk at the lower section of Limekiln Creek, and the remaining 13 near the redwoods and upper part of the creek. Each campsite contains a picnic table and fire pit and is separated by boulders. For day use,

visitors can access the beach, and three available hiking trails follow Limekiln Creek's three tributaries through the redwood forest. Four historic limekilns along the Limekilns Trail follow the west fork of Limekiln Creek. A map from the California State Parks website shows the park features in Figure 37.

This campground is mostly accessed by car and is popular, considering it is one of the few areas along the Big Sur Coast with beach access. Campsites are known to fill up, and reservations can be made up to 6 months in advance. Limekiln is one of the more southern parks and is more isolated between stretches of highway. The closest similar park is Julia Pfeiffer Burns, approximately 15 miles north, and San Simeon, approximately 37 miles south.

Figure 37 Limekiln State Park Campground Map



Use

The Federal Highway Administration regulations at 23 Code of Federal Regulations 774 define three forms of use for Section 4(f).

1. Permanent incorporation occurs when a Section 4(f) property is acquired outright for a transportation project.
2. Temporary Occupancy occurs when there is temporary use of property that is adverse in terms of Section 4(f)'s preservationist purpose.
3. Constructive Use occurs when the proximity impacts of a transportation project on a Section 4(f) property, even without acquisition of the property, are so great that the activities, features, and attributes of the property are substantially impaired.

Both permanent incorporation and temporary occupancy would apply to both proposed alternatives.

Permanent Incorporation

Approximately 1.464 acres of land would be acquired in fee for Alternative 4B. This area would be west of the existing bridge to accommodate the shift in alignment (shown in Figure 38).

Alternative 6 would require a small acquisition of 0.002 acre and would adjust the existing Caltrans right-of-way line. This area is too small to be seen in Figure 40 but would be northwest of the proposed northern abutment.

The land acquisition for both alternatives would not affect any of Limekiln State Park's contributing features or activities, including campsites, trails, and parking.

Temporary Occupancy

Temporary construction easements and full park closure would be required within the park for the duration of construction to replace the bridge under both Alternative 4B and Alternative 6 (shown in Figures 38 and 40). This would involve heavy equipment within the park near the lower campsites and beach. It is anticipated that machinery would be placed below the bridge using a crane, and the northern entrance road would be used for vehicular access. Vegetation removal would be required to widen the existing access road. Using the northern entrance would avoid the narrow turn near the kiosk at the southern park entrance, as well as the small bridge within the park.

No impacts to structures (such as a kiosk, bathrooms, and a small bridge within the park near the kiosk) in the park are anticipated. Disturbed areas within the temporary construction easement would be used for staging equipment. Campsites 1 through 12 would be disturbed but fully restored. The picnic tables, fire pits, and boulders would be moved during construction but

would be placed in their original location after the new bridge is constructed. Vegetation removal and stream diversion would be required. A mitigation and monitoring plan will be used to restore vegetation, which will include a one-to-one plant replacement ratio, native plant replacement, and a plant establishment period. Stream diversion for the removal of the existing pier in the creek would take place during the dry season. The creek would be diverted with pipes and then buried for pier removal and equipment access. More information on construction, biology impacts, and stream diversion can be found in Sections 1.5 and 2.4 of the draft Environmental Impact Report/Environmental Assessment. Wooden platforms and/or a debris containment system would be used to ensure no debris is dropped into the creek.

Construction is anticipated for approximately four years for Alternative 4B and four and a half years for Alternative 6.

Alternative 4B would require a temporary construction easement of 1.462 acres. This would be for the staging and construction work east of the existing bridge (shown in Figure 39).

Alternative 6 would require a slightly larger temporary construction easement of 1.992 acres (shown in Figure 41). In addition to the staging and construction area east of the bridge, the other required area would be near the northern abutment on the beach side of the bridge. The temporary bridge would be constructed at the lower campsites. Alternative 4B would require one stream diversion, but Alternative 6 might require two additional diversions to install and remove the temporary bridge pier.

Both alternatives would result in the full closure of Limekiln State Park for the duration of construction and would impact park activities such as camping, trail, and beach access.

Figure 38 Alternative 4B Limekiln State Park Right-of-Way Map



Figure 39 Alternative 4B Limekiln Campground Map



Figure 40 Alternative 6 Limekiln State Park Right of Way Map

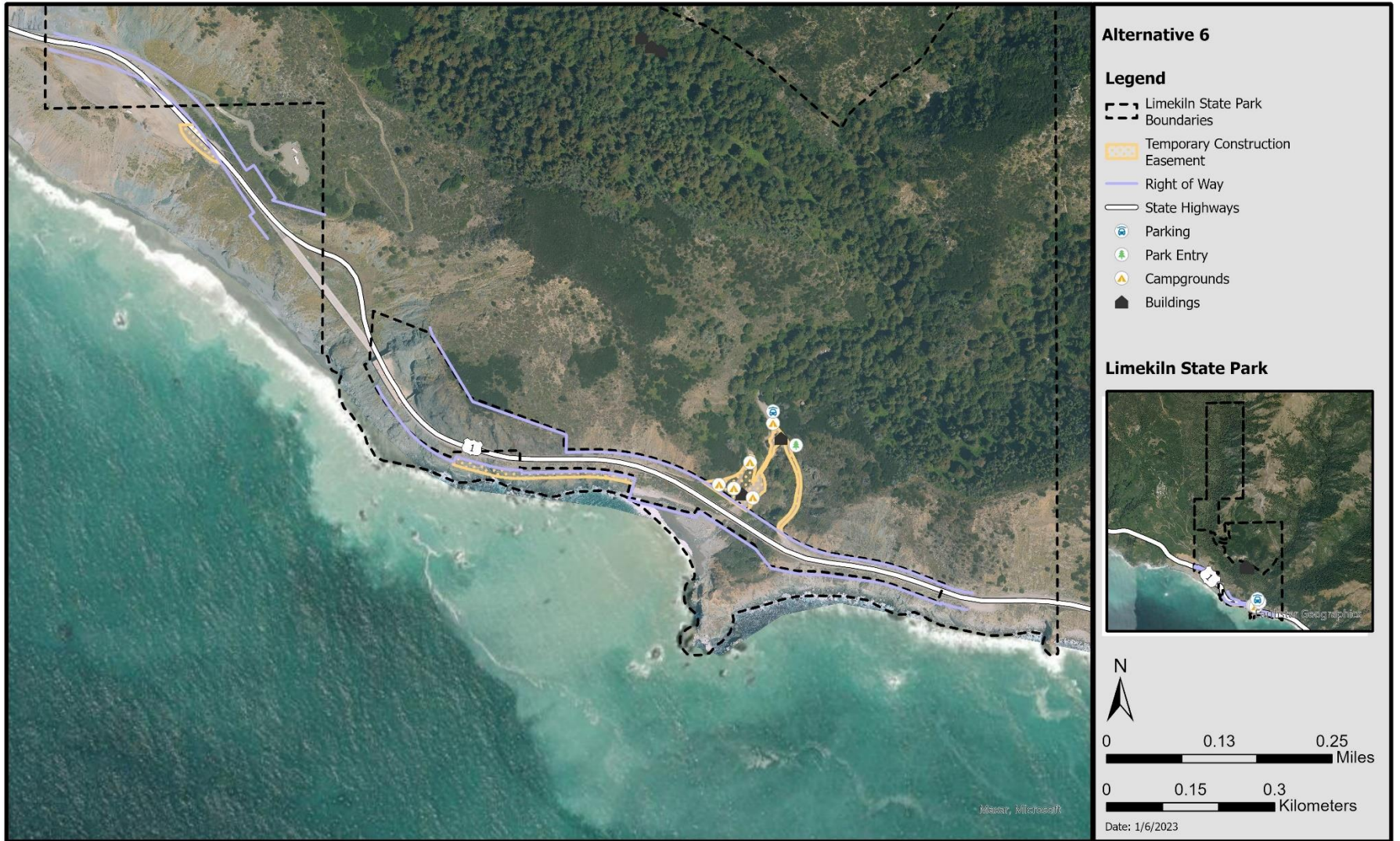


Figure 41 Alternative 6 Limekiln Campground Map



Avoidance Alternatives

Section 4(f) evaluations must make the finding that there is no feasible and prudent avoidance alternative and that the project includes all possible planning to minimize harm. Considering the proposed project is within and entirely surrounded by Limekiln State Park (see Figures 38 through 41), it would not be possible to completely avoid the Section 4(f) property. Even if the bridge were replaced entirely within Caltrans' existing right-of-way, there would be some form of impact on Limekiln State Park. For example, construction access and staging would not be feasible within the limited right-of-way.

Other alternatives have been evaluated over the years (see Section 1.7) in consultation with California State Parks, which include various shifts in alignment both east and west. A realignment to the east is challenging due to steep cliffs and the active landslide. Alternative 4B and Alternative 6 were determined to be the only feasible alternatives for a western realignment. Both were designed to avoid the riparian area, support the bridge if the landslides were activated, and allow traffic flow. None of these prior alternatives would have been able to completely avoid Limekiln State Park. The only alternative that could completely avoid Limekiln State Park would be the No-Build Alternative.

Section 4(f) states that any alternative that avoids the use of every Section 4(f) property must be evaluated to determine whether it is feasible and prudent. There are six factors to consider.

Does the alternative:

1. Compromise the project so that it is unreasonable given the purpose and need?
2. Result in unacceptable safety or operational problems?
3. After reasonable mitigation, it still causes:
4. Severe social, economic, or environmental impacts.
5. Severe disruption to established communities.
6. Severe environmental justice impacts.
7. Severe impacts on other federally protected resources.
8. Result in additional construction, maintenance, or operational costs of an extraordinary magnitude?
9. Consider factors such as the percentage difference in the costs of the alternatives, how the cost difference relates to the total cost of similar transportation projects in the applicant's annual budget, and the extent to which the increased cost of the project would adversely impact the applicant's ability to fund other transportation projects (Federal Highway

Agency Final Rule, “Section-by-Section Analysis of the Notice of Proposed Rule Making Comments and the Administration’s Response,” Federal Register Volume 73, Number 49, March 12, 2008).

10. Cause other unique problems or unusual factors?
11. Involve multiple factors listed above that, while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude?

Under Section 4(f), an alternative using any amount of Section 4(f) property is not considered an avoidance alternative. Therefore, the feasible and prudent discussion below only includes alternatives that would completely avoid Limekiln State Park and any other Section 4(f) resources.

The only alignment that would completely avoid Limekiln State Park would require the realignment of State Route 1 a significant distance east. Relocation west would not be possible due to the Pacific Ocean. State Route 1 would need to be realigned approximately 0.8 mile north of the center of the existing Limekiln Creek Bridge. The route would then head east about 2 miles inland and return west to realign with the existing highway, about 0.4 mile south of the center line of the existing Limekiln Creek Bridge.

Limekiln State Park is fully surrounded by the Los Padres National Forest. Though moving the highway alignment east would entirely avoid California State Parks’ property, it would impact Los Padres National Forest, another publicly owned protected resource. This would cause additional Section 4(f) and Section 6(f) impacts.

Moving the highway east would also be challenging because of the mountainous terrain, which would require at least 4 miles of new highway on undeveloped land, as opposed to the current project’s 0.4-mile length of existing highway, half of which would be built in the Los Padres National Forest. This alternative would not be feasible or prudent. It would be costly, have a long construction duration, and impact protected resources.

The No-Build alternative would not address the purpose or need. It would leave the bridge cracking and unstable slopes at risk.

Leaving the bridge in its existing condition could result in unacceptable safety and operational conditions. Netting has been installed under the bridge to catch falling concrete, but this is a temporary solution. The rock slope protection and crib walls at the northern abutment would still require constant maintenance, and any potential landslide would cause major damage to the existing bridge.

There would be no mitigation with the No-Build alternative; therefore, there would not be severe social, economic, or environmental impacts. On the other hand, because of the safety measures previously mentioned, not addressing

the existing bridge could cause economic impacts if the bridge were to fail and the highway was closed. The No-Build alternative would also likely result in additional maintenance costs.

The No-Build alternative does not have a cost but would be quantified by the ongoing and additional maintenance required for the bridge and unstable slopes. If a landslide were to occur, it would also shut down the highway for an unknown amount of time. For example, Paul's Slide first closed State Route 1 in January 2023. This slide is located about 0.5 mile north of Limekiln State Park and continues to move. State Route 1 is currently closed for a 2-mile stretch, and it is unknown when the highway will open.

Aside from the potential issues mentioned above, there are no other unique problems or unusual factors that would cause impacts of extraordinary magnitude.

Based on the discussions above, it appears that no feasible and prudent avoidance alternative completely avoids the Section 4(f) property. However, a final decision will not be made until after the draft document has been circulated for public review.

Measures to Minimize Harm to the Section 4(f) Property

All alternatives were discussed with California State Parks' input because the project lies entirely within and surrounded by California State Parks property with no possibility of avoidance.

The recommendation is to keep the entire park closed for the duration of construction. This was determined in coordination with California State Parks and is recommended because of public safety concerns and operational challenges. The hiking trails were closed between 2020 and September 2023 due to highway closures, storms, and maintenance. Additionally, having half of the campsites open during construction would likely alter the camping experience due to noise, visual, and safety concerns. This would include both campsites and day passes. Though it would be possible to maintain access through the park for campsites 13 through 29 and hiking trails, this is not recommended.

California State Parks will be fully compensated for revenue loss for the duration of the park closure. After work is complete, all natural areas would be restored to their original grade and contour and revegetated as appropriate.

The temporary construction easement established between Caltrans and California State Parks states that the park will be restored to the existing condition it was in before construction.

Additionally, the following avoidance and minimization measures would be included in the proposed project:

1. SP-1: No California State Parks structures will be removed, including the kiosk, bathrooms, and bridge, without prior approval from California State Parks.
2. SP-2: Any vegetation removed will be replanted in coordination with California State Parks.
3. SP-3: All campsites affected by temporary construction activities will be restored to match existing conditions and configurations after the completion of construction.
4. SP-4: Any damage to pavement or structures due to heavy equipment access will be restored to their previous condition or better.

Individual Evaluation for the Historic District

Description

Rockland Lime and Lumber Historic Landscape District

Historic districts are geographical areas that contain contributing and noncontributing properties. A contributing property is any element that adds to the historical integrity or significance.

The Rockland Lime and Lumber Company operated between 1887 and 1890. Sixteen contributing elements of the potential district were identified within the study area. These include lime kilns and associated quarries, a townsite, landing, wagon road, and various structure flats and foundations, as well as four historic vegetation elements, all associated with the historic Rockland Lime and Lumber Company. These contributing elements are historically significant and give value to the district. Another seven archaeological resources were identified and recorded but do not contribute to the district's historical character or eligibility.

The district was determined to be eligible for inclusion in the National Register under Criteria A and C and assumed to be eligible under Criterion D as an archaeological district that reflects a cultural landscape and includes archaeological, vegetation, and topographic/geological elements related to the theme of industrial lime development. It is significant at the state and local level, with a period of significance from 1887 to 1890, reflecting the total duration of lime processing activities at the Rockland Lime and Lumber Company operation.

Use

The Federal Highway Administration regulations at 23 Code of Federal Regulations 774 define three forms of use for Section 4(f).

1. Permanent Incorporation occurs when a Section 4(f) property is acquired outright for a transportation project.

2. Temporary Occupation occurs when there is temporary use of property that is adverse in terms of Section 4(f)'s preservationist purpose.
3. Constructive Use occurs when the proximity impacts of a transportation project on a Section 4(f) property, even without acquisition of the property, are so great that the activities, features, and attributes of the property are substantially impaired.

Both Permanent Incorporation and Temporary Occupancy would apply to both proposed alternatives.

Alternative 4B

Alternative 4B would require grading at the southern knoll for the proposed abutment. The grading, along with the western movement of the bridge itself, would require the right-of-way acquisition of about 1.464 acres within and around the area of the doghole port (small ports that operated between the mid-1800s and 1930s). This property acquisition would impact the wagon road (DH-18) and site MNT-2452H, which are contributing resources to the Rockland Lime and Lumber Historic Landscape District. A small part of both the wagon road and site would be destroyed due to the shifting abutment. This would be a Section 4(f) use.

Alternative 6

Alternative 6 was designed to avoid impacts on the southern knoll and, therefore, its associated cultural resources. There would be an acquisition of 0.002 acre closer to the northern abutment of the existing bridge. There would be no Section 4(f) use for Alternative 6 for the historic district. However, because Alternative 6 would still result in the use of Limekiln State Park, Alternative 6 is not discussed below under Avoidance Alternatives.

Avoidance Alternatives

Section 4(f) evaluations must make the finding that there is no feasible and prudent avoidance alternative and that the project includes all possible planning to minimize harm. Considering the proposed project is within and entirely surrounded by Limekiln State Park (see Figures 38 through 41), it would not be possible to completely avoid the Section 4(f) property. Even if the bridge were replaced entirely within Caltrans' existing right-of-way, there would be some form of impact on Limekiln State Park. For example, construction access and staging would not be feasible within the limited right-of-way.

Other alternatives have been evaluated over the years (see Section 1.7) in consultation with California State Parks, which include various shifts in alignment both east and west. A realignment to the east is challenging due to steep cliffs and the active landslide. Alternative 4B and Alternative 6 were determined to be the only feasible alternatives for a western realignment.

Both were designed to avoid the riparian area, support the bridge if the landslides were activated, and allow traffic flow. None of these prior alternatives would have been able to completely avoid Limekiln State Park. The only alternative that could completely avoid Limekiln State Park would be the No-Build Alternative.

Section 4(f) states that any alternative that avoids the use of every Section 4(f) property must be evaluated to determine whether it is feasible and prudent. There are six factors to consider.

Does the alternative:

1. Compromise the project so that it is unreasonable given the purpose and need?
2. Result in unacceptable safety or operational problems?
3. After reasonable mitigation, it still causes:
 - a. Severe social, economic, or environmental impacts.
 - b. Severe disruption to established communities.
 - c. Severe environmental justice impacts, or
 - d. Severe impacts on other federally protected resources.
 - e. Result in additional construction, maintenance, or operational costs of an extraordinary magnitude?
4. Consider factors such as the percentage difference in the costs of the alternatives, how the cost difference relates to the total cost of similar transportation projects in the applicant's annual budget, and the extent to which the increased cost of the project would adversely impact the applicant's ability to fund other transportation projects (Federal Highway Agency Final Rule, "Section-by-Section Analysis of the Notice of Proposed Rule Making Comments and the Administration's Response," Federal Register Volume 73, Number 49, March 12, 2008).
5. Cause other unique problems or unusual factors?
6. Involve multiple factors listed above that, while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude?

Under Section 4(f), an alternative using any amount of Section 4(f) property is not considered an avoidance alternative. Therefore, the feasible and prudent discussion below only includes alternatives that would completely avoid Limekiln State Park as well as any other Section 4(f) resources.

Like the evaluation for Limekiln State Park, the only build alternative that would completely avoid Limekiln State Park would require the realignment of State Route 1 a significant distance east. Relocation west would not be

possible due to the Pacific Ocean. State Route 1 would need to be realigned approximately 0.8 mile north of the center of the existing Limekiln Creek Bridge. The route would then head east about 2 miles inland and return west to realign with the existing highway, about 0.4 mile south of the center line of the existing Limekiln Creek Bridge. This would entirely avoid the California State Parks' property but would be challenging because of the mountainous terrain. This would also require at least 4 miles of new highway on undeveloped land, and half of this highway would be built in the Los Padres National Forest. This alternative would not be feasible or prudent. It would be costly, have a long construction duration, and impact protected resources.

The No-Build alternative would not address the purpose or need. It would leave the bridge cracking and unstable slopes at risk.

Leaving the bridge in its existing condition could result in unacceptable safety and operational conditions. Netting has been installed under the bridge to catch falling concrete, but this is a temporary solution. The rock slope protection and crib walls at the northern abutment would still require constant maintenance, and any potential landslide would cause major damage to the existing bridge.

There would be no mitigation with the No-Build alternative; therefore, there would not be severe social, economic, or environmental impacts. On the other hand, because of the safety measures previously mentioned, not addressing the existing bridge could cause economic impacts if the bridge were to fail and the highway was closed. The No-Build alternative would also likely result in additional maintenance costs.

The No-Build alternative does not have a cost but would be quantified by the ongoing and additional maintenance required for the bridge and unstable slopes. If a landslide were to occur, it would also shut down the highway for an unknown amount of time. For example, Paul's Slide first closed State Route 1 in January 2023. This slide is located about 0.5 mile north of Limekiln State Park and continues to move. State Route 1 is currently closed for a 2-mile stretch, and it is unknown when the highway will reopen.

Aside from the potential issues mentioned above, there are no other unique problems or unusual factors that would cause impacts of extraordinary magnitude.

Based on the discussions above, it appears that no feasible and prudent avoidance alternative completely avoids the Section 4(f) property. However, a final decision will not be made until after the draft document has been circulated for public review.

Measures to Minimize Harm to the Section 4(f) Property

Mitigation measures were determined in coordination with consulting parties and agencies and approved by the State Historic Preservation Office. The following mitigation measures would be used to minimize harm to the Rockland Lime and Lumber Historic Landscape District:

1. ARC-1: Marine survey of the intertidal related to the Rockland Landing Doghole Port. This would determine whether any additional features of the doghole port are present in the intertidal waters off Limekiln Beach. Resource locations would be recorded with GPS, photography, and measurements. Archaeologists will use snorkels or self-contained underwater breathing apparatus (known as SCUBA) diving visual surveys to locate resources underwater. The results will be documented in the Marine Survey Inventory Report, and any resources would be added to the site record for MNT-2452/H and to the district record for the Rockland Lime and Lumber Company Historic Landscape District.
2. ARC-2: Preparation of a District Nomination Form for the Rockland Lime and Lumber Company Historic Landscape District. An archeological district record for the Rockland Lime and Lumber Company Historic Landscape District has been prepared and recommended for listing in the National Register. This would be compiled into a formal district nomination that would consider nominating the doghole port as part of a Maritime Cultural Landscape. Standard Caltrans practice is to determine eligibility, but this additional step would officially add the District to the National Register.
3. ARC-3: Preparation of Public Outreach Materials Related to the Rockland Lime and Lumber Company. California State Parks has developed a cell phone application that features various park-specific cultural content to create an immersive experience for hikers along a park trail. Caltrans would work with California State Parks to develop content specific to the Rockville Landing site and the broader Rockland Lime and Lumber Company Historic Landscape District.

Least Harm Analysis

This section will be completed for the final environmental document after input from the public and officials with jurisdiction during the circulation of the draft environmental document and future coordination.

Resources Evaluated Relative to the requirements of Section 4(f) No-Use

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 United States Code 303, declares that “it is the policy of the United States Government that special effort should be made to preserve the

natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites."

This section of the document discusses parks, recreational facilities, wildlife refuges, and historic properties found within or next to the project area that do not trigger Section 4(f) protection because: 1) they are not publicly owned; 2) they are not open to the public; 3) they are not eligible historic properties; or 4) the project does not permanently use the property and does not hinder the preservation of the property.

MNT-620

Site MNT-620 is a precontact Native American archeological site. This site was determined to be outside the project's affected area; therefore, there will be no Section 4(f) use.

MNT-1892

Site MNT-1892 is a precontact archeological site. This resource would be impacted by the proposed project under both alternatives. For a resource to qualify for Section 4(f), it must be eligible for the National Register, except in those instances when the resource is important because of what can be learned from data recovery and has minimal value for preservation in place (23 Code of Federal Regulations 774(b)(1)). Site MNT-1892 is eligible for the National Register; however, this site has had previous data recovery and evaluation excavations, which have left the site with a limited deposit. Because of this, a more targeted approach is anticipated for mitigation at this site rather than a large-scale data recovery effort, which has minimal value for preservation in place. Therefore, Section 4(f) does not apply.

Carmel-San Simeon Highway Historic District

The Carmel-San Simeon Highway Historic District (P-27-002775) follows the alignment of State Route 1 and has been determined eligible as a historic district. There are 241 contributing elements, including roadside water fountains, retaining walls, culvert headwalls, and concrete arch bridges. As determined in the Historic Property Survey Report, this district does intersect with the Rockland Lime and Lumber Historic Landscape District, but the portion that intersects does not include any contributing elements. There is a contributing element, a battlement-style parapet wall (feature DM-343), located just west of the study area. This feature would not be impacted as a result of the proposed project, and there is no Section 4(f) use.

Limekiln Bridge

According to the Caltrans Historic Bridge Inventory, Limekiln Bridge is not historic. It is also not a contributor to the Carmel-San Simeon Highway Historic District. Therefore, there is no Section 4(f) use.

Section 6(f)

The Land and Water Conservation Fund Act was established by Congress in 1964 to fulfill a bipartisan commitment to safeguard natural areas, water resources, and cultural heritage and to provide recreation opportunities to all Americans. The Land and Water Conservation Fund program provides matching grants to states and local governments for the acquisition and development of public outdoor recreation areas and facilities. Section 6(f) of this Act prohibits the conversion of property acquired or developed with these grants to a non-recreational purpose without the approval of the Department of Interior's National Park Service.

Applicability of Section 6(f) for Limekiln State Park

Following consultation with California State Parks in October 2023, it appears that Limekiln State Park does not qualify as a Section 6(f) property. A California State Parks Limekiln Project Resource Summary from 2000 states:

“The property was acquired from the American Land Conservancy in two separate transactions in 1994 and 1996. Before the Conservancy's brief ownership, the property had been owned by Henry Cowell and the S.H. Cowell Foundation since 1902. The American Land Conservancy assisted and facilitated the State of California's acquisition of the property. Both the Conservancy and the Save the Redwoods League made financial donations to supplement state funding to make the acquisition of the property possible. State funding came from Proposition 117—the Mountain Lion Initiative that established annual funding for the Wildlife Conservation Fund to acquire and manage wildlife habitat.”

Based on this documentation, it appears Limekiln State Park is not a Section 6(f) property. This will be confirmed during the transfer of jurisdiction once an alternative is selected.

Coordination

Caltrans requires consultation and coordination with the agencies with jurisdiction for Section 4(f). This coordination determines use and helps develop measures to avoid or minimize harm. Caltrans coordinated with the California Coastal Commission and California State Parks regarding project design, but Section 4(f) discussions were focused on California State Parks as the official with jurisdiction for any use of the park property.

1. Caltrans makes eligibility determinations relative to cultural resources and then must coordinate with the State Historic Preservation Office as the official with jurisdiction for any use involving historic properties. Caltrans received concurrence from the State Historic Preservation Office on July

- 8, 2021, regarding site MNT-1892 and the Rockland Lime and Lumber Company Historic Landscape District.
2. A multiagency meeting was held with Caltrans, California State Parks, and the California Coastal Commission on July 17, 2023, to discuss compensatory mitigation and Section 4(f). In this meeting, Caltrans asked if California State Parks had any needs that would benefit public access to Limekiln State Park. California State Parks was asked to calculate the cost for peak, off-season, and day use. Possible compensatory mitigation proposed by California State Parks included replacing the retaining wall at the north side of the park entrance and the small bridge within the park near the kiosk. California State Parks also mentioned potential road, stormwater, and utility improvements dependent on what equipment would be used in staging areas.
 3. Caltrans' environmental coordinator emailed California State Parks staff on August 18, 2023, to get input regarding park closure.
 4. Caltrans' environmental coordinator and a representative from California State Parks had a phone call on August 23, 2023, to discuss questions related to park closure. California State Parks made its position clear that public safety is its number one goal, and full park closure for construction would be the safest solution.
 5. Caltrans' project manager sent California State Parks staff a draft of the Section 4(f) evaluation on August 31, 2023.
 6. Caltrans' project manager and a representative from California State Parks had a phone call on September 6, 2023.
 7. Caltrans and California State Parks met on September 12, 2023, to discuss revisions to the Section 4(f) evaluation. Caltrans informed California State Parks that, at this time, the cost estimate included only park closure compensation, but additional mitigation could be coordinated between the draft and final environmental documents.
 8. Caltrans' environmental coordinator called California State Parks representatives to discuss Section 6(f) needs on October 4, 2023.
 9. Caltrans' environmental coordinator called California State Parks representatives on October 19, 2023, to discuss if Section 6(f) applies to Limekiln State Park. Based on the documents California State Parks found, it was determined that Section 6(f) does not apply.

Appendix B Title VI/Non-Discrimination Policy Statement

CALIFORNIA STATE TRANSPORTATION AGENCY

GAVIN NEWSOM, GOVERNOR

California Department of Transportation

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September 2022

NON-DISCRIMINATION POLICY STATEMENT

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964, ensures *"No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."*

Caltrans will make every effort to ensure nondiscrimination in all of its services, programs and activities, whether they are federally funded or not, and that services and benefits are fairly distributed to all people, regardless of race, color, or national origin. In addition, Caltrans will facilitate meaningful participation in the transportation planning process in a non-discriminatory manner.

Related federal statutes, remedies, and state law further those protections to include sex, disability, religion, sexual orientation, and age.

For information or guidance on how to file a complaint, or obtain more information regarding Title VI, please contact the Title VI Branch Manager at (916) 639-6392 or visit the following web page: <https://dot.ca.gov/programs/civil-rights/title-vi>.

To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Civil Rights, at PO Box 942874, MS-79, Sacramento, CA 94274-0001; (916) 879-6768 (TTY 711); or at Title.VI@dot.ca.gov.

A handwritten signature in black ink, appearing to read 'Tony Tavares'.

TONY TAVARES
Director

Appendix C Avoidance, Minimization and/or Mitigation Summary

The following summarizes the measures that could be included in the project to avoid or minimize impacts on environmental resources as a result of the project. Anticipated impacts on visual quality and cultural resources have been determined to be significant under CEQA. Measures to mitigate significant or potentially significant impacts under CEQA are identified. Impacts on other resources have been determined to be less than significant under CEQA. The potential impacts and specific measures are discussed in more detail in Chapter 2.

Parks and Recreation

Any damage to structures due to heavy equipment will be fully restored to their original condition. Any removal of structures will first be approved by California State Parks.

The following measures will be included to minimize effects on Limekiln State Park:

- SP-1: No California State Parks structures will be removed, including the kiosk, bathrooms, and bridge, without prior approval from California State Parks.
- SP-2: Any vegetation removed will be replanted in coordination with California State Parks.
- SP-3: All campsites affected by temporary construction activities will be restored to match existing conditions and configurations after the completion of construction.
- SP-4: Any damage to pavement or structures due to heavy equipment access will be restored to their previous condition or better.

Visual/Aesthetics

The aesthetic design will be done in coordination with District 5 Landscape Architecture. Replacement planting will include aesthetic considerations as well as biological goals and will be limited to native species. New structures will be colored to match the surroundings and reduce reflectivity.

The following measures are proposed to reduce significant impacts under CEQA on the visual character of the project area, although the impact will remain significant and unavoidable.

- VIS-1: Design the bridge and viaduct structures with the highest quality architectural and engineering practices and considerations, acknowledging the existing historic bridges of the Big Sur Coast, local

policies, and considering the adjacent Rain Rocks and Pitkins Curve structures. The design shall be done in coordination with District 5 Landscape Architecture.

- VIS-2: Involve the community in the aesthetic design of all structures.
- VIS-3: The design of all structures shall consider including a high level of architectural detailing, including the shape of columns and other structural elements that are visible to pedestrians under the structures. The design shall be done in coordination with District 5 Landscape Architecture.
- VIS-4: Use an open-style bridge rail that maximizes views. Bridge rail selection shall be done in coordination with District 5 Landscape Architecture.
- VIS-5: Use finish, colors, and textures that minimize reflectivity and glare, and they shall be selected in coordination with District 5 Landscape Architecture.
- VIS-6: Preserve as much existing vegetation as possible. Prescriptive clearing and grubbing and grading techniques that save the most existing vegetation and trees possible shall be used.
- VIS-7: Recontour all disturbed areas and construction access roads to a natural appearance.
- VIS-8: All excavation slopes shall include slope-rounding and landform-grading as appropriate to reduce their engineered appearance and to visually blend with the natural topography of the region.
- VIS-9: Revegetate all areas disturbed by the project, including but not limited to temporary access roads, staging, and other areas with native plant species appropriate to each specific work location.
- VIS-10: Replacement planting shall include aesthetic considerations as well as the inherent biological goals. Revegetation shall include native species as determined by the Caltrans Biologist and Caltrans District 5 Landscape Architecture. Revegetation shall occur to the maximum extent horticulturally viable and be maintained until established.
- VIS-11: Minimize the use of signage and reflectors to the minimum required by the American Association of State Highway and Transportation Officials.
- VIS-12: All overhead utility lines affected by the project shall be placed underground per the California Public Utilities Commission requirement under Public Utilities Code 320.
- VIS-13: All concrete drainage elements, including but not limited to headwalls, drain inlet aprons, etc., should be colored to blend with the surroundings and reduce reflectivity. The specific colors of these concrete elements shall be determined by Caltrans District 5 Landscape Architecture.

- VIS-14: All metal drainage components related to down drains and inlets, including but not limited to flared end sections, connectors, anchorage systems, safety cable systems, etc., should be darkened or colored to blend with the surroundings and reduce reflectivity. The specific color shall be determined by Caltrans District 5 Landscape Architecture.
- VIS-15: All visible rock slope protection should be placed in natural-appearing shapes rather than in geometric patterns to the greatest extent possible to reduce its engineered appearance.
- VIS-16: Following the placement of rock slope protection, the visible rock should be colored to blend with the surroundings and reduce reflectivity. The specific color shall be determined by Caltrans District 5 Landscape Architecture.
- VIS-17: Metal roadside elements, including but not limited to guardrails, guardrail transitions, and end treatments, should be stained or darkened to be visually compatible with the rural setting. The color shall be determined and approved by Caltrans District 5 Landscape Architecture.
- VIS-18: Pedestrian or bicycle railing shall not be included on top of a bridge or viaduct rail unless required by traffic safety standards. If pedestrian or bicycle railing is required, it shall be designed with materials, form, and colors to minimize noticeability and ocean-view blockage and to complement the bridge architecture.

Cultural Resources

A marine survey will be performed related to the Rockland Landing Doghole Port. These results will be added to the site record for both the historic-era landing site and the historic district. There will also be a formal district nomination that would consider the doghole port as part of a Maritime Cultural Landscape.

Caltrans will work with California State Parks to develop content specific to the Rockville Landing Site, which is part of the Rockland Lime and Lumber Company Historic Landscape District. This will be used as a form of public outreach.

A small, targeted data recovery will be performed for site MNT-1892. The findings will be discussed in an academic manuscript for publication in an academic journal.

The following measures are proposed to reduce significant impacts under CEQA on cultural resources, although the impacts will remain significant and unavoidable.

- ARC-1: Marine survey of the intertidal related to the Rockland Landing Doghole Port. This would determine whether any additional features of the doghole port are present in the intertidal waters off Limekiln Beach.

Resource locations would be recorded with GPS, photography, and measurements. Archaeologists will use snorkels or self-contained underwater breathing apparatus (known as SCUBA) diving visual surveys to locate resources underwater. The results will be documented in the Marine Survey Inventory Report, and any resources would be added to the site record for MNT-2452/H and to the District record for the Rockland Lime and Lumber Company Historic Landscape District.

- ARC-2: Preparation of a District Nomination Form for the Rockland Lime and Lumber Company Historic Landscape District. An archeological district record for the Rockland Lime and Lumber Company Historic Landscape District has been prepared and recommended for listing on the National Register. This would be compiled into a formal district nomination that would consider nominating the doghole port as part of a Maritime Cultural Landscape.
- ARC-3: Preparation of Public Outreach Materials Related to the Rockland Lime and Lumber Company. California State Parks has developed a cell phone application that features various park-specific cultural content to create an immersive experience for hikers along a park trail. Caltrans would work with California State Parks to develop content specific to the Rockville Landing site and the broader Rockland Lime and Lumber Company Historic Landscape District.
- ARC-4: Data recovery excavations targeting specific datasets. A limited deposit is present at MNT-1892. A targeted approach of a single one-by-one meter excavation is proposed. The unit would be excavated in 10-centimeter levels with a 50-by-50-centimeter quadrant from each level collected to obtain plant macrofossils, small fish bones, and shells. The remainder of the unit will be screened on-site to collect any larger tools or faunal remains. The proposed methods and resulting laboratory efforts and reporting will be detailed in an Archaeological Data Recovery Plan, which will be developed prior to project implementation.
- ARC-5: Stable isotope seasonality studies. These studies require sampling the margins of whole mussel shells from the site. Shells for analysis will be obtained from the large bulk soil samples obtained from the proposed control unit. A sample of up to 50 shells will be sampled, with up to 200 isotope measurements read (up to four per shell).
- ARC-6: Academic manuscript preparation. As the archaeological community constitutes a large part of the interested public, the proposed mitigation studies will result in the preparation of a manuscript for publication in an academic journal. This manuscript will address either the seasonality studies or the analysis of fish remains at the site.

Water Quality and Stormwater Runoff

Construction activities will be scheduled during the dry season when working near Limekiln Creek. Work on the beach will be scheduled during low tide.

Stormwater control barriers and stabilized access will be used. Sediment barriers, fiber rolls, and other Best Management Practices will be used to control sediment. A Stormwater Pollution Prevention Plan will be implemented.

The following measures will be included to minimize effects on water quality and stormwater runoff.

- WQ-1: Construction activities should be scheduled according to the relative sensitivity of the environmental concerns. Scheduling considerations will vary when working near perennial or ephemeral portions of Limekiln Creek within the project area. Work should be performed during the dry season. By their very nature, ephemeral drainages are usually dry in the summer, and therefore, in-stream construction activities will not cause significant water quality concerns. When working near streams, erosion and sediment controls should be implemented to keep sediment out of stream channels.
- WQ-2: Minimize disturbance through the selection of the narrowest crossing location, limiting the number of equipment trips across a stream during construction, and minimizing the number and size of work areas (equipment staging areas and spoil storage areas).
- WQ-3: Isolate equipment staging and spoil storage areas away from the stream channel using appropriate stormwater control barriers. Provide stabilized access to the stream when in-stream work is required.
- WQ-4: Locate project sites and work areas in pre-disturbed areas when possible.
- WQ-5: Select equipment that reduces the amount of pressure exerted on the ground surface and, therefore, reduces erosion potential, and/or uses overhead or aerial access for transporting equipment across drainage channels.
- WQ-6: Preserve existing vegetation outside of the active work area.
- WQ-7: Install temporary large sediment barriers to control sediment. Temporary large sediment barriers should only be installed where sediment-laden water can pond, thus allowing the sediment to settle out.
- WQ-8: Install temporary fiber rolls along the slope contour above the high water level to intercept runoff, reduce flow velocity, release the runoff as sheet flow, and provide sediment removal from the runoff. In a stream environment, temporary fiber rolls should be used in conjunction with other sediment control methods. Temporary fiber rolls and temporary hydraulic mulch (bonded fiber matrix) shall be applied above the high water level to all disturbed soil areas before every predicted rain event to prevent erosion.

- WQ-9: A gravel bag berm or barrier will be placed at the top of slopes or to replace dikes, preventing runoff in disturbed soil areas.
- WQ-10: Temporary check dams are placed in the flow line where stormwater leaves the project to slow the flow of water, allowing sediment to settle out.
- WQ-11: Work on the beach will be scheduled during low tide.
- JUR-6: Caltrans will ensure that Best Management Practices are implemented according to the most current approved guidelines to control erosion and sedimentation during and after project implementation. Under the California Interagency Noxious Weed Free Forage and Mulch Program (<http://pi.cdfa.gov/weed/wff>), California is taking steps to make noxious weed-free hay and straw widely available. Under this program, weed-free hay and straw bales will be used for erosion control measures when they become available.
- JUR-10: Before construction, the contractor will prepare and sign a Water Pollution Control Plan or a Stormwater Pollution Prevention Plan that complies with the Caltrans Stormwater Quality Handbook (Caltrans 2011). Provisions of this plan will be implemented during and after construction as necessary to avoid and minimize erosion and stormwater pollution in and near the work area.

Greenhouse Gas

Recycled materials will be used to reduce construction waste. Construction equipment will be used to improve fuel efficiency. Construction training will provide information regarding methods to reduce greenhouse gas emissions. Bicycle and pedestrian access will be maintained throughout construction.

The following measures will be included to minimize the effects of greenhouse gas emissions:

- GHG-1: Reduce construction waste and maximize the use of recycled materials, including but not limited to stockpiling pavement grindings for future use, salvaging rebar from demolished concrete, replacing drainage pipes, and processing waste to create usable fill material.
- GHG-2: Operate construction equipment with improved fuel efficiency by:
 - Properly tuning and maintaining equipment
 - Limiting idling to five minutes for delivery and dump trucks and other diesel-powered equipment
 - Using the right-sized equipment for the job
 - Use of alternative fuels, such as renewable diesel, as feasible
 - Produce hot mix asphalt with warm mix technology.

- GHG-3: Schedule traffic control with traffic handling plans and stage construction.
- GHG-4: Reduce water consumption during construction and prioritize the use of recycled water for construction needs.
- GHG-5: Conduct construction environmental training to provide construction personnel with information regarding methods to reduce greenhouse gas emissions related to construction.
- GHG-6: Select pavement materials that lower the rolling resistance of highway surfaces as much as possible while still maintaining design and safety standards.
- GHG-7: Maintain bicycle, pedestrian, and transit access throughout construction.

Biological Resources

Temporary, high-visibility fencing will be used to protect environmentally sensitive areas. Activities in Limekiln Creek would be limited to the dry season, and the creek would be returned to natural contours after construction. Cleaning and refueling equipment and vehicles will occur only within a staging area and at a designated distance from aquatic resources. Work on the beach will be limited to low tide. No work will occur within ocean or tidal waters. Night work will be limited and require a preconstruction survey.

Caltrans will coordinate with the National Oceanic and Atmospheric Administration before work occurs within the Monterey Bay National Marine Sanctuary. A Marine Mammal Avoidance plan will be used.

Tree trimming or removal would avoid impacts on nesting birds. Other work windows would be applied to minimize impacts on sensitive species. Preconstruction surveys would be conducted for special-status species; if individuals were found, they would be relocated. Applicable measures of the California red-legged frog and Smith's blue butterfly programmatic biological opinions would be adhered to, and these measures would also protect other species. Training sessions for construction personnel, biological monitoring, modifications to equipment to prevent harm to protected species, removal of exotic species, and revegetation of the project areas with an assemblage of native riparian, wetland, and upland vegetation suitable for the area would be used for impacts to special-status species, including black abalone, South-Central California Coast steelhead, and southern sea otter.

The following measures are proposed to reduce impacts on biological resources. Mitigation measures to reduce potentially significant impacts under CEQA to less than significant are listed after.

- JUR-9: Dewatering and stream diversion will be performed according to Caltrans Construction Site Best Management Practices (2017), and upstream and downstream passage of adult and juvenile fish will be maintained at all times, according to current National Marine Fisheries Service guidelines and criteria (National Marine Fisheries Service 2001).
- MB-1: Before construction, Caltrans will coordinate with the National Oceanic and Atmospheric Administration to acquire any permits or authorizations required for work within the Monterey Bay National Marine Sanctuary.
- NB-1: If feasible, vegetation removal, tree trimming, and bridge demolition shall be scheduled to occur between October 1 and January 31, outside of the typical nesting bird season, which is February 1 to September 30.
- NB-2: If it is not feasible to conduct this work outside of the nesting bird season, nesting bird surveys shall be conducted by a qualified biologist no more than seven days prior to the start of construction. If an active nest is found, a qualified biologist shall determine an appropriate Environmentally Sensitive Area buffer (typically 100 feet around active passerine nests and 500 feet for active bird of prey or raptor nests) or monitoring strategy based on the habits and needs of the species. The buffer area shall be avoided, or a monitoring strategy shall be implemented until a qualified biologist has determined that juveniles have fledged.
- NB-3: Bird exclusion will be installed or implemented during the construction of the new bridge and the demolition of the existing bridge to reduce impacts on swallows that are nesting on the existing bridge. Bird exclusions will be installed before the nesting bird season each year that bridge work is anticipated.
- NB-4: Trees to be removed will be noted on design plans. Prior to any ground-disturbing activities, temporary high-visibility fencing or flagging will be installed around the dripline of trees to be protected within project limits.
- NB-5: Least Bell's vireo surveys will be performed prior to construction. If an active nest for least Bell's vireo is found within 100 feet of the area of potential impact at any point during construction, all project activities shall immediately cease while Caltrans coordinates with applicable regulatory agencies and determines if additional measures are necessary. If California condors are observed within the construction area, all work shall cease within 250 feet of the animals until the animals leave the area of their own accord. The Caltrans Resident Engineer and Biologist will be notified immediately. The biologist will call appropriate regulatory agencies as needed to coordinate additional protective measures, if necessary.
- NB-6: No rodent control pesticides shall be used, including anticoagulant rodenticides such as brodifacoum, bromadiolone, difethialone, and

- difenacoum. This is a necessary precaution to avoid secondary poisoning by raptors that hunt and feed on rodents and other small animals.
- NB-7: A litter control program shall be instituted at each project site. No canine or feline pets or firearms (except for law enforcement officers and security personnel) shall be permitted on construction sites to avoid harassment, killing, or injuring animals. Environmental training will include the importance of not leaving hazardous materials exposed and the daily removal of all garbage fragments to maintain condor health.
 - NB-8: Project activities will be stopped temporarily if any California condors are observed within the project area prior to the start of work. The California condors will be allowed to depart on their own before project activities resume. California condors that arrive in the project area or approach work crews while work is ongoing will be hazed with direction from a qualified biologist, pursuant to the September 3, 2014, California Condor Recovery Program memo (United States Fish and Wildlife Service 2014).
 - NB-9: Work crews will store all project materials, tools, hardware, equipment, and all loose items in a manner that will prevent their removal or ingestion by California condors and other wildlife.
 - NB-10: Work crews will place all materials that are liquid, granular, or powder in sealed leak-proof containers and store them in a manner that prevents access by California condors and other wildlife.
 - SAS-1: Preconstruction surveys will be conducted for aquatic and semi-aquatic species before work in the creek or riparian areas occurs.
 - SAS-2: If the preconstruction survey reveals the presence of western pond turtles or coast range newts within the area of potential impact, Caltrans will notify the California Department of Fish and Wildlife and/or the United States Fish and Wildlife Service.
 - MM-1: A Marine Mammal Avoidance Plan will be prepared to avoid and minimize the effects on marine mammals. The plan will outline:
 - a. Biological monitoring requirements, including activities and times when one or more qualified biologists would be required to monitor for marine mammals using binoculars from a high vantage point. Monitoring activities will include any work activities onshore within 50 feet of tidal waters (defined for this project as a high tide line). No in-water work will occur within ocean waters. The biological monitor will have the authority to stop project activities if southern sea otters or other marine mammals approach or enter the exclusion zone (see measure c) or if, in the professional judgment of the monitor, southern sea otters or other marine mammals outside the exclusion zone display a significant and alarming reaction to construction or project activity. Biological monitoring will begin 0.5 hour before work begins and will continue until 0.5 hour after work is completed each day.

- b. Weather conditions that would prohibit work activities if sight distance is limited.
 - c. Procedures for when a marine mammal enters the project vicinity, including species-specific stop-work buffers. Work will start only with the approval of the biological monitor to ensure that no southern sea otters are present in the exclusion zone.
 - d. An exclusion zone will be implemented at all times when work is occurring onshore within 50 feet of tidal waters (high tide line). The radius of the exclusion zone will be a minimum of 50 feet to prevent the injury or disturbance of southern sea otters and other marine mammals from project activities.
 - e. If project activities (e.g., pile driving) occur within areas where they may generate underwater noise, an exclusion zone will be implemented that includes all areas where underwater sound pressure levels are expected to reach or exceed 160 dB re 1 μ Pa (sound pressure level). Project activities such as pile extraction or driving will not start (or restart following a shutdown) until southern sea otters are not sighted within the exclusion zone for a 15-minute period.
- MM-2: No in-water pile driving will occur.
 - MM-3: To reduce the risk of potentially startling marine mammals with a sudden, intensive sound, the construction contractor will begin construction activities gradually each day by starting tractors or other heavy equipment one at a time.
 - MM-4: Night work would be limited to the minimum necessary to complete the project. A preconstruction survey would be conducted prior to night work to ensure no marine mammals are hauled out within the project area. Work that is tidal dependent will occur within 1 hour before sunrise and 1 hour after sunset.
 - MM-5: If southern sea otters or other marine mammals are present within the work area, they will be allowed to leave of their own volition (i.e., they will not be hazed).
 - MM-6: Prior to construction, a qualified biologist will conduct a worker environmental training program that will include a description of protected species and habitats, their legal/protected status, proximity to the project site, avoidance/minimization measures to be implemented during the project, and the implications of violating the Federal Endangered Species Act, the California Endangered Species Act, the Marine Mammals Protection Act, and other relevant permit conditions.

The following mitigation measures are proposed to reduce significant impacts on biological resources under CEQA to less than significant.

- JUR-1: All trees that are removed will be replanted at a 1-to-1 or 3-to-1 ratio, depending on species and size. A mitigation and monitoring plan will be used to ensure the restoration of the disturbed riparian corridor. Replacement plants, erosion control material, native seed mixtures, and an invasive weed treatment plan will be described in detail in the mitigation and monitoring plan. The final mitigation and monitoring plan will be consistent with the agency requirements as written in project permits and will be reviewed and approved through the regulatory review process. Caltrans will implement the mitigation and monitoring plan as necessary during construction and immediately following project completion.
- JUR-2: Instream work will occur between June 1 and October 31, during the period of seasonally lower water levels. Deviations from this work window will only be made with concurrence from regulatory resource agencies.
- JUR-3: Before any ground-disturbing activities, temporary high-visibility fencing will be installed around work limits or otherwise flagged, as appropriate, to ensure no impacts occur outside the project limits. Environmentally Sensitive Areas will be included in design plans and delineated in the field before the start of construction activities.
- JUR-4: All project-related hazardous materials spills within the project site will be cleaned up immediately. Readily accessible spill prevention and cleanup materials will be kept by the contractor on-site at all times during construction.
- JUR-5: Cleaning and refueling of equipment and vehicles will occur only within a designated staging area. This area will either be a minimum of 100 feet from aquatic resources, or if the area is less than 100 feet from aquatic areas, the area must be surrounded by barriers (e.g., fiber rolls or equivalent). The staging areas will conform to Caltrans Construction Site Best Management Practices (Caltrans 2017).
- JUR-6: Caltrans will ensure that Best Management Practices are implemented according to the most current approved guidelines to control erosion and sedimentation during and after project implementation. Under the California Interagency Noxious Weed Free Forage and Mulch Program (<http://pi.cdfa.gov/weed/wff>), California is taking steps to make noxious weed-free hay and straw widely available. Under this program, weed-free hay and straw bales will be used for erosion control measures when they become available.
- JUR-7: Immediately upon completing in-channel work, all in-channel structures will be removed in a manner that minimizes disturbance to downstream flows and water quality.
- JUR-8: All temporary excavations and fills within project limits will be removed in their entirety, and the affected areas will be returned to

preconstruction elevations. After construction has been completed in aquatic resources, contours will be restored as close as possible to their original condition.

The impact is expected to be less than significant with the implementation of the following mitigation measures:

- CBB-1: Surveys will occur prior to ground disturbance for nesting bumblebees. No work will occur within 50 feet of an active Crotch's bumblebee nest unless approved by the California Department of Fish and Wildlife.
- CBB-2: A Worker Environmental Awareness Training will be provided for all construction personnel prior to the start of any ground disturbance or vegetation removal to discuss Crotch's bumblebee identification, ecology, habitat, and avoidance and minimization measures.
- CBB-3: Any blooming flowering plants that are scoped for removal would be inspected by a qualified biologist immediately prior to work to ensure that no bumblebees are on or near the plant. If a bumblebee is identified on or adjacent to vegetation that is to be removed, work in that area would not proceed until the bumblebee leaves the area of its own accord.
- CBB-4: Prior to any ground-disturbing activities, Environmentally Sensitive Area fencing shall be installed, as appropriate, around Crotch's bumblebee feeding and nesting habitats to be avoided. Environmentally Sensitive Areas shall be noted on design plans and delineated in the field prior to the start of construction activities.
- CBB-5: Any areas of suitable Crotch's bumblebee habitat that are temporarily impacted during construction will be replaced on-site at a minimum ratio of 1 to 1.
- BA-1: Prior to construction, Caltrans will complete a Federal Endangered Species Act consultation with the National Marine Fisheries Service.
- BA-2: If required by the National Marine Fisheries Service (in coordination with permitting agencies), a monitoring plan will be submitted to the agencies and approved to ensure that the black abalone population is monitored for any impacts that occur during and/or after construction activities.
- BA-3: If required (in coordination with permitting agencies), an emergency relocation plan will be created for implementation in the unlikely event that the population is imperiled by a slide caused by construction activities.
- BA-4: An approved biologist will conduct preconstruction surveys before work starts above black abalone habitat.
- BA-5: Prior to construction, a qualified biologist will conduct a worker environmental training program that will include a description of protected species and habitats, their legal/protected status, proximity to the project

site, avoidance/minimization measures to be implemented during the project, and the implications of violating the Federal Endangered Species Act and other relevant permit conditions.

- BA-6: A construction monitor will be present during all construction within black abalone habitat to ensure that no black abalone are injured or removed. All sea walls, crib walls, and rock slope protection being removed from the beach will be thoroughly inspected for abalone individuals.
- BA-7: To avoid impacts on critical habitat, all work to remove rock slope protection and alter the sea and crib walls from the beach will occur during negative tides. No work will occur within ocean/tidal waters.
- BA-8: No work will occur within suitable habitat for black abalone. All work on the crib, sea walls, and rock slope protection will be confined to the sandy beach and adjacent hillside. No rocks that could support the species will be removed or moved.
- BA-9: Where feasible, netting will be installed on the slope above medium-to-high-value critical habitat before any adjacent work is initiated to ensure that no debris falls into critical habitat and crushes black abalone.
- BA-10: All debris, equipment, and non-essential construction materials will be removed from the area after each day, and areas of critical habitat will be restored when construction is complete.
- SCCC-1: Prior to construction, Caltrans will complete a Federal Endangered Species Act consultation with the National Marine Fisheries Service.
- SCCC-2: An aquatic species exclusion/relocation plan will be prepared and approved by the National Marine Fisheries Service and implemented before a diversion is installed.
- SCCC-3: No in-water pile driving will occur as part of project activities.
- SCCC-4: If feasible, pile driving will not occur within 200 feet of the water's edge (Limekiln Creek and the Pacific Ocean high tide line). If pile driving is required within 200 feet of these areas, then a hydroacoustic analysis will be performed.
- SCCC-5: If piles are driven within 200 feet of open water (Limekiln Creek or the Pacific Ocean), a hydroacoustic analysis will be prepared to evaluate possible hydroacoustic effects. This analysis for underwater sound impacts would be provided in the Biological Assessment for South-Central California Coast steelhead and other biological permits, as needed. Project-specific measures to reduce potential effects will be implemented as needed, and hydroacoustic monitoring will be done to avoid and minimize adverse effects on fish.

- SBB-1: No more than 300 individual buckwheat plants and no more than 75 percent of buckwheat within the 230-foot buckwheat survey area will be impacted by project activities.
- SBB-2: Buckwheat revegetation will use buckwheat seeds and plants sourced from the Smith's blue butterfly southern metapopulation's range, from the Carmel Valley south along the Big Sur Coast to Hearst San Simeon State Park.
- SBB-3: Caltrans will prohibit mowing and broadcast spraying of herbicide in stands of buckwheat. Within areas that contain buckwheat, control of invasive weeds, which is beneficial to buckwheat, will be achieved by spot spraying of herbicide and/or hand clearing.
- SBB-4: Caltrans will ensure that only U.S. Fish and Wildlife Service-approved biologists will participate in the capture, handling, and monitoring of all life stages of the Smith's blue butterfly and the handling of buckwheat plants.
- SBB-5: Caltrans will ensure that ground disturbance for project activities will not begin within stands of buckwheat until a service-approved biologist is on site.
- SBB-6: A U.S. Fish and Wildlife Service-approved biologist will survey the work site no more than 30 days before the start of ground disturbance. If any life stage of the Smith's blue butterfly or its host plant, seacliff and seaside buckwheat, is found and is likely to be killed or injured by work activities, the approved biologist will be allowed sufficient time to relocate seacliff buckwheat plants, duff, and/or soil from the site before work activities begin. The seacliff buckwheat plants, duff, and/or soil will be hand removed and placed as close as possible to, but not on, living seacliff buckwheat plants. The service-approved biologist will relocate the seacliff buckwheat plants, duff, and/or soil the shortest distance possible to a location that contains suitable habitat and will not be affected by activities associated with the proposed project. The service-approved biologist will maintain detailed records of the number of seacliff buckwheat plants that are moved.
- SBB-7: Before any project activity work begins within stands of buckwheat, a service-approved biologist will provide training to all field personnel. At a minimum, the training will include a description of the Smith's blue butterfly and its habitat, the specific measures that are being implemented to conserve the Smith's blue butterfly, and the boundaries within which the project may be accomplished. Brochures, books, and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions.
- SBB-8: A U.S. Fish and Wildlife Service-approved biologist will be present at the work site for project activities within stands of buckwheat until all Smith's blue butterflies and seacliff buckwheat plants that are at risk due

to project activities have been removed, workers have been instructed, and disturbance to habitat has been completed. After this time, Caltrans will designate a person to monitor on-site compliance with all minimization measures. The service-approved biologist will ensure that this monitor receives the training outlined in Measure SBB-7 and for the identification of the Smith's blue butterfly and its host plant, seacliff buckwheat. If the monitor or the service-approved biologist recommends that work be stopped because the Smith's blue butterfly or seacliff buckwheat will be affected to a degree that exceeds the levels anticipated by Caltrans and the Service during the review of the proposed action, they will notify the resident engineer (the engineer that is directly overseeing and in command of construction activities) immediately. The resident engineer will either resolve the situation by eliminating the unanticipated effect(s) immediately or require that all actions causing these effects be stopped. If work is stopped, the Service will be notified as soon as is reasonably possible.

- SBB-9: An assemblage of native species will be used for the revegetation of project sites. Seacliff buckwheat seeds or plants will only be placed outside the vegetation control areas (10 feet from Caltrans road edges). The spread of invasive weeds during revegetation efforts will be controlled according to the Vegetation Management Guidelines (California Department of Transportation 2002) developed as part of the Big Sur Coast Highway Management Plan (California Department of Transportation 2004).
- SBB-10: The number of access routes, the size of staging areas, and the total area of the activity will be limited to the minimum necessary to achieve the project goal. Environmentally sensitive areas will be established to confine access routes and construction areas to the minimum area necessary to complete construction and minimize the impact on Smith's blue butterfly and seacliff buckwheat.
- SBB-11: Caltrans will ensure that Best Management Practices are implemented according to the most current approved guidelines to control erosion and sedimentation during and after project implementation.
- SBB-12: All buckwheat plants or stands outside the work limits will be flagged and marked as environmentally sensitive areas prior to construction. Environmentally sensitive area limits will be depicted on the final design plans and will be placed in the field by a qualified biologist prior to the start of work.
- SBB-13: At least five days prior to the beginning of work, the resident engineer shall meet with the district biologist in the field at the project site for the identification of select locations where flagging shall be incorporated.

- SBB-14: To avoid the loss of buckwheat in the range of Smith's blue butterfly and to promote species recovery across the range, seacliff buckwheat will be replanted on-site, either from seed or seedling.
 - a. Caltrans will monitor revegetated areas and the immediate vicinity for invasive weed species every 6 months for the first year and annually thereafter for a total of 5 years. If replacement ratios or invasive weed-free conditions are not met at the end of the monitoring period, then corrective measures will be developed and implemented, subject to approval by the United States Fish and Wildlife Service.
 - b. If replanted from seedlings, there will be at least two seedlings planted for every one plant removed (minimum 2-to-1 replacement ratio).
 - c. If buckwheat is replanted from seed, the total area occupied by buckwheat at the end of the 5-year monitoring period will be the same as the area of buckwheat plants removed (1 to 1 ratio).
 - d. Caltrans will conduct revegetation efforts in all other disturbed areas that are outside of those impacted by buckwheat removal. Caltrans will reseed these disturbed areas with a native seed mix that includes seacliff buckwheat seed. Caltrans will monitor these disturbed areas and the immediate vicinity for invasive weed species every 6 months for the first year and annually thereafter for a total of 5 years. Any invasive weed species present, including seedlings, will be removed without damaging seacliff buckwheat plants.
- SBB-15: Replanting will occur as close as possible to the original site of buckwheat removal but outside the vegetation control area or other areas where repeated disturbance or future activities are anticipated.
- SBB-16: Dust and erosion control will be implemented to prevent adverse effects on buckwheat.
- CRLF-1: Only United States Fish and Wildlife Service-approved biologists shall participate in activities associated with the capture, handling, and monitoring of California red-legged frogs.
- CRLF-2: Ground disturbance shall not begin until written approval is received from the United States Fish and Wildlife Service that the biologist is qualified to conduct the work.
- CRLF-3: A United States Fish and Wildlife Service-approved biologist shall survey the project area no more than 48 hours before the start of work activities. If any life stage of the California red-legged frog is found and these individuals are likely to be killed or injured by work activities, the approved biologist shall be allowed sufficient time to move them from the site before work begins. The United States Fish and Wildlife Service-approved biologist shall relocate the California red-legged frogs to the shortest distance possible to a location that contains suitable habitat and will not be affected by project activities. The relocation site shall be in the same drainage to the extent practicable. Caltrans shall coordinate with the

United States Fish and Wildlife Service on the relocation site prior to the capture of any California red-legged frogs.

- CRLF-4: Before any activities begin on a project, a United States Fish and Wildlife Service-approved biologist shall conduct a training session for all construction personnel. At a minimum, the training shall include a description of the California red-legged frog and its habitat, the specific measures that are being implemented to conserve the California red-legged frog for the current project, and the boundaries within which the project may be accomplished. Brochures, books, and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions.
- CRLF-5: A United States Fish and Wildlife Service-approved biologist shall be present at the work site until all California red-legged frogs have been removed, workers have been instructed, and disturbance of the habitat has been completed. After this time, Caltrans shall designate a person to monitor on-site compliance with all minimization measures. The United States Fish and Wildlife Service-approved biologist shall ensure that this monitor receives the training outlined in CRLF-4 and in the identification of California red-legged frogs. If the monitor or the United States Fish and Wildlife Service-approved biologist recommends that work be stopped because California red-legged frogs would be affected in a manner not anticipated by Caltrans and the United States Fish and Wildlife Service during the review of the proposed action, they shall notify the resident engineer immediately. The resident engineer shall resolve the situation by requiring that all actions that are causing these effects be stopped. When work is stopped, the United States Fish and Wildlife Service shall be notified as soon as possible.
- CRLF-6: During project activities, all trash that may attract predators or scavengers shall be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris shall be removed from work areas.
- CRLF-7: Without the express permission of the United States Fish and Wildlife Service to do otherwise, all refueling, maintenance, and staging of equipment and vehicles shall occur at least 60 feet from the riparian habitat or water bodies and not in a location from which a spill would drain directly toward aquatic habitat. The monitor shall ensure contamination of habitat does not occur during such operations. Prior to the start of work, Caltrans shall ensure that a plan is in place for prompt and effective response to any accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.
- CRLF-8: Habitat contours shall be returned to a natural configuration at the end of the project activities. This measure shall be implemented in all areas disturbed by project activities unless the United States Fish and

Wildlife Service and Caltrans determine that it is not feasible or that modification of the original contours would benefit the California red-legged frog.

- CRLF-9: The number of access routes, the size of staging areas, and the total area of activity shall be limited to the minimum necessary to achieve the project. Environmentally sensitive areas shall be established to confine access routes and construction areas to the minimum area necessary to complete construction and minimize the impact on California red-legged frog habitat; this goal includes locating access routes and construction areas outside of wetlands and riparian areas to the maximum extent practicable.
- CRLF-10: Caltrans shall attempt to schedule work for times of the year when impacts on the California red-legged frog would be minimal. For example, work that would affect large pools that may support breeding would be avoided, to the maximum degree practicable, during the breeding season (November through May). Isolated pools that are important to maintain California red-legged frogs through the driest portions of the year would be avoided, to the maximum degree practicable, during the late summer and early fall. Habitat assessments, surveys, and technical assistance between Caltrans and the United States Fish and Wildlife Service during project planning shall be used to assist in scheduling work activities to avoid sensitive habitats during key times of the year.
- CRLF-11: To control sedimentation during and after project completion, Caltrans shall implement the Best Management Practices outlined in any authorizations or permits issued under the authority of the Clean Water Act received for the project. If Best Management Practices are ineffective, Caltrans shall attempt to remedy the situation immediately, in coordination with the United States Fish and Wildlife Service.
- CRLF-12: If a work site is to be temporarily dewatered by pumping, intakes shall be completely screened with wire mesh not larger than 0.2 inch to prevent California red-legged frogs from entering the pump system. Water shall be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. Upon completion of construction activities, any diversions or barriers to flow shall be removed in a manner that would allow flow to resume with the least disturbance to the substrate. Alteration of the streambed shall be minimized to the maximum extent possible; any imported material shall be removed from the streambed upon completion of the project.
- CRLF-13: Unless approved by the United States Fish and Wildlife Service, water shall not be impounded in a manner that may attract California red-legged frogs.
- CRLF-14: A United States Fish and Wildlife Service-approved biologist shall permanently remove any individuals of exotic species, such as

bullfrogs (*Rana catesbeiana*), signal and red swamp crayfish (*Pacifasticus leniusculus*; *Procambarus clarkia*), and centrarchid fishes, from the project area to the maximum extent possible. The United States Fish and Wildlife Service-approved biologist shall be responsible for ensuring his or her activities follow the California Fish and Game Code.

- CRLF-15: If Caltrans demonstrates that disturbed areas have been restored to conditions that allow them to function as habitat for the California red-legged frog, these areas will not be included in the amount of total habitat permanently disturbed.
- CRLF-16: To ensure that diseases are not conveyed between work sites by the United States Fish and Wildlife Service-approved biologist, the fieldwork code of practice developed by the Declining Amphibian Task Force shall be followed at all times.
- CRLF-17: Project sites shall be revegetated with an assemblage of native riparian, wetland, and upland vegetation suitable for the area. Locally collected plant materials shall be used to the extent practicable. Invasive exotic plants shall be controlled to the maximum extent practicable. This measure shall be implemented in all areas disturbed by project activities unless the United States Fish and Wildlife Service and Caltrans determine that it is not feasible or practical.

CRLF-18: Caltrans shall not use herbicides as the primary method to control invasive, exotic plants. However, if it is determined that the use of herbicides is the only feasible method for controlling invasive plants at a specific project site, it will implement the following additional protective measures (CRLF-19 through CRLF-28) for the California red-legged frog:

- CRLF-19: Caltrans shall not use herbicides during the breeding season for the California red-legged frog.
- CRLF-20: Caltrans shall conduct surveys for the California red-legged frog immediately prior to the start of herbicide use. If found, California red-legged frogs shall be relocated to suitable habitat far enough from the project area that no direct contact with herbicide would occur.
- CRLF-21: Giant reed and other invasive plants shall be cut and hauled out by hand and painted with glyphosate-based products, such as Aquamaster® or Rodeo®.
- CRLF-22: Licensed and experienced Caltrans staff or a licensed and experienced contractor shall use a hand-held sprayer for foliar application of Aquamaster® or Rodeo® where large monoculture stands occur at an individual project site.
- CRLF-23: All precautions shall be taken to ensure that no herbicide is applied to native vegetation.
- CRLF-24: Herbicides shall not be applied on or near open water surfaces (no closer than 60 feet from open water).

- CRLF-25: Foliar applications of herbicide shall not occur when wind speeds are more than 3 miles per hour.
- CRLF-26: No herbicides shall be applied within 24 hours of forecasted rain.
- CRLF-27: Application of all herbicides shall be done by qualified Caltrans staff or contractors to ensure that overspray is minimized, that all applications are made in accordance with the label recommendations, and with the implementation of all required and reasonable safety measures. A safe dye shall be added to the mixture to visually denote the treated sites. Application of herbicides shall be consistent with the Environmental Protection Agency's Office of Pesticide Programs and Endangered Species Protection Program county bulletins.
- CRLF-28: All herbicides, fuels, lubricants, and equipment shall be stored, poured, or refilled at least 60 feet from riparian habitat or water bodies in a location where a spill would not drain directly toward aquatic habitat. Prior to the start of work, Caltrans shall ensure that a plan is in place for a prompt and effective response to accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

Appendix D Notice of Preparation



EDMUND G. BROWN JR.
GOVERNOR

STATE OF CALIFORNIA
GOVERNOR'S OFFICE of PLANNING AND RESEARCH



KEN ALEX
DIRECTOR

Notice of Preparation

September 10, 2018

To: Reviewing Agencies
Re: Limekiln Creek Bridge Replacement
SCH# 2018091017

Attached for your review and comment is the Notice of Preparation (NOP) for the Limekiln Creek Bridge Replacement draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Julie McGuigan
California Department of Transportation, District 5
50 Higuera
San Luis Obispo, CA 93402

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Attachments
cc: Lead Agency

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
1-916-322-2318 FAX 1-916-558-3184 www.opr.ca.gov

**Document Details Report
State Clearinghouse Data Base**

SCH# 2018091017
Project Title Limekiln Creek Bridge Replacement
Lead Agency Caltrans #5

Type NOP Notice of Preparation

Description The Department proposes to replace the existing Limekiln Creek Bridge. The new bridge would be placed west of the existing structure and tied into the existing alignment. It would span approx 1000 ft and will have a similar profile to the existing bridge. Impacts are expected at each abutment, affecting existing embankment conditions and slop vegetation. The existing rock slope protection and sea wall protecting the north abutment of the bridge will be removed. Drainage improvements are expected. The project will require staged construction with one-way traffic control that uses temporary traffic signalization. Construction work, staging areas, and noise will affect Limekiln State Park, but it is anticipated that the State Park will remain open. However, if it can't be avoided, project work may temporarily require a partial or full closing.

Lead Agency Contact

Name Julie McGuigan
Agency California Department of Transportation, District 5
Phone 805-549-3118 **Fax**
email
Address 50 Higuera
City San Luis Obispo **State** CA **Zip** 93402

Project Location

County Monterey
City
Region
Cross Streets
Lat / Long
Parcel No. 422-021-002-000
Township **Range** **Section** **Base**

Proximity to:

Highways SR 1
Airports
Railways
Waterways
Schools
Land Use

Project Issues Toxic/Hazardous; Biological Resources; Aesthetic/Visual; Noise; Water Quality; Wetland/Riparian; Other Issues

Reviewing Agencies Resources Agency; California Coastal Commission; Department of Conservation; Department of Fish and Wildlife, Region 4; Department of Parks and Recreation; Department of Water Resources; Native American Heritage Commission; State Lands Commission; California Highway Patrol; Air Resources Board, Transportation Projects; Regional Water Quality Control Board, Region 3; State Water Resources Control Board, Division of Drinking Water; Department of Toxic Substances Control

Date Received 09/10/2018 **Start of Review** 09/10/2018 **End of Review** 10/09/2018

Note: Blanks in data fields result from insufficient information provided by lead agency.

NOP Distribution List

County: interv

SCH# 201801017

Resources Agency

- Resources Agency Nadell Gayou
 - Dept. of Boating & Waterways Denise Peterson
 - California Coastal Commission Aliyson Mitt
 - Colorado River Board Elsa Contreras
 - Dept. of Conservation Crina Chan
 - Cal Fire Dan Foster
 - Central Valley Flood Protection Board James Herota
 - Office of Historic Preservation Ron Parsons
 - Dept of Parks & Recreation Environmental Stewardship Section
 - S.F. Bay Conservation & Dev't. Comm. Steve Goldbeck
 - Dept. of Water Resources Resources Agency Nadell Gayou

Fish and Game

- Depart. of Fish & Wildlife Scott Flint Environmental Services Division
- Fish & Wildlife Region 1 Curt Babcock
- Fish & Wildlife Region 1E Laurie Harnsberger
- Fish & Wildlife Region 2 Jeff Drongesen
- Fish & Wildlife Region 3 Craig Weightman

- Fish & Wildlife Region 4 Julie Vance
- Fish & Wildlife Region 5 Leslie Newton-Reed Habitat Conservation Program
- Fish & Wildlife Region 6 Tiffany Ellis Habitat Conservation Program
- Fish & Wildlife Region 6 I/M Heidi Calvert Inyo/Mono, Habitat Conservation Program
- Dept. of Fish & Wildlife M William Paznokas Marine Region

Other Departments

- California Department of Education Lesley Taylor
- OES (Office of Emergency Services) Monique Wilber
- Food & Agriculture Sandra Schubert Dept. of Food and Agriculture
- Dept. of General Services Cathy Buck Environmental Services Section
- Housing & Comm. Dev. CEQA Coordinator Housing Policy Division

Independent Commissions, Boards

- Delta Protection Commission Erik Vink
- Delta Stewardship Council Anthony Navasero
- California Energy Commission Eric Knight

Native American Heritage Comm. Debbie Treadway

- Public Utilities Commission Supervisor
- Santa Monica Bay Restoration Guangyu Wang
- State Lands Commission Jennifer Deleong
- Tahoe Regional Planning Agency (TRPA) Cherry Jacques

Cal State Transportation Agency CalSTA

- Caltrans - Division of Aeronautics Philip Crimmins
- Caltrans - Planning HQ LD-IGR Christian Bushong
- California Highway Patrol Suzann Ikeuchi Office of Special Projects

Dept. of Transportation

- Caltrans, District 1 Rex Jackman
- Caltrans, District 2 Marcelino Gonzalez
- Caltrans, District 3 Susan Zanchi - North
- Caltrans, District 4 Patricia Maurice
- Caltrans, District 5 Larry Newland
- Caltrans, District 6 Michael Navarro
- Caltrans, District 7 Dianna Watson
- Caltrans, District 8 Mark Roberts

- Caltrans, District 9 Gayle Rosander
- Caltrans, District 10 Tom Dumas
- Caltrans, District 11 Jacob Armstrong
- Caltrans, District 12 Maureen El Harake

Cal EPA

Air Resources Board

- Airport & Freight Jack Wursten
- Transportation Projects Nesamani Kalandiyur
- Industrial/Energy Projects Mike Tollstrup
- California Department of Resources, Recycling & Recovery Kevin Taylor/Jeff Esquivel

State Water Resources Control Board Regional Programs Unit Division of Financial Assistance

State Water Resources Control Board Cindy Forbes - Asst Deputy Division of Drinking Water

State Water Resources Control Board Div. Drinking Water # _____

State Water Resources Control Board Student Intern, 401 Water Quality Certification Unit Division of Water Quality

State Water Resources Control Board Phil Crader Division of Water Rights

Dept. of Toxic Substances Control Reg. # _____ CEQA Tracking Center

Department of Pesticide Regulation CEQA Coordinator

Regional Water Quality Control Board (RWQCB)

- RWQCB 1 Cathleen Hudson North Coast Region (1)
- RWQCB 2 Environmental Document Coordinator San Francisco Bay Region (2)
- RWQCB 3 Central Coast Region (3)
- RWQCB 4 Teresa Rodgers Los Angeles Region (4)
- RWQCB 5S Central Valley Region (5)
- RWQCB 5F Central Valley Region (5) Fresno Branch Office
- RWQCB 5R Central Valley Region (5) Redding Branch Office
- RWQCB 6 Lahontan Region (6)
- RWQCB 6V Lahontan Region (6) Victorville Branch Office
- RWQCB 7 Colorado River Basin Region (7)
- RWQCB 8 Santa Ana Region (8)
- RWQCB 9 San Diego Region (9)

Other _____

Conservancy

Last Updated 5/22/18

Appendix E Glossary of Technical Terms

1. Abutment: a structure built to support the lateral pressure of an arch or span, often at the ends of a bridge.
2. Box girder bridge: a bridge in which the main support beams are in the shape of a hollow box.
3. Cofferdam: a temporary retaining structure used to retain water and support the sides of excavations where water is present.
4. Falsework: temporary framework structures used to support a building during its construction.
5. Girder: a horizontal support beam for a bridge.
6. Haze: relevant to the U.S. Fish and Wildlife Service and involves actions such as hand clapping, yelling, the use of leashed barking dogs, the use of water, and/or soft projectiles to startle animals and get them to move away from potentially harmful situations.
7. H-piles: structural beams that are usually square and driven into soil for deep foundation applications to support large buildings or bridges.
8. Noxious: a non-native plant that threatens agricultural crops, local ecosystems, or fish and wildlife habitat.
9. Riparian: habitat surrounding a body of water, often a river.
10. Ruderal: growth where natural vegetation has been disturbed by humans.
11. Seal course: a concrete slab poured under a pipe to block water from going into an excavation.
12. Trestle: a braced structural tower-like framework of timber, metal, or reinforced concrete used to support a bridge.
13. Viaduct: a bridge-like structure carrying a road.

List of Technical Studies Bound Separately

Air Quality, Greenhouse Gas, and Noise Assessment Memorandum, August 4, 2023

Archeological Survey Report, February 2021 (not to be publicly circulated)

Climate Change Report, August 18, 2023

Draft Historic Properties Treatment Plan, August 2023 (not to be publicly circulated)

Hazardous Waste Initial Site Assessment, June 19, 2023

Historic Property Survey Report, May 2021 (not to be publicly circulated)

Historic Resources Evaluation Report, March 2021 (not to be publicly circulated)

Natural Environment Study, July 2023

Paleontological Initial Identification Report, June 16, 2023

Structure Preliminary Geotechnical Report, August 13, 2014

Water Quality Assessment Report, June 2023

Please note, many state and federal laws limit the disclosure of sensitive cultural and tribal resource information to the public. Additional information regarding the confidentiality of these resources can be found in the Standard Environmental Reference Volume 2 in Section 3.4.13 and Section 5.3.

The studies and/or technical analyses above have been prepared and are incorporated by reference into this Environmental Impact Report/Environmental Assessment.

To obtain a copy of one or more of these technical studies/reports or the Environmental Impact Report/Environmental Assessment, please send your request to:

Matt Fowler
District 5 Environmental Division
California Department of Transportation
50 Higuera Street, San Luis Obispo, California 93401

Or send your request via email to: matt.c.fowler@dot.ca.gov

Or call: 805-779-0793

Please provide the following information in your request:

Project title: Limekiln Creek Bridge Replacement

General location information: On State Route 1 in Monterey County

District number-county code-route-post mile: 05-MON-1-PM 20.9-21.3

Project ID number: 0514000004