ROAD REPAIR AND ACCOUNTABILITY ACT OF 2017
PROJECT BASELINE AGREEMENT

Limekiln Creek Bridge Replacement (05-1F510)

Resolution SHOPP-P-2425-04B
(to be completed by CTC)

1. FUNDING PROGRAM

- ☐ Active Transportation Program
- ☐ Local Partnership Program (Competitive)
- ☐ Solutions for Congested Corridors Program
- ☑ State Highway Operation and Protection Program
- ☐ Trade Corridor Enhancement Program

2. PARTIES AND DATE

2.1 This Project Baseline Agreement (Agreement) effective on January 30, 2025 (will be completed by CTC), is made by and between the California Transportation Commission (Commission), the California Department of Transportation (Caltrans), the Project Applicant, Caltrans, and the Implementing Agency, Caltrans, sometimes collectively referred to as the "Parties".

3. RECITAL

3.1 Whereas at its 3/22/2024 meeting the Commission approved the State Highway Operation and Protection Program and included in this program of projects the Limekiln Creek Bridge Replacement (05-1F510), the parties are entering into this Project Baseline Agreement to document the project cost, schedule, scope and benefits, as detailed on the Project Programming Request Form attached hereto as ***Exhibit A***, the Project Report attached hereto as ***Exhibit B***, the Performance Metrics Form, if applicable, attached hereto as ***Exhibit C***, as the baseline for project monitoring by the Commission.

3.2 The undersigned Project Applicant certifies that the funding sources cited are committed and expected to be available; the estimated costs represent full project funding; and the scope and description of benefits is the best estimate possible.

4. GENERAL PROVISIONS

The Project Applicant, Implementing Agency, and Caltrans agree to abide by the following provisions:

4.1 To meet the requirements of the Road Repair and Accountability Act of 2017 (Senate Bill [SB] 1, Chapter 5, Statutes of 2017) which provides the first significant, stable, and on-going increase in state transportation funding in more than two decades.

4.2 To adhere, as applicable, to the provisions of the Commission:

- ☐ Resolution _____, "Adoption of Program of Projects for the Active Transportation Program", dated _____
- ☐ Resolution _____, "Adoption of Program of Projects for the Local Partnership Program", dated _____
- ☐ Resolution _____, "Adoption of Program of Projects for the Solutions for Congested Corridors Program", dated _____
- ■ Resolution G-24-34, "Adoption of Program of Projects for the State Highway Operation and Protection Program", dated 3/22/2024
- ☐ Resolution _____, "Adoption of Program of Projects for the Trade Corridor Enhancement Program", dated _____

4.3 All signatories agree to adhere to the Commission's Guidelines. Any conflict between the programs will be resolved at the discretion of the Commission.

4.4 All signatories agree to adhere to the Commission's SB 1 Accountability and Transparency Guidelines and policies, and program and project amendment processes.

4.5 Caltrans agrees to secure funds for any additional costs of the project.

4.6 Caltrans agrees to report to Caltrans on a quarterly basis; on the progress made toward the implementation of the project, including scope, cost, schedule, and anticipated benefits/performance metric outcomes.

4.7 Caltrans agrees to prepare program progress reports on a on a semi-annual basis and include information appropriate to assess the current state of the overall program and the current status of each project identified in the program report.

4.8 Caltrans agrees to submit a timely Completion Report and Final Delivery Report as specified in the Commission's SB 1 Accountability and Transparency Guidelines.

4.9 Caltrans agrees to submit a timely Project Performance Analysis as specified in the Commission's SB 1 Accountability and Transparency Guidelines.

4.10 All signatories agree to maintain and make available to the Commission and/or its designated representative, all work related documents, including without limitation engineering, financial and other data, and methodologies and assumptions used in the determination of project benefits and performance metric outcomes during the course of the project, and retain those records for six years from the date of the final closeout of the project. Financial records will be maintained in accordance with Generally Accepted Accounting Principles.

4.11 The Inspector General of the Independent Office of Audits and Investigations has the right to audit the project records, including technical and financial data, of the Department of Transportation, the Project Applicant, the Implementing Agency, and any consultant or sub-consultants at any time during the course of the project and for six years from the date of the final closeout of the project, therefore all project records shall be maintained and made available at the time of request. Audits will be conducted in accordance with Generally Accepted Government Auditing Standards.

5. SPECIFIC PROVISIONS AND CONDITIONS

5.1 Project Schedule and Cost
See Project Programming Request Form, attached as Exhibit A.

5.2 Project Scope
See Project Report or equivalent, attached as Exhibit B. At a minimum, the attachment shall include the cover page, evidence of approval, executive summary, and a link to or electronic copy of the full document.

5.3 Performance Metrics
See Performance Metrics Form, if applicable, attached as Exhibit C.

Attachments:

Exhibit A: Project Programming Request Form
Exhibit B: Project Report
Exhibit C: Performance Metrics Form *(if applicable)*

SIGNATURE PAGE
TO
PROJECT BASELINE AGREEMENT

Project Name: Limekiln Creek Bridge Replacement (05-1F510)

Resolution: SHOPP-P-2425-04B

(to be completed by CTC)



12/09/2024
Date

Scott Eades

District Director

Project Applicant



12/09/2024
Date

Scott Eades

District Director

Implementing Agency



12/09/2024
Date

Scott Eades

District Director

California Department of Transportation

Michael D. Keever for

01/10/2025
Date

Tony Tavares

Director

California Department of Transportation



10/31/2025
Date

Tanisha Taylor

Executive Director

California Transportation Commission

January CTC SB1 SHOPP Baseline Agreements

Final Audit Report 2025-01-10

Created:	2025-01-10
By:	Monica Frambes (s144286@dot.ca.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAAdvAzDAiFIVDXganhqEdOv3kp1uMRu5-S

"January CTC SB1 SHOPP Baseline Agreements" History

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2025-01-10 - 4:43:27 PM GMT- IP address: 149.136.17.246

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2025-01-10 - 4:47:40 PM GMT

Email viewed by Michael Keever (mike.keever@dot.ca.gov)
2025-01-10 - 5:01:22 PM GMT- IP address: 149.136.33.246

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Baseline agreement information was extracted from Caltrans' project data systems. Project description, funding and performance measures are from CTIPS. Project delivery milestones are from PRSM. All information is current and accurate.

STATE OF CALIFORNIA ● DEPARTMENT OF TRANSPORTATION

BASELINE AGREEMENT

Date:	12/04/24 05:23:50 PM

District	EA	Project ID	PPNO	Project Manager
05	1F510	0514000004	2524	YU, CARLA M

County	Route	Begin Postmile	End Postmile	Implementing Agency	
MON	1	20.9	21.3	PA&ED	Caltrans
				PS&E	Caltrans
				Right of Way	Caltrans
				Construction	Caltrans

Project Nickname

Limekiln Creek Bridge Replacement

Location/Description

Near Lucia, from 0.1 mile south to 0.2 mile north of Limekiln Creek Bridge No. 44-0058. Replace bridge. (G13 Contingency)

Legislative Districts

Assembly:	30	Senate:	17	Congressional:	19

PERFORMANCE MEASURES

	Primary Asset	Good	Fair	Poor	New	Total	Units
Existing Condition	Bridge Health	0.0	0.0	19536.0		19536	Square feet of bridge deck
Programmed Condition	Bridge Health	19536.0	0.0	0.0	0.0	19536	Square feet of bridge deck

Project Milestone	Actual	Planned
Project Approval and Environmental Document Milestone	08/28/24	
Right of Way Certification Milestone		07/28/26
Ready to List for Advertisement Milestone		03/08/27
Begin Construction Milestone (Approve Contract)		10/26/27

FUNDING (Allocated amounts are shaded)

Component	Fiscal Year	SHOPP					Total
PA&ED	24/25	3,600*					3,600*
PS&E	24/25	10,848					10,848
RW Support	24/25	600					600
Const Support	26/27	18,500					18,500
RW Capital	26/27	3,632					3,632
Const Capital	26/27	96,125					96,125
Total		133,305					133,305

*See Baseline Agreement memo for corrected amount.

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

Memorandum

To: RICH STONE
SHOPP
HQ Financial Programming

Date: December 12, 2024

File: 05-1F510-0514000004-2524
05-MON-1-20.9/21.3

From: Carla Yu, PE
Project Manager
District 5

Subject: **PROJECT STATUS UPDATE**

This memorandum is written to accompany the Baseline Agreement for the referenced project.

The project was originally programmed into the 2018 SHOPP as a long lead project for FY 24/25 RTL Delivery. In June 2024, the project was reprogrammed in the 2024 SHOPP after the original $3,500,000 in allocated PA&ED funds lapsed. These previously allocated funds were not included in the reprogrammed project but are still shown in the PPR because the Quality Management Reporting System (QMRS) pulls in all funds ever allocated to a phase. An allocation request for $10,848,000 in PS&E support was higher than the programmed amount of $9,600,000 and was approved at the October 2024 CTC meeting. The reason for the $1,248,000 PS&E support increase was for preconstruction CM/GC costs which were not included in the original programmed PS&E budget.

Due to the project allocating the PS&E phase in October 2024, and there being a Project Manager change in November, the new PM met with the PDT to confirm if the milestone dates were still on schedule, and the PDT decided to move RTL out of the holiday season and into the spring.

Currently Proposed Major Milestones:

Milestone	Current Schedule
R/W Cert M410	7/28/26
RTL M460	3/8/27
Approve Contract M500	10/26/27

Funding:

Component	Programmed	Allocated	Prior allocation before project was reprogrammed
PAED Support	$100	$100	$3,500
PS&E Support	$9,600	$10,848	
RW Support	$600	$600	
Const. Support	$18,500		
RW Capital	$3,632		
Const. Capital	$96,125		

cc: Joe Erwin, David Silberberger, Kyle Birch, D5 Programming

Project Report

For Project Approval

On Route State Route 1 in Monterey County

Between 0.1 Mile South of Limekiln Creek Bridge

And 0.2 Mile North of Limekiln Creek Bridge

I have reviewed the right-of-way information contained in this report and the right-of-way data sheet attached hereto, and find the data to be complete, current and accurate:

Marshall Garcia, District Division Chief, Right of Way

APPROVAL RECOMMENDED:

Luis Duazo, Project Manager

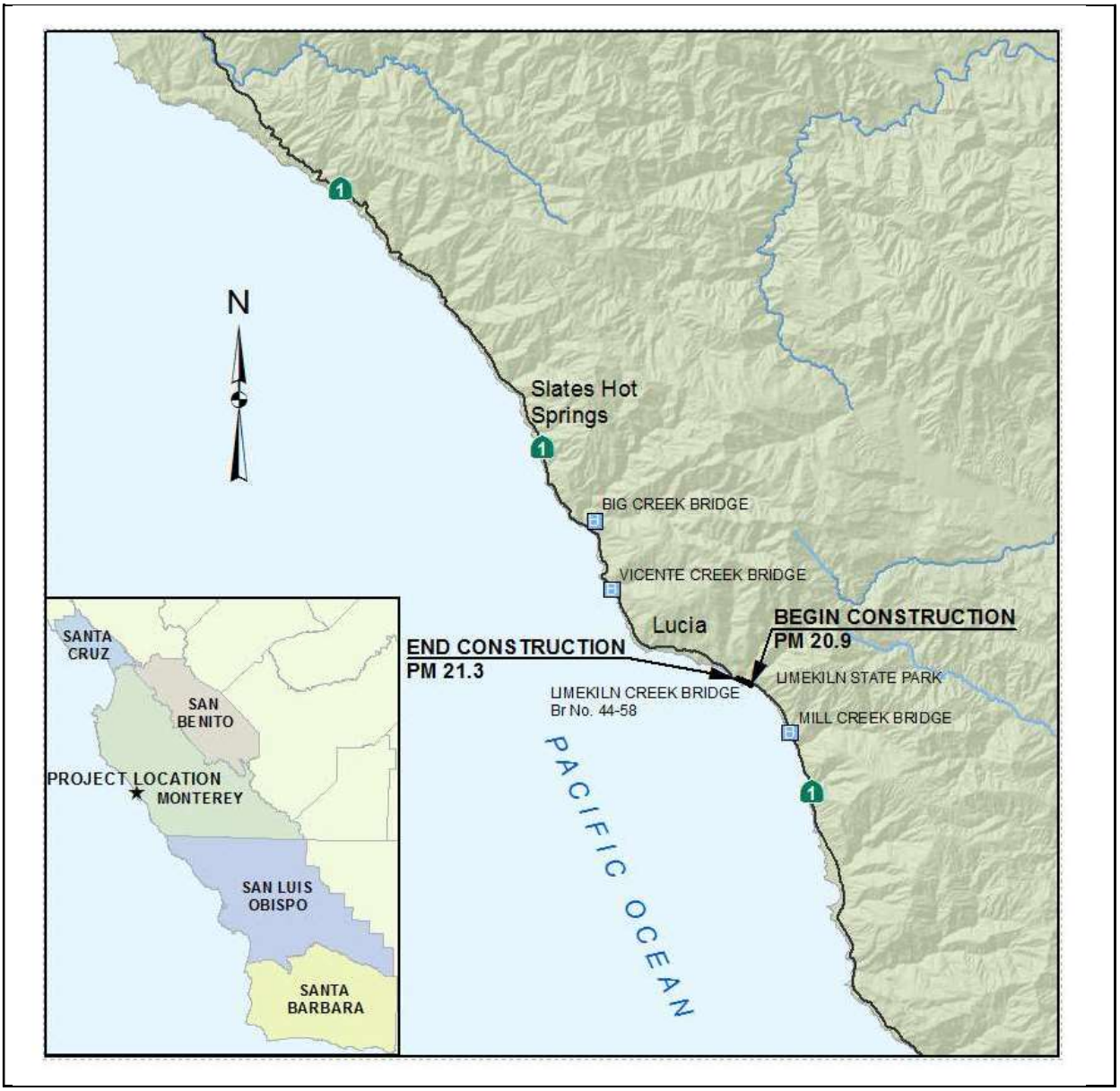
PROJECT APPROVED:

Scott Eades, District Director

08/28/2024

Date

Vicinity Map



This project report has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

Scott Alan Morris 7/25/2024

REGISTERED CIVIL ENGINEER *DATE*



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1. INTRODUCTION

Project Description:

This project proposes to replace the existing Limekiln Creek Bridge (Bridge Number 44-0058) located in Monterey County on State Route (SR) 1 near Lucia. See Attachment A. The project lies within the Limekiln State Park property.

The proposed bridge and highway alignment would follow the existing alignment as closely as feasible. It would require construction of a temporary bridge to the east of the existing bridge for carrying traffic during construction. Temporary construction easements would be required from State Parks for construction.

Proposed viaducts would support the highway north of the main- bridge by crossing over the existing distressed retaining walls which occur between the Limekiln Creek Bridge and the adjacent Rain Rocks Sidehill Viaduct. The seawall and revetment on the beach would be removed to the extent it can safely be done and the beach returned to natural condition.

Project Limits	05 – MON-Route 1; PM 20.9/21.3	
Number of Alternatives	3 including No-Build Alternative	
Preferred Alt 6 Costs:	**Current Cost Estimate**	**Escalated Cost Estimate**
Capital Outlay Support	$24,035,000	$28,800,000
Alt 6 Capital Outlay Construction	$85,045,050	$102,363,625
Alt 6 Capital Outlay Right-of-Way	$4,298,593	$4,739,198
Funding Source	20.xx.201.110	
Funding Year	26/27	
Type of Facility	2-Lane Conventional Highway	
Number of Structures	1	
State Highway Operation and Protection Program (SHOPP) Project Output	1 Bridge (19,536 SQFT Poor to Good, 41,056 SQFT New)	
Environmental Determination or Document	Environmental Impact Report/Environmental Assessment	
Legal Description	In Monterey County near Lucia from 0.1 mile south of Limekiln Creek Bridge	

	to 0.2 mile north of Limekiln Creek Bridge.
Project Development Category	4A

2. RECOMMENDATION

It is recommended that the project be approved using the preferred alternative (Alt. 6) and proceed to the next phase.

3. BACKGROUND

Project History

The present 578-foot-long Limekiln Creek Bridge is located on the scenic Monterey County Coast on State Route (SR) 1 about 21 miles north of the San Luis Obispo/Monterey County line. In the project area, SR 1 is a 2-lane conventional highway. Lanes are 10 to 12 feet wide with 0- to 4-foot-wide shoulders. Observed highway speeds are 45 mile per hour. The bridge was originally built in 1957 and replaced a 1936 timber trestle. The current bridge features nine spans and carries an average of 1,700 vehicles a day of which 2% to 3% are trucks. The entire project location is surrounded by Limekiln State Park which provides campsites, beach access, and trail access to adjacent coastal mountains. The bridge deck is approximately 90 feet above the creek at the highest point.

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

Slope stability at the north abutment has been a recurring maintenance issue since the original construction as 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 (RSP) was repeatedly placed to deter erosion. An RSP and ring system was placed in front of the crib wall in 2010 and has also failed. The Coastal Development Permit stipulates that a long-term solution to coastal erosion be implemented by

removing all shoreline armoring and restoring the slope and beach to natural conditions.



Limekiln Creek Bridge

The Limekiln Creek Bridge has irreversible damage caused by chloride intrusion from pervasive salt-laden fog. This has accelerated deterioration of both the super and substructures resulting in frequent spalling, cracking, and corrosion of reinforcing steel.

In July 2011, the District 5 Bridge Program Advisor initiated a project to perform bridge maintenance on six bridges along SR 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. A Structure Maintenance & Investigations (SM&I) Bridge Maintenance Strategy Meeting (formerly called a Peer Review) was conducted in October of 2012. In this meeting, it was recommended to remove this structure from maintenance project (05-A1890) and develop a new SHOPP project to replace the bridge. See Attachment B.

A Project Study Report (PSR) was completed in June 2015 for programming the capital outlay support cost through the Project

Approval and Environmental Document (PA&ED) phase as a Long Lead Project due to the complexity and duration of the environmental studies and the number of permitting agencies involved. The environmental phase began in October 2016 after mapping was submitted.

To date, studies have considered different bridge alignments, number of spans and their arrangement, as well as bridge types. New bridge alignments consisted of: (a) east of the existing to address concerns from the advancing sea and erosive action of hydrodynamic forces-- while maintaining traffic on the existing bridge during construction; (b) west of the existing to address concerns from the abutting fractured rock and associated rockfalls-- while maintaining traffic on the existing bridge during construction; and (c) a compromise alignment which seeks to build the new bridge in the same footprint as the existing while constructing a temporary bridge on the east for continued traffic mobility.

The existing landscape is naturally vegetated. There is no existing highway planting within the project limits. There are no existing irrigation facilities in the project limits. Existing landscape will be naturally vegetated with Coastal Sage Scrub and Riparian vegetation and preserved to the maximum extent feasible.

Community Outreach

A public Scoping Meeting was held on April 10, 2019, at the Big Sur Lodge. Preliminary alternatives and project information was displayed. Project Development Team members, including the Project Manager, Design Senior, Environmental Generalist, Project Engineer, and others discussed the project with the public and collected comments.

4. PURPOSE and NEED

Purpose:
The purpose of the project is to ensure the reliability of State Route 1 for the traveling public and the movement of essential foods and services in addition to maintaining the only coastal access route along this section of Big Sur coast.

Need:
Bridge replacement is necessitated due to: (a) the irreversible damage caused to super and substructure elements by chloride intrusion from pervasive salt-laden fog, resulting in frequent spalling and cracking of

concrete, and corrosion of reinforcing steel and prestressing strands; (b) recurring slope stability problems at the north abutment; and (c) safety of the motorists and Limekiln State Park and beach users. In addition to the foregoing needs to restore the bridge's functionality, concerns with existing bridge piers being in the riparian area and State Park's concerns with aesthetics and beach encumbrance will be greatly mitigated.

4A. Problem, Deficiencies, Justification

Inspections of the bridge have documented a long history of concrete cracking and spalling on the deck, superstructure, and substructure. Core samples taken from the bridge deck and superstructure in 2012 found chloride well above levels needed to cause active corrosion of steel in the concrete. See Attachment B for detailed findings.

In addition to chloride intrusion, the northern end of the bridge has experienced slope stability problems due to wave and storm actions. This has been an ongoing maintenance concern. Revetment has been installed on the beach beginning in 1974 and has been continually repaired and replaced as waves and storms cause deterioration.

4B. Regional and System Planning

Systems Identified

The Big Sur Coast Highway portion of SR 1 is an Officially Designated State Scenic Highway and All-American Road. The Truck Network is California Legal Advisory Route with an advisory King Pin to Rear Axle distance of 30 ft. The route is on the Interregional Road System. The Federal Functional Classification is Minor Arterial.

State Planning

The Transportation Concept Report (TCR) is the long-term planning document developed by Caltrans District 5 for the SR 1 corridor. The TCR evaluates the current and projected conditions along the route and establishes a 20 to 25-year planning concept and recommends long and short-term improvements to achieve those concepts.

For the segment that includes the proposed project, the most recent TCR dated June 2017 proposes the following recommended corridor strategies:

- Maintain two lane conventional highway.
- Increase shoulder widths where needed, including on bridge crossings to improve motor vehicle, bicycle, and pedestrian operations and safety.
- Collaborate with local and regional partners to identify suitable alignments for the California Coastal Trail.
- Incorporate Main Street and Complete Streets concepts where applicable.
- Consider operational improvements including potential for grade separations where appropriate and feasible.
- Enhance and address future needs for bicyclists and pedestrian mobility.
- Develop viable alternatives to driving and transportation demand management strategies.

The scope of this project and its location on SR 1 only allows consideration of the first three bulleted items above.

The 2015 District 5 District System Management Plan (DSMP) is developed as a vision of how the transportation system will be maintained, managed, and developed for the next 20 years and beyond. This project is categorized on the DSMP Project List as a Tier III Project, indicating the District will advocate inclusion in the SHOPP project lists.

Regional Planning

The Transportation Agency for Monterey County (TAMC) is the regional planning agency for Monterey County. It is tasked with developing a Regional Transportation Plan (RTP) to provide a basis for the allocation of state and federal transportation funds to transportation projects within the county over a long-range timeframe. Although the scope of this project does not allow for the opportunity to address the current highway projects identified by TAMC, this project is consistent with TAMC's mission statement to develop and maintain a multimodal transportation system that enhances mobility, safety, access, environment quality, and economic activities in Monterey County.

The Big Sur Coast Highway Management Plan (CHMP), dated

March 2004, was prepared by Caltrans with guidance from a steering committee and other stakeholders. The CHMP created a management framework for the continued safe and efficient operation of SR1 in a manner that preserves, protects, and restores the scenic, natural, and cultural character and qualities of the highway corridor. Specifically, the CHMP contains guidelines for landslide management and storm damage response for corridor aesthetics and for vegetation management. This project is consistent with the management framework and guidelines in the CHMP.

The Highway 1 Sustainable Transportation Demand Management (TDM) Plan, dated February 2020, builds upon previous plans, and creates a framework to address recent challenges and consider how transit, sustainability and related enhancements can be part of the Big Sur experience. The TDM strategies, goals and objectives are listed below:

- Incorporate and build upon local land use planning.
- Reduce number of single-occupant vehicles along the highway.
- Increase the use of transit, shuttles, and biking to key destinations.
- Reduce the impacts of peak visitor use.
- Provide tools and management strategies that address undesirable visitor behavior related to parking and recreation access.
- Increase user information and provide static or real-time information.
- Increase the use of electric vehicles by identifying infrastructure opportunities.
- Create partnerships and identify funding strategies.

TDM encourages a shift from single-occupant vehicle trips to transit, biking, walking, or other forms of transportation to modify visitor behaviors from use of personal vehicles to other forms of transportation. Although the scope of this project does not allow for the opportunity to address all the TDM goals, it would widen the shoulder through the project limits to provide safer bicycle and walking opportunities.

Local Planning

All counties and cities in a corridor have their own general plans which guide future community growth through established goals

and policies and include a circulation element consistent with their general plan's land use element. Although the scope of this project does not allow for the opportunity to address any local planning elements due to its remote location, it does not preclude any local agencies from moving forward with their plans.

4C. Traffic

Current and Forecasted Traffic

Annual average daily traffic (AADT), 2030: 1,718
Annual average daily traffic (AADT), 2050: 2,479
Design hourly volume (DHV): 382
Peak hour directional split: 57.6% (southbound)
Percentage of trucks: 2.0% - 3.0%

The forecasted volumes are projected using regional model growth rates.

Collision Analysis

Collision data collected for the period October 1, 2019, through September 30, 2022 between post miles 20.9 and 21.3 reported zero collisions resulting in a collision rate of zero collisions/million vehicle miles (MVM). In comparison, the average total collision rate for similar state facilities is 1.02 collisions/MVM.

Location	Number of Collisions			Actual Rates (Collisions/MVM)			Average Rates (Collisions/MVM)		
	Fatal	F+I	Total	Fatal	F+I	Total	Fatal	F+I	Total
PM 20.85 to 21.35	0	0	0	0.00	0.00	0.0	0.027	0.50	1.02

Million Vehicle Miles F+I: Fatal plus Injury collisions

5. ALTERNATIVES

5A. Viable Alternatives

The Draft Project Report with two viable alternatives, Alternative 4b and Alternative 6, was approved on December 21, 2023. The Draft Environmental Impact Report/Environmental Assessment, to

examine potential environmental impacts of the alternatives, was circulated publicly and comments were received.

The scope of bridge replacement in both alternatives include replacement of the existing bridge with a longer bridge to span the unstable slope north of the existing bridge, removal of the seawall, crib walls, and RSP at the beach below the existing north abutment, and replacement of some or all the existing distressed retaining walls between the Limekiln Creek bridge and the Rain Rocks Sidehill Viaduct.

Alternative 4b consists of a 900-foot-long 2-span bridge over the Limekiln Creek canyon and adjacent landslide area. This would be aligned 65 ft westerly from the existing bridge (towards the Pacific Ocean) and tie into the current highway alignment at both ends while exhibiting a profile similar to the existing. This would allow traffic on the existing bridge while the new bridge is constructed. Right of way (R/W) would be acquired from State Parks for the new bridge. Approximately 7,000 cubic yards of excavation would be required west of the Park entrance to place the new south abutment west of the existing, impacting an archaeological site at Rockland Landing.

In Alternative 6, the main bridge would have 2 spans and begin at the existing bridge south abutment. The bridge would follow the existing alignment as closely as feasible without needing excessive excavation in the landslide area north of the existing bridge. The Project Development Team (PDT) met on February 14, 2024, and reviewed comments received from the public circulation of the Draft Environmental document. To avoid impacts at Rockland Landing and changing the beach experience by moving the bridge west (Alternative 4b), the PDT chose Alternative 6 as the preferred alternative.

The escalated capital cost estimate for Alternative 6, including construction and right of way, is $107.103 million. See Attachment F.

Proposed Engineering Features

The preferred Alternative 6 consists of a 2-span bridge approximately 920 feet in length and will avoid excavation at Rockland Landing. It would require construction of a temporary one-lane bridge to the east of the existing for carrying traffic during

construction. Temporary construction easements would be required from State Parks for construction.

There will be riparian impacts due to removal of the existing bridge piers that are in the riparian area. However, the permanent pier of Alternative 6 will be located away from the creek to avoid it impacting the riparian area after construction is complete. Two viaducts would support the highway north of the new bridge at the location of existing distressed retaining walls between the bridge and the adjacent Rain Rocks Sidehill Viaduct.

Non-Standard Design Features

Alternative 6 proposes 3 non-standard features that are documented in the Design Standards Decision Document approved 10/10/2023.

- Bridge width and shoulder width will be improved but remain sub-standard; 32 feet wide bridge and 4 feet wide shoulders. The proposed nonstandard features avoid excessive construction and right of way acquisition costs and environmental impacts associated with the standard 8 feet wide shoulders or 40 feet wide roadbed.

- Non-standard stopping sight distance will exist for 465 feet of northbound travel and 574 feet of southbound travel. The original roadbed is severely constrained laterally because the SR 1 segment where this project occurs was constructed by cutting benches in the mountains. It is not feasible to provide needed stopping sight distances because this would require cutting the mountains to create wider northbound lane leading to a significant increase in rock slope instability and fall hazard and widening the embankment along the southbound lane and place the proposed barrier as much as 16 feet away.

- Existing substandard horizontal clearances will be improved but remain sub-standard. Minimum horizontal clearance standard is 8 feet. This project proposes 4 feet. Constraints and adverse impacts are similar as noted under preceding bullet above.

Interim Features

Not applicable

High-Occupancy Vehicle (Bus and Carpool) Lanes

Not applicable

Ramp Metering

Not applicable

California Highway Patrol Enforcement Areas

Not applicable

Park-and-Ride Facilities

Not applicable

Utilities

Communication utilities exist in the area and relocation will be needed to construct the proposed improvements. Further coordination between the utility owners and Right of Way is required to determine responsibility and scope. See Attachment G, Right of Way Data Sheet.

Railroad involvement

Not applicable

Highway Planting and Irrigation

It is anticipated that replacement planting will be required due to visual and biological impacts associated with the removal of native trees and vegetation impacted by construction. Replacement planting will include riparian, wetland and coastal sage scrub habitats. Final scope and locations of work will be refined in coordination with the project biologist when the Natural Environment Study is completed and commitments to the various regulatory agencies are resolved.

Replacement planting associated with stabilizing drainages will be constructed as part of the roadway contract and may include bioengineering techniques such as riparian cuttings and pole plantings. Any replacement planting done as part of the roadway contract will also include a 1-year plant establishment period.

Where additional restoration is required to meet the permit conditions, a follow up split-off mitigation planting project will be implemented. The follow up split-off mitigation planting project would include container stock plantings of other riparian and wetland species, seacliff buckwheat (Eriogonum parvifolium) and other coastal sage scrub species, and a temporary irrigation system. The split-off mitigation planting project will also include a 3-year plant establishment period. Funding for PS&E Support, Construction Support and Construction Capital for the split-off mitigation planting project will be included as construction dollars in the parent project until a split-off planting project is created.

Noise Barrier

Not applicable

Erosion Control

Preservation of existing vegetation to minimize the areas of disturbance will be implemented to the maximum extent feasible. Disturbed areas will be treated with permanent erosion control. Erosion control materials will be selected to best address the various conditions within the project site. Areas that are steep and exposed to concentrated flows will require aggressive erosion control techniques that may include bioengineering at creek banks, application of duff, netting, fiber rolls, and hydroseed to control erosion and establish vegetation for long term protection.

Roadside Safety Improvements

There is not a need for roadside worker safety features in this project.

Maintenance and Worker Safety

Measures planned for worker safety during construction include positive protection and traffic control via:

- Temporary Barrier System and crash cushions separating the work area and traffic
- Special provisions for protection from rockfall (to be developed in the PS&E phase)
- Traffic control system

- Temporary signals at each end of the detour with rumble strips
- Portable message and stationary construction signs

Refer to the Traffic Control section of Attachment F for the estimated costs of these safety measures.

Vegetation control will not be implemented due to it being inconsistent with the Big Sur Coast Management Plan and the minimal linear feet of construction impact for the project.

Nonmotorized and Pedestrian Facilities

Highway 1 along the Big Sur Coast is a classified as a "Shared Roadway" and a part of the larger Pacific Coast Bike Route. To accommodate bicycles, the project continues the 4' wide paved shoulder that is typical throughout portions of the Big Sur Coast. Where possible, the paved shoulder is increased up to 8' wide for added safety.

Pedestrian circulation along Highway 1 is not warranted. Pedestrian access to Limekiln State Beach and the nearby hiking trails is safely routed through Limekiln State Park.

Aesthetic Treatments

Aesthetic treatment will be integrated into the design to be consistent with the visual impact analysis and its recommendations, with specific types of aesthetic treatments being developed during the project design phase. At this time, it is anticipated that guardrail railing, posts, end treatments and bridge rail will be stained. Aesthetic design feature recommendations may result from the Coastal Development Permit process.

This project is proposed within the vicinity of the Pitkins Curve Bridge and Rain Rocks Rock Shed projects. Aesthetic treatments for this project should be selected with consideration of the aesthetic treatments used at both of those projects.

Wherever possible, cut slopes and grading work shall employ contour grading techniques to help grading work conform with the natural topography.

Needed Roadway Rehabilitation and Upgrading

Review of current pavement condition is irrelevant as the entire roadway within the project limits will be replaced with structures or entire roadway structural section.

Needed Structure Rehabilitation and Upgrading

In July 2011, the District 5 Bridge Program Advisor initiated a project to perform bridge maintenance on six bridges along SR 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. A Bridge Maintence Strategy Meeting (formerly called SM&I Peer Review Committee) met in October 2012 and formally recommended the replacement of the existing bridge. See Attachment B.

Cost Estimates

The following table show the current capital cost estimate.

	Current Year Cost	Escalated Cost
TOTAL ROADWAY COST	**$ 18,272,700**	**$ 21,993,753**
TOTAL STRUCTURES COST	**$ 66,772,350**	**$ 80,369,872**
SUBTOTAL CONSTRUCTION COST	**$ 85,045,050**	**$ 102,363,625**
TOTAL RIGHT OF WAY COST	**$ 4,298,593**	**$ 4,739,198**
TOTAL CAPITAL OUTLAY COSTS	**$ 89,344,000**	**$ 107,103,000**

Itemized cost estimates are shown in Attachment F, Project Report Cost Estimate.

Right of Way Data

Temporary Construction Easements will be needed to construct this project. Utility relocation is required. Cost estimates for acquisition,

mitigation, state share of utilities, and title and escrow are included in the cost estimate. See Attachment G, Right of Way Data Sheet.

5B. Rejected Alternatives

A total of six bridge replacement alternatives were studied during the PA&ED phase. The table below summarizes the timeline of the Advance Planning Studies completed. The rejected alternatives are 1, 2, 3, and 5. Of these, Alternatives 1 and 2 were carried forward into the PA&ED phase from the Project Study Report for further evaluation. Alternative 3 resulted from a Value Analysis (VA) Study which was undertaken in Fall 2019. The resulting VA Study Report in December 2019 recommended longer spans thereby eliminating piers from the beach and improving the viewshed. Alternative 5 resulted from agency collaboration (meetings with State Parks and California Coastal Commission from January 2022 to September 2022) to place the bridge on the exact alignment as the existing highway to maintain a similar shadow footprint as the existing and avoid impacts to historic resources near Rockland Landing.

Alternatives 1 and 2 considered a 5-span box girder bridge over the creek. Alternative 1 further proposed a half-width viaduct continuing north approximately 360 ft to an outcropping and conforming with the current highway alignment approximately 200 ft south of the Rain Rocks Sidehill Viaduct. Alternative 2 considered addition of a full-width viaduct to the project and connecting it to the Rain Rocks Sidehill Viaduct. These two alternatives were not found viable due to slope instability issue and larger impacts to the beach viewshed and riparian areas of Limekiln Creek. The escalated capital cost estimate for Alternatives 1and 2, including construction and right of way, is $57.9 million and $71.5 million respectively.

Alternative 3 considered a 3-span cast-in-place (CIP) box girder bridge over Limekiln Creek with a system of viaduct and retaining walls at the northern end. This alternative too was deemed not viable by the geotechnical functional group due to concerns of placing a support column within the unstable slope behind the seawall and rock slope protection (RSP). The escalated capital cost estimate for Alternative 3, including construction and right of way, is $90.6 million.

Alternative 5 would place a 2-span bridge on the same alignment

as the existing highway. A temporary bridge would be constructed to the east of the existing to allow traffic flow during construction of the new bridge. To span the landslide area with a bridge on this alignment, a trench would be required to accommodate the bridge girder with an average depth of 12 feet and width of 44 feet removing 7,000 to 10,000 cubic yards. This would further destabilize the slope above resulting in unpredictable behavior of the slope both during construction and after and was rejected as geotechnically infeasible.

Alternative 4 originally included 8-foot wide shoulders. The Project Development Team determined this could entail permitting risks by the Coastal Commission and Monterey County as the Big Sur Coast Highway Management Plan vision includes 4-foot shoulders and 12-foot lanes. Alternative 4 Advance Planning Study (APS) with 8-foot shoulders was completed in April of 2021. (Alternative 4b APS with 4-foot shoulders was completed May 2023).

Alternative	APS Completed	Description
1	July 29, 2019	5-span bridge 65' west, one viaduct north of bridge.
2	July 29, 2019	5-span bridge 65' west, two viaducts north of bridge.
3	Feb. 24, 2020	3-span bridge 65' west, two viaducts north of bridge.
4	April 5, 2021	2-span bridge 65' west, two viaducts north of bridge.
4b	May 17, 2023	Alternative 4 with 4' wide shoulders
5	May 17, 2023	2-span on existing alignment, temporary bridge during construction, two viaducts north of bridge.
6 **Chosen by PDT**	June 20, 2023	2-span near existing alignment, temporary bridge during construction, two viaducts north of bridge.

6. CONSIDERATIONS REQUIRING DISCUSSION

6A. Hazardous Waste

Hazardous waste studies will take place to test for asbestos containing material in the existing bridge and lead containing paint. If hazardous

materials are found, they will be dealt with during construction in accordance with applicable laws. Treated Wood Waste from the removal of guardrail posts will be disposed of in accordance with Project Special Provisions and/or Caltrans Standard Specifications.

6B. Value Analysis

Federal law requires that all federally funded bridge projects on the National Highway System with a total cost of $40 million or more must have a VA study performed prior to Ready-To-List (RTL) in order to receive construction authorization. VA studies are a function-oriented, structured, multi-disciplinary team approach used to analyze and improve value in a project.

A VA Study was undertaken in the Fall of 2019. It recommended the following six options for further consideration:

1. Consider Construction Manager General Contractor (CMGC)project delivery method.
2. Close campground completely during construction.
3. Increase structure span lengths.
4. Consider soldier pile for retaining wall.
5. Consider single-pile bents for viaduct spans.
6. Consider precast elements for viaduct spans.

These options continue to be explored. As more engineering and environmental data is gathered, recommendations will be incorporated if significant value to the project is recognized.

6C. Resource Conservation

There is a possibility that concrete and steel from the bridge demolition can be reused. The concrete can be crushed and used as aggregate. The steel may be recycled. In addition to this, effective traffic control and construction signing will be used to minimize the amount of lane closures and delays in order to reduce fuel consumption and emissions.

6D. Right-of-Way Issues

Temporary Right of Way will be needed for the project. Temporary Construction Easements will be needed for temporary access.

There has been discussion with the State Parks regarding closing the campground during construction for safety and construction access

and staging. Compensation will be negotiated during future phases and permit requirements may impact this option. The attached Right of Way Data Sheets includes cost estimate to compensate State Parks for campground closure during construction.

AT&T's aerial communication utilities conflict with the project and will need to be relocated. These utilities were installed through State Encroachment Permit and may need to be placed underground as a condition of the Coastal Development Permit. See the attached Right of Way Data Sheet, Attachment G.

6E. Environmental Compliance

An Environmental Impact Report/Environmental Assessment has been completed to assess the environmental impacts of the proposed project. This document level has been selected based on the impact to some endangered species, Section 4(f) impact to Limekiln State Park, and visual impact to coastal resources. Permits 401, 404, and 1602 will be required from Regional Water Quality Control Board, Army Corps of Engineers, and California Department of Fish and Wildlife, respectively. A Biological Opinion will be required from National Marine Fisheries Service and United States Fish and Wildlife Service. A Coastal Development permit from Monterey County will also be required along with a National Marine Sanctuaries Permit from the National Oceanic and Atmospheric Administration. A Section 4(f) agreement will be required from California State Parks.

The Environmental Impact Report/Assessment has been prepared in accordance with Caltrans' environmental procedures, as well as state and federal environmental regulations. See the attached Draft Environmental Impact Report/Assessment, Attachment C.

6F. Air Quality Conformity

No special considerations are required for air quality conformity throughout this project.

6G. Title VI Considerations

Caltrans, 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."

This project will comply with Title IV considerations.

6H. Noise Abatement Decision Report

Not applicable. This project does not significantly change the horizontal or vertical alignment of the existing highway or increase the number of traffic lanes, nor does it involve the construction of a highway at a new location. Therefore, a Noise Abatement Decision Report (NADR) is not required for this project.

7. OTHER CONSIDERATIONS AS APPROPRIATE

Public Hearing Process

A public hearing took place on January 17,2024 after the circulation of the Draft Environmental Document in accordance with the Project Development Procedures Manual.

Permits

See Section 6E Environmental Compliance for permits needed.

Transportation Management Plan

A Transportation Management Plan Data Sheet has been completed. Working day estimate is approximately 900 days. Traffic control will consist of flaggers to mobilize, move in materials, placement of temporary railing, and other operations. Traffic will be reduced to one lane using reversing traffic control and temporary traffic signals to construct the main bridge and two viaducts.

Stage Construction

Stage construction and a temporary one-lane detour bridge will be utilized to handle traffic during construction.

Stage 1 will consist of building this temporary detour bridge while traffic remains on existing bridge and highway. This detour bridge will consist of a 4-span cast in place concrete box girder or a modular superstructure. Both options are anticipated to take around 8 months to construct.

During Stage 2, one-way reversing traffic will be placed on the newly constructed detour bridge and the existing bridge will be partially removed. Abutments and the main pier, the soffit deck, and the barrier railing will be constructed during this stage. Viaduct 1 and half-with and shoulder of Viaduct 2 (SB side) are to be constructed in this stage along with SB lane and shoulder. A temporary retaining wall will also be built as shoring to construct Abutment 3.

Stage 3 construction will handle traffic on the newly constructed SB lane of the main bridge via one way reversing traffic. The NB roadway will be constructed along with the remaining NB half of Viaduct 2. Lastly, the temporary retaining wall and detour bridge would then be removed in this stage.

Roadside Safety Improvements

New roadside worker safety features have not been included in this project.

Pedestrian Facilities

SR 1 along the Big Sur Coast is a classified as a "Shared Roadway" and a part of the larger Pacific Coast Bike Route. To accommodate bicycles, the project will install the 4 ft wide paved shoulder that is typical throughout portions of the Big Sur Coast. Pedestrian facilities along SR 1 are not warranted due to safety concerns. Pedestrian access to Limekiln State Beach and the nearby hiking trails is safely routed through Limekiln State Park.

Aesthetic Treatments

Aesthetic treatment will be integrated into the design to be consistent with the visual impact analysis and its recommendations. Coordination with stakeholders will take place to approve aesthetic treatments. Specific types of aesthetic treatments will be developed during the project design phase and will comply with safety standards. At this time, it is anticipated that guardrail railing, posts, end treatments and bridge rail will be stained. This project is proposed within the vicinity of the Pitkins Curve Bridge and Rain Rocks Rock Shed projects. Aesthetic treatments for this project would be selected with consideration of the aesthetic treatments used at both of those projects. Wherever possible, cut slopes and grading work shall employ contour grading techniques to help grading work conform with the natural topography.

8. FUNDING, PROGRAMMING AND ESTIMATE

Funding - This project is eligible for Federal-aid funding.

Programming - This project is programmed in the 2024 SHOPP.

The ongoing discussion regarding the best constructability method of this project took much longer than anticipated. Many alternatives were developed and vetted in an effort to meet the needs of all agencies and stake holders involved. In addition, the circulation of the Draft Environmental Document for this complex area generated many comments which took more time to address than planned. As a result, the Project Approval and Environmental Document (PA&ED) phase lapsed 6/30/24. The project was reprogrammed in the 2024 SHOPP with an updated delivery schedule.

Fund Source					
20.XX.201.110	Prior	24/25	26/27	27/28	Total
Component					
PA&ED Support	3,500*	100			100
PS&E Support		9,600			9,600
Right-of-Way Support		600			600
Construction Support			18,500		18,500
Right-of-Way Capital			3,632		3,632
Construction Capital			96,125		96,125
Total		10,300	118,257		128,557

*Prior PA&ED funds have already been spent and are not included in new re-programmed total cost.

The support : cost ratio is 34.2%

Cost Estimates

Project Capital Cost estimate includes Right of Way, 15% Roadway contingencies, 25% Structure contingencies, and escalation at 4.2% to mid-construction.

The current escalated capital cost estimate is as follows:

Preferred Alternative 6: $ 107,103,000

Itemized cost estimates are shown in Attachment F, Project Report Cost Estimates.

9. DELIVERY SCHEDULE

Project Milestones		Milestone Date	Milestone Designation (Target/ Actual)
PROGRAM PROJECT	M015	4/1/2016	A
BEGIN ENVIRONMENTAL	M020	10/12/2016	A
NOTICE OF PREPARATION (NOP)	M030	4/4/2017	A
CIRCULATE DPR & DED EXTERNALLY	M120	10/23/2023	A
PA & ED	M200	8/1/2024	T
BRIDGE SITE DATA COMPLETE	M221	3/29/2024	A
PS&E TO DOE	M377	6/1/2026	T
DRAFT STRUCTURES PS&E	M378	5/5/2026	T
RIGHT OF WAY CERTIFICATION	M410	7/1/2026	T
READY TO LIST	M460	12/1/2026	T
HEADQUARTERS ADVERTISE	M480	4/6/2027	T
AWARD	M495	6/18/2027	T
APPROVE CONTRACT	M500	7/9/2027	T
CONTRACT ACCEPTANCE	M600	7/15/2031	T
END PROJECT EXPENDITURES	M800	12/14/2036	T
FINAL PROJECT CLOSEOUT	M900	8/14/2038	T

10. RISKS

Risks are uncertainties which can affect project objectives negatively or positively. The Project Risk Management Process is intended to result in the effective management of project risks and opportunities during the entire project life cycle. Risk management is applied to this project in conformance with Project Delivery Directive PD-09 and Project Risk Management Handbook: A Scalable Approach.

The Risk Register is a living document – a tool to help the PDT take the appropriate measures to minimize adverse impacts to the project

scope, schedule, or cost. The Risk Register cannot identify all risks in advance of occurrence for a project, as some risks are unknown. The current cost estimate and schedule do not include quantitative impacts to costs and/or schedule for the risks identified in the Risk Register.

A Risk Register has been developed by the PDT to assess, respond to, and monitor identified project risks that may occur throughout the life of the project (Attachment I– Risk Register).

Key risks include:

- Rockfall leading to frequent road closures, thus impacting project schedule and cost.
- Delays in receiving Coastal Commission and State Park approvals
- Difficulty in acquiring Limekiln State Park property
- Challenging bridge foundation construction because of drilling through rock, tidal flows, caving potential, and encounter with buried archaeological resources
- Construction logistics including heavy bridge machinery mobilization, material supplies, and movements within the project; all affecting the project schedule
- Multiple shifts/ weekend work for schedule makeup

11. EXTERNAL AGENCY COORDINATION

Federal Highway Administration (FHWA)

This project is considered to be an Assigned Project.

The project requires the following coordination:

US Fish and Wildlife Service
Biological Opinion

National Marine Fisheries Service
Biological Opinion

National Oceanic and Atmospheric Administration
National Marine Sanctuaries Permit

US Army Corps of Engineers
Department of the Army Permit for:

Clean Water Act Section 404

California State Parks
Section 4(f) Agreement

California Department of Fish and Wildlife
California Fish and Game Code Section1602
Lake or Streambed Alteration Agreement

California Coastal Commission and/or Local Coastal Program
California Public Resources Code Division 20 (California Coastal Act)
Coastal Development Permit

Regional Water Quality Control Board
Clean Water Act Section 401
Water Quality Certification
Major Permit, Administrative Permit, or Regionwide Permit

Local Agency
The project will require coordination with Monterey County and California Coastal Commission to obtain the Coastal Development Permit.

12. PROJECT REVIEWS

Scoping team field review_____Date 1-14-2014___
District Program Advisor _____Kelly McClain____Date 6-22-2021___
Headquarters SHOPP Program Advisor D. Campbell_____Date 3-30-2020_____
District Maintenance _____Lee Chavas_____Date 6-22-2021___
Headquarters Project Delivery Coordinator _____Date _____
Project Manager _____Luis Duazo_____Date _____
FHWA _____Date _____
Constructability Review _____Date 6-22-2021
Other, 2nd Internal Review_____Date 8-22-2023

13. PROJECT PERSONNEL

Name	Function	Phone
Luis Duazo	Project Manager	(805) 835-6502
Ryan Turner	Geotech	(805) 549-3750
Neil Weller	Structures Construction	(805) 471-2109
Mitch Dallas	Coastal Resources Senior Specialist	(805) 542-4662
Ben Erchul	Hydraulics	(805) 549-3391
Paul Peterson	Structure Design	(916) 227-8156
Charles Lomicka	Structure Project Engineer	(916) 227-8093
Berkeley Lindt	Senior Maintenance Engineer	(805) 549-3315
Scott Morris	Design Manager	(805) 549-3080
Hannah Butler	Environmental Generalist	(805) 458-2234
Kyle Burch	Acting Office Chief of Programming and Asset Management	(805) 503-9374
Scott Kirkish	Asset Manger	(805) 441-3838
Justin Anderson	Geotech Senior	(510) 414-9122
Patrick Mason	Right of Way	(805) 549-3498
Matt Fowler	Senior Environmental Planner	(805) 779-0793
Alexandra Thiel	Biologist	(805) 441-8484
Kelly Mcclain	Program Coordinator	(805) 549-3278
Adam Rianda	Construction Engineer	(805) 471-2100
Karen Holmes	Senior Environmental Planner	(805) 440-5535

Krista Kiaha	Senior Environmental Planner	(805) 549-3669
Terry Joslin	Environmental, Archaeology	(805) 549-3778
Scott Hamm	Maintenance Engineer	(805) 549-3359
Ryan McKee	Geotechnical	(805) 549-3287
Kristen Langager	Landscape Architect	(805) 549-3483
Zachary Tanner	Landscape Architect	(805) 549-3446
Dhvani Desai	Technical Liaison Bridge Design	(916) 227-5204
Diana Campbell	HQ Program Coordinator	(916) 639-5953
Corby Kilmer	Senior Landscape Architect	(805) 721-2805
Abul Syed-Muhammad	Design	(703) 300-6825
Maddie Rasmussen	Design	(805) 534-3584
Jennifer Moonjian	Senior Environmental Scientist	(805) 779-0756
Skylar Feltman	Aquatic Resources Biologist	(805) 458-0108
Katheryn Kleinschmidt	District Traffic Safety Engineer	(805)721-0098

14. ATTACHMENTS

A. Project Location Map
B. Structure Maintenance and Investigations Fact Sheet (dated 10-24-2012)
C. Final Environmental Impact Report/Assessment (Administrative Draft)
D. Preferred Alt Layout and Typical Sections
E. Preferred Alt Advance Planning Study
F. Preferred Alt Project Report Cost Estimate
G. Preferred Alt R/W Data Sheet,
H. Storm Water Data Report
I. Risk Register

J. SHOPP Performance Report
K. Document Distribution List

ATTACHMENT A

Project Location Map

INDEX OF PLANS

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	MON	1	20.9/21.3		

STATE OF CALIFORNIA

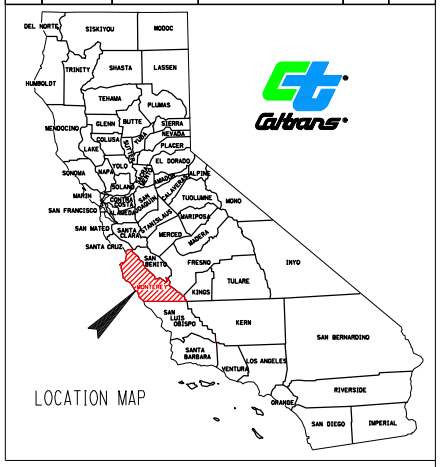
DEPARTMENT OF TRANSPORTATION

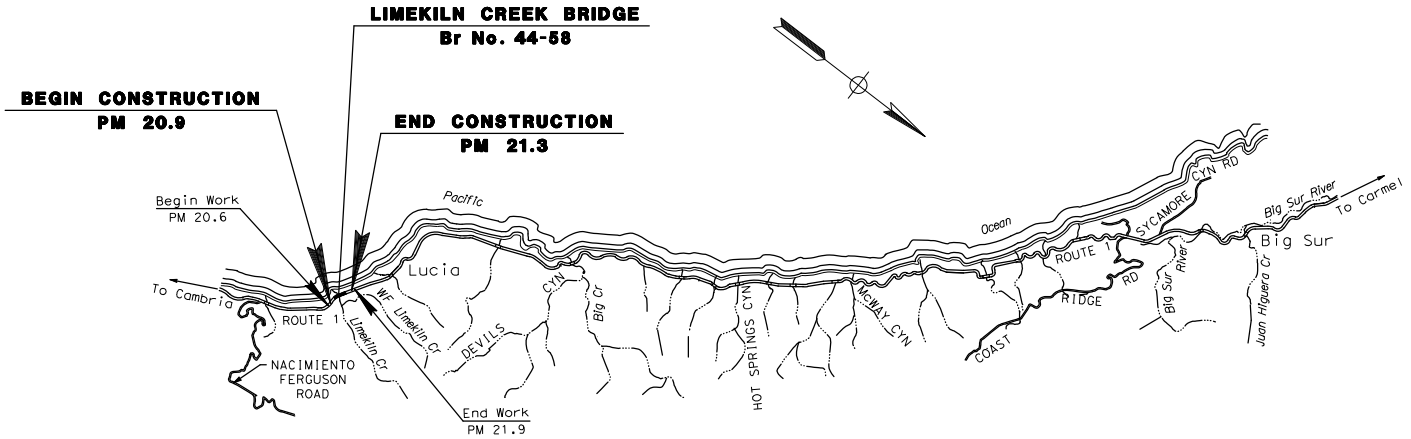
PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

IN MONTEREY COUNTY NEAR LUCIA
FROM 0.1 MILE SOUTH OF LIMEKILN CREEK BRIDGE
TO 0.2 MILE NORTH OF LIMEKILN CREEK BRIDGE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2018





NO SCALE

ATTACHMENT A

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

PROJECT ENGINEER
REGISTERED CIVIL ENGINEER
DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

CONTRACT No.	05-1F5104
PROJECT ID	0514000004

DESIGN ENGINEER: RON R. KRAEMER
PROJECT MANAGER: LUIS DUAZO

LAST REVISION 05-01-14
DATE PLOTTED => @DATE
TIME PLOTTED => @TIME

BORDER LAST REVISED 7/2/2010 | CALTRANS WEB SITE IS: HTTP//WWW.DOT.CA.GOV/ | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | USERNAME => @USER DGN FILE => @REQUEST | UNIT 1451 | PROJECT NUMBER & PHASE 05140000040

ATTACHMENT B

Structure Maintenance and Investigations Fact Sheet (dated 10-24-2012)

Structure Maintenance & Investigations
PEER REVIEW FACT SHEET
Highway 1 Limekiln Creek, Bridge No. 44-0058
October 24, 2012

Project Location

5-MON-1-20.95

The 578-foot-long Highway 1 Limekiln Creek Bridge is located on the scenic Monterey Coast, about 20 miles north of the San Luis Obispo County line.

The bridge, which was built in 1957, features six spans with precast/prestressed concrete "I" girders on "T" bents and three spans of reinforced concrete (RC) "T" girders on concrete encased steel pile bents.

The bridge carries an average of 2,600 vehicles a day of which 1% are trucks.



Event Description

A Structure Maintenance & Investigations (SM&I) Peer Review was convened on October 24, 2012 to determine the appropriate strategy to repair the 55- year-old structure.

Attendees included Specialty Investigations and Bridge Management Chief Michael B. Johnson, Senior Bridge Engineers Richard Dills, Erol Kaslan and Matt Lee, Design Engineer Tim Campbell, Corrosion Engineer Michael Mifkovic of the Translab and District 5 Project Engineer Kelly McKinley.

Inspection of the bridge has documented a long history of concrete cracking and spalling on the deck, superstructure and substructure. Salt-laden fog is pervasive and a major contributing factor to the deterioration of the bridge.

Several of the bottom flanges of the PC/PS I-girders have spalls along their edges exposing some of the longitudinal tensile steel. On the ocean facing side of the bridge, precast girders exhibited exposed prestressing steel in one location resulting in a 40% loss of strand section. The old earthquake cable restrainers have varying amounts of corrosion.

The visible portions of the steel bearings have areas of rust.

The Limekiln Creek Bridge was included in a Maintenance Contract (05-1A890), which is scheduled to go to construction in 2013. The work to be done involves treating the deck with methacrylate to seal the cracks, replacing the joint seals, patching the spalls on the bottom edges of the girders, cleaning the bearings to bare metal and recoating them with an appropriate paint



Limekiln Creek is one of the historic bridges carrying Highway 1 along the scenic Monterey County coast.



The Limekiln Creek Bridge carries 2,600 vehicles a day.

ATTACHMENT B

system and upgrading the bridge rail.

In June, Design Engineer Tim Campbell and SM&I Design Branch Senior Matt Lee performed a detailed inspection of the bridge to determine the scope of work to be included in the engineering design plans for the Maintenance contract.

The inspection found scattered areas of the deck with transverse cracks. About 1% of the deck area concrete is unsound. Active corrosion in the concrete girders is causing the steel to expand and break off areas of the concrete cover.

Core samples taken from the bridge deck and superstructure found chloride levels ranging from as low as 2.55 pounds per cubic yard on the deck to 13.6 pounds per cubic yard on the girders. Active corrosion of steel can occur when the chloride levels in concrete exceed 3 pounds per cubic yard.

As a result of the inspection findings, SM&I convened the Peer Review to discuss whether to proceed with proposed work for the Limekiln Creek Bridge as outlined in the upcoming Maintenance project or pursue other potential repair strategies.

Some of the alternatives discussed included protective actions such as installing a cathodic protection system using anodes tying the steel to an electrical current, treating the steel with a corrosive-resistant coating and then replacing the cover concrete, and replacing the bridge.



Numerous spalls are prevalent in the girders.



Rust is evident on the seismic cable restrainers.

ATTACHMENT B

Alternatives Considered

1) **Do Nothing -** This alternative was not considered because of the need to address the deteriorating condition of the bridge to ensure the safety of the traveling public and guarantee the reliability of the structure.
2) **Repair the Bridge –** This alternative would involve District 5 modifying the upcoming Maintenance contract (05-1A890) to include installing a cathodic protection system to the other work identified on the Limekiln Creek Bridge.
3) **Rehabilitate the Bridge -** Replace the precast girders with exposed strands and section loss, clean and patch other exposed areas. This alternative is problematic because the original concrete cover depth over the prestressing strands is very shallow making patching ineffective. Replacement of some of the ocean side exterior girders would involve removal of the existing rails, portions of the deck and earthquake restrainers. Additionally, the salt laden concrete on the remainder of the bridge will continue to invite corrosion in the moist fog environment of the central coast.
3) **Replace the Bridge –** This alternative would involve District 5 removing this bridge from Maintenance contract (05-1A890) and developing a project for the State Highway Operation and Protection Program (SHOPP) to replace the Limekiln Creek Bridge with a new structure.

Recommended Action

The Peer Review unanimously recommended that District 5:

1. Remove the Limekiln Creek Bridge from Maintenance contract (05-A190), which is scheduled to go to construction in 2013.
2. Develop a new project for the SHOPP to replace the Limekiln Bridge with a new structure.

ATTACHMENT B

ATTACHMENT C

Final Environmental Impact Report/Assessment (Administrative Draft)

ADMINISTRATIVE DRAFT

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

Final Environmental Impact Report/ Environmental Assessment and Section 4(f) Evaluation with Finding of No Significant Impact



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.

June 2024

Caltrans

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 Final Environmental Impact Report/Environmental Assessment with Finding of No Significant Impact, 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.

The Draft Environmental Impact Report/Environmental Assessment circulated to the public for 45 days between December 22, 2024, and February 5, 2024. Comments received during this period are included in Appendix F. Elsewhere, language has been added throughout the document to indicate where a change has been made since the circulation of the draft environmental document. Minor editorial changes and clarifications have not been so indicated.

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. This document may be downloaded at the following website: https://dot.ca.gov/caltrans-near-me/district-5/district-5-current-projects/05-1f510

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State Clearinghouse Number 2018091017
05-MON-1-PM 20.9-21.3
EA 05-1F510/Project Number 0514000004

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

FINAL ENVIRONMENTAL IMPACT REPORT /ENVIRONMENTAL ASSESSMENT and Section 4(f) Evaluation with Finding of No Significant Impact

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
California Department of Transportation
NEPA and CEQA Lead Agency

12/21/2023
Date

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

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Finding of No Significant Impact (FONSI)

This determination has been added since the draft environmental document.

For the Limekiln Creek Bridge Replacement Project

The California Department of Transportation (Caltrans) has determined that Alternative 6 will have no significant impact on the human environment. This FONSI is based on the attached Environmental Assessment which has been independently evaluated by Caltrans and determined to adequately and accurately discuss the need, environmental issues, and impacts of the proposed project and appropriate mitigation measures. It provides sufficient evidence and analysis for determining that an Environmental Impact Statement is not required. Caltrans takes full responsibility for the accuracy, scope, and content of the attached EA (and other documents as appropriate).

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

Caltrans District Director Date

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).

This paragraph has been updated since release of the Draft Environmental Document. After receiving comments from the public and reviewing agencies, a Final EIR/EA was prepared. The Final EIR/EA includes responses to comments received on the Draft EIR/EA and identifies the preferred alternative. A Notice of Determination will be published for compliance with CEQA, and Caltrans will issue a Finding of No Significant Impact (FONSI) for compliance with NEPA. A Notice of Availability (NOA) of the FONSI will be sent to the affected units of federal, state, and local government and to the State Clearinghouse in compliance with Executive Order 12372.

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
This table has been updated to reflect changes since the release of the Draft Environmental Document.

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	The project is within both Monterey County and Coastal Commission jurisdiction. The 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. No permanent acquisition will 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.	No permanent acquisition will 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 archaeological sites and an associated district. There would be a direct impact on a site at the southern abutment.	Adverse effect on archaeological 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	There would be cumulative visual impacts which would be mitigated.	There will be cumulative visual impacts which will be mitigated.	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.
- Final Section 4(f) Evaluation with California State Parks is included in Appendix A.

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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.

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

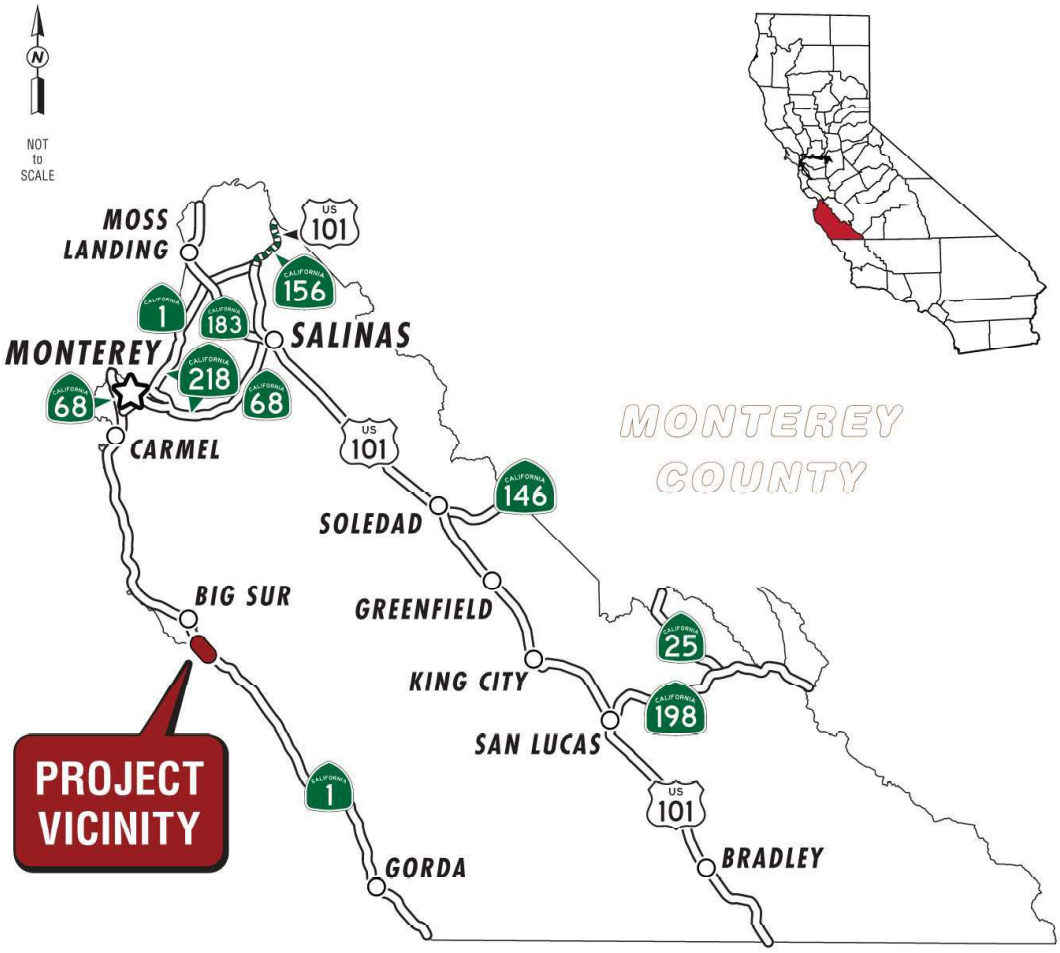
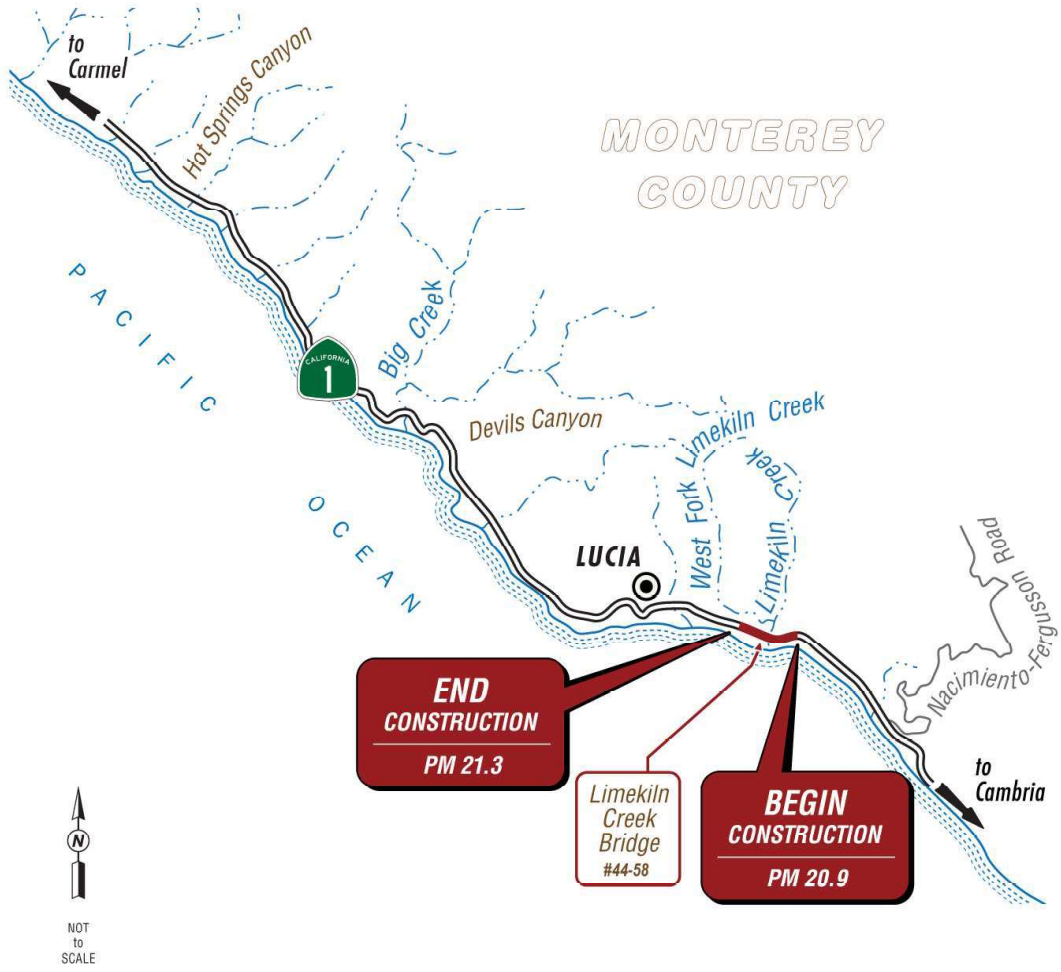


Figure 2 Project Location Map



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

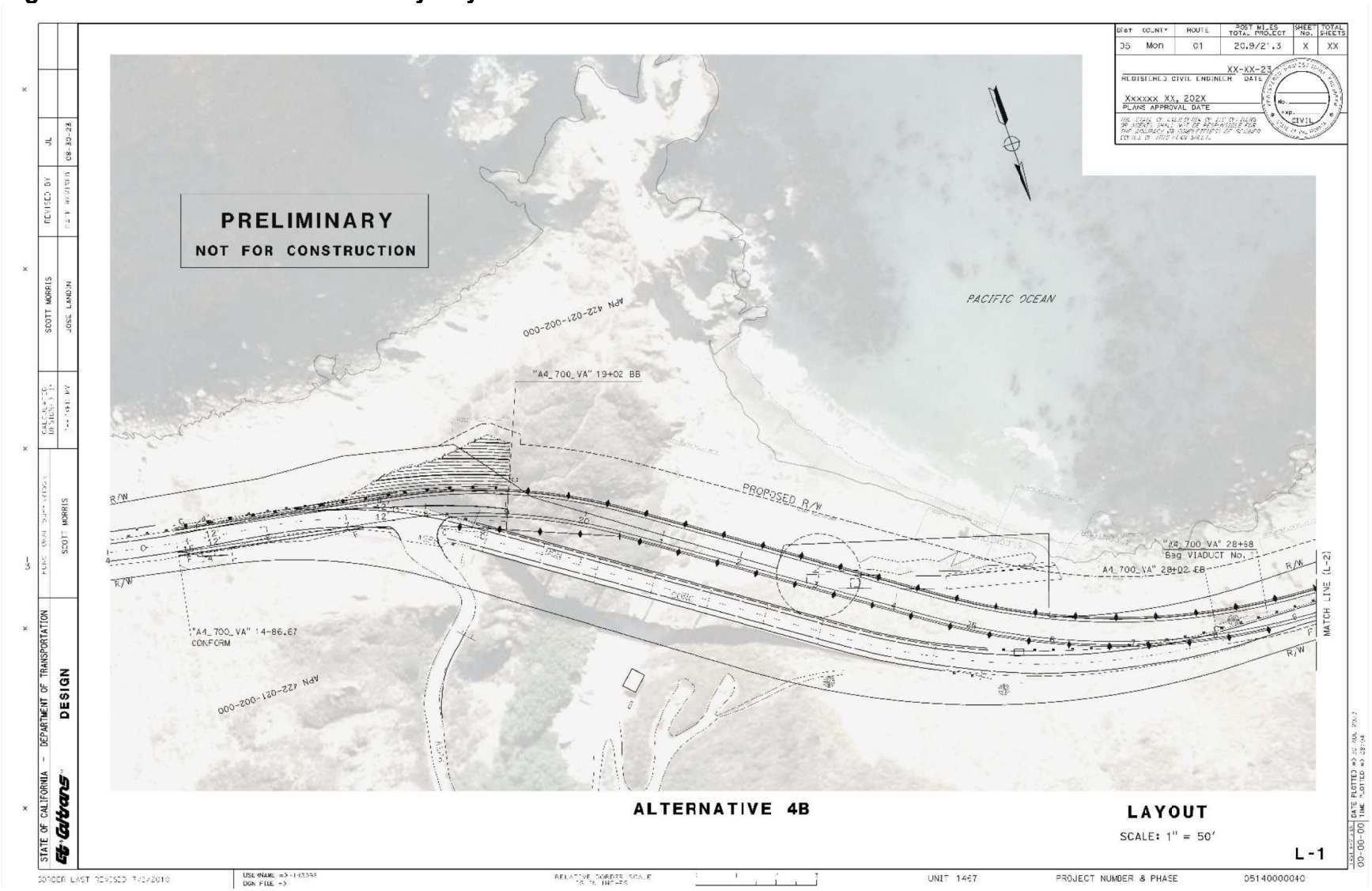
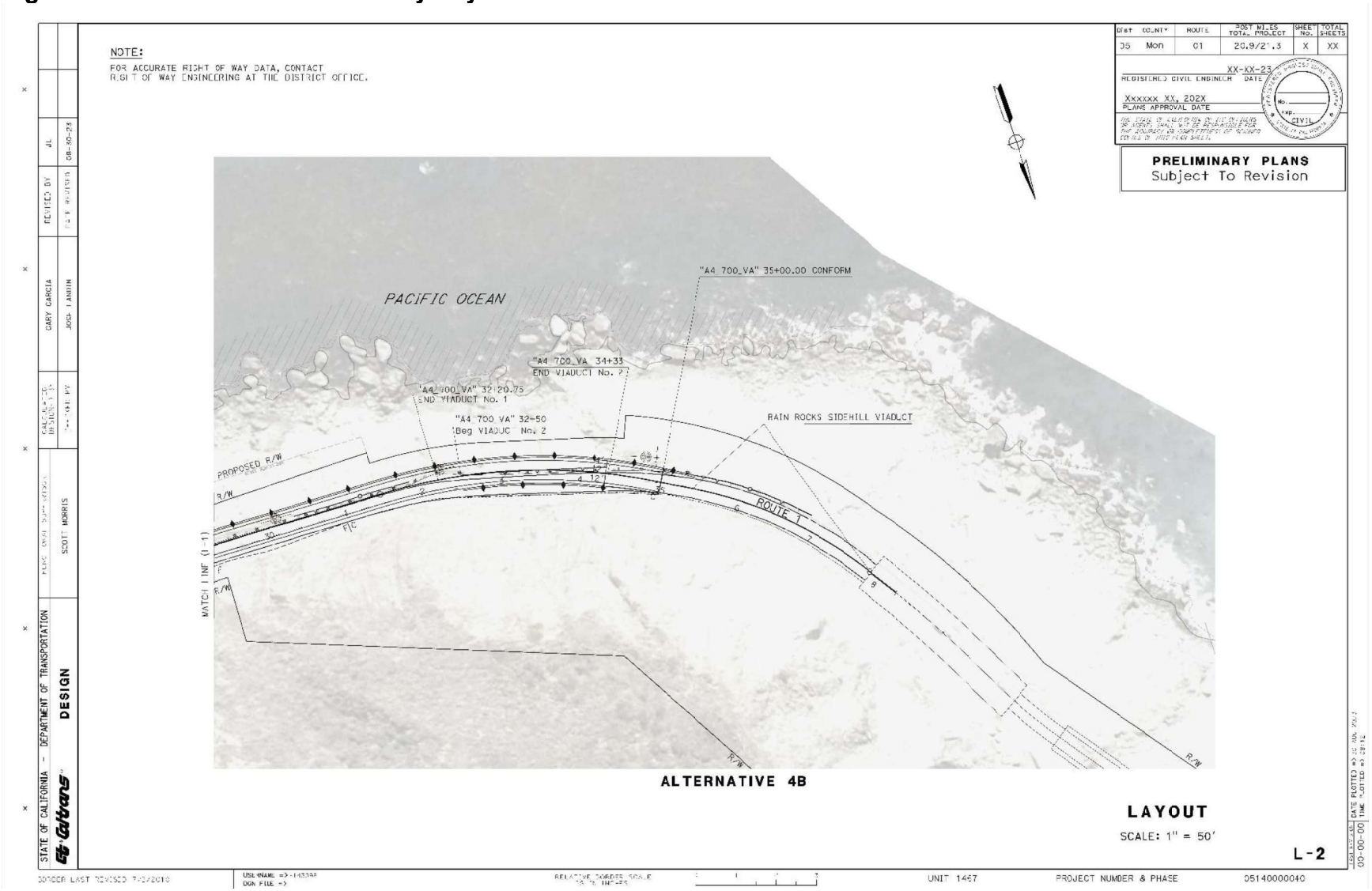


Figure 8 Alternative 4B Preliminary Layout Sheet 2



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

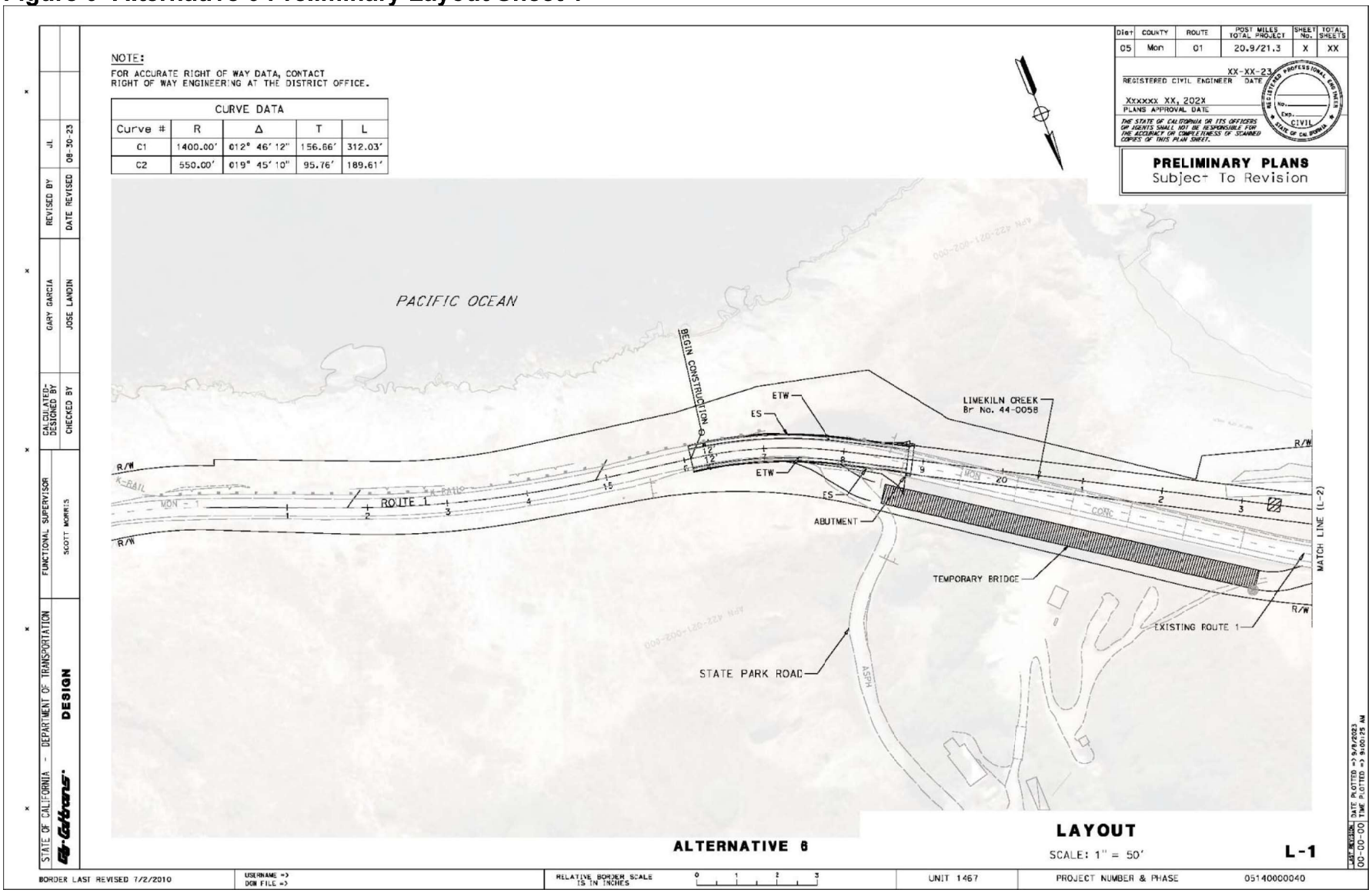
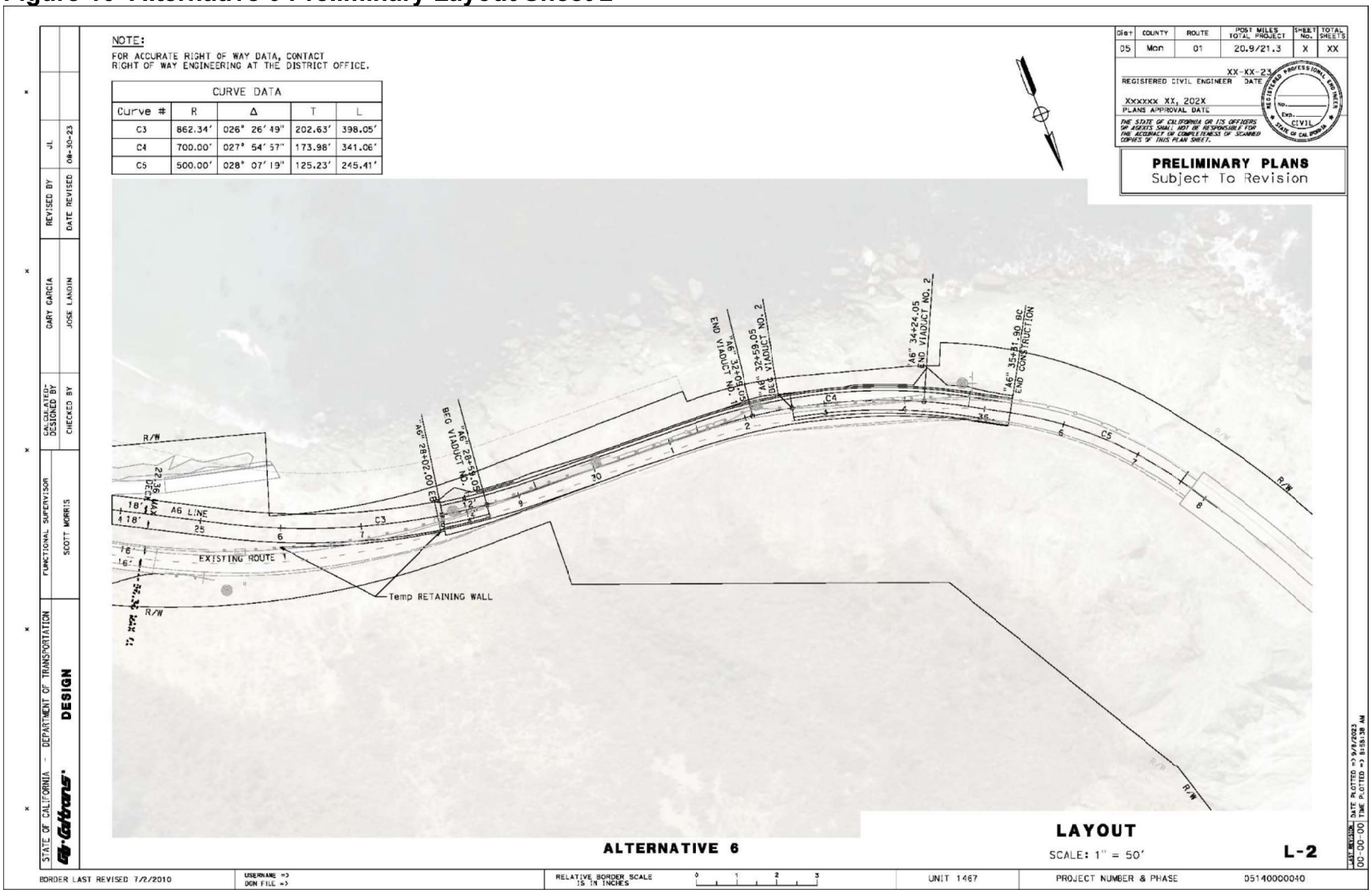


Figure 10 Alternative 6 Preliminary Layout Sheet 2



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.

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.

1.7 Identification of a Preferred Alternative

Section 1.7 has been added since release of the Draft Environmental Document.

On February 14, 2024, a Project Development Team meeting was held and decided to go forward with Alternative 6 as the preferred alternative. This was decided based on environmental impacts and agency comment. Though environmental impacts are similar with both alternatives, Alternative 6 has less impacts to cultural resources than Alternative 4B. State Parks and Coastal Commission prefer Alternative 6 for this reason as well as the alignment. Alternative 6's alignment is the closest feasible alignment to the existing bridge.

Alternative 4B is still discussed throughout the environmental document in comparison to Alternative 6.

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.
Archaeological resources	14-2.03 Archaeological Resources: If archaeological 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.

1.8 Alternatives Considered but Eliminated from Further Discussion Prior to the Draft Environmental Impact Report/Environmental Assessment

Several alternatives were 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.

1.9 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

Agency	Permits, Licenses, Agreements, and Certifications	Status
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	Final Evaluation included in Appendix A

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 will not change existing or future land use.

2.1.2 Community Character and Cohesion

The project does not include new features that will impact the existing character and cohesion but will, 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 will 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 Land Use Plan, Big Sur Coast Highway Management Plan, and the Big Sur Highway 1 Sustainable Transportation Demand Management Plan. These policies and consistency with the project are discussed in more detail in Section 2.2.1. The project is listed in the 2023 Federal Transportation Improvement Program.

2.1.4 Traffic and Transportation/Pedestrian and Bicycle Facilities

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

2.1.5 Growth

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

2.1.6 Hydrology and Floodplain

The proposed bridge will not affect the watershed, and piers will 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 will be appropriately handled, treated, and disposed of with the implementation of Caltrans Standard Specifications. An asbestos-containing materials study will be conducted during the final design, and proper Standard Special Provisions will 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

This section has been updated since release of the Draft Environmental Document. There will be no relocations because of this project; see Section 1.4 Project Description. A small amount of land would be required for Alternative 4B, which would have been a transfer of jurisdiction from California State Parks to Caltrans of approximately 1.464 acres. There will be no property acquisition for Alternative 6.

2.1.12 Utilities/Emergency Services

Telecommunication utilities will 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 will take place in the next phase of the project. There are no other utilities in the area that will be impacted by this project.

A Traffic Management Plan will be implemented during construction, and the highway will 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 will 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 will 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 will 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 will be implemented to avoid the spread of invasive plants, noxious weeds, and nonnative animals, including aquatic species. Noxious weeds will be removed and replaced by California native plants. Any nonnative animals discovered during stream diversion activities will be removed from the project area.

2.1.16 Energy

The project is not capacity-increasing, and therefore, the operation will not increase energy usage. Energy usage will be required during construction but will 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 will 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.

This paragraph was updated since release of the Draft Environmental Document. 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. 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.

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

This paragraph was updated since release of the Draft Environmental Document. This project is subject to Monterey County's local coastal program. The 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 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 paragraph has been updated since release of the Draft Environmental Document. The project is within both Monterey County and California Coastal Commission jurisdiction. Areas above the mean high tide line are within Monterey County jurisdiction and areas below would be permitted by the Coastal Commission. This project is subject to Monterey County's local coastal program. The 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. Caltrans plans to work with Monterey County to receive a consolidated Coastal Development Permit to cover both jurisdictions.

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.

This paragraph has been added since release of the Draft Environmental Document. The Monterey County Coastal Implementation Plan was adopted by the Board of Supervisors in 1988 and is also applicable to this project. The plan is split into six parts. Part 3 is the Regulations for Development in the Big Sur Coast Land Use Plan area.

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

Public access through the project area during construction will be temporarily impacted because the park will 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 will 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 will 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 will 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 will 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 will 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 will keep the project consistent with coastal policies related to habitat areas.

An approved 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 invasive weed treatment will be described in detail in the plan. The final mitigation and monitoring plan will be consistent with the agency requirements, as written in the 404, 401, 1602, and coastal permits, and will 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.
- This bullet has been added since release of the Draft Environmental Document. Monterey County Coastal Implementation Plan 20.145.050: Development shall not cause significant adverse impacts to water quality, year-round flows, and/or stream bed gravel conditions of Garrapata Creek, Rocky Creek, Bixby Creek, Little Sur River, Big Sur River, Partington Creek, Anderson Creek, Hot Springs Creek, Vicente Creek, Big Creek, or Limekiln Creek, where such changes may cause significant adverse impact on the rainbow and/or steelhead trout populations.

  Development of channelizations, dams, and other substantial alterations of natural streams shall not be allowed. However, minor alterations may be considered and approved if they meet all development standards and criteria for:

  a. Environmentally Sensitive Habitats, as specified in section 20.145.040;

  b. trout populations, as specified in Section 20.145.050.B-3 and Section 20.145,050 B.2.a.

  c. flood hazards, as specified in Section 20,145.080. (Ref. Policy 3.4.3.B.5)

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 will allow the proposed bridge to fully span the creek, restoring the natural channel and providing a wider stream passage.

A stream diversion will 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 will be built over the creek. Temporary impacts will include vegetation removal, clearing and grubbing, ground compaction, and disturbance. Wooden platforms will be placed to ensure no debris from the pier is dropped into the creek. The creek diversion will be deconstructed once the pier is removed, and new piers will be placed outside the jurisdictional areas. It is possible that Alternative 6's temporary bridge will 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 will ensure that the project impacts will remain consistent with coastal policies related to biological habitats. Those measures will provide details for replanting and restoration. An approved mitigation and monitoring plan will 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 will 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, filing, 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.

- This bullet has been added since release of the Draft Environmental Document. Monterey County Coastal Implementation Plan 20.145.040: All development, including vegetation removal, excavation, grading, filling, and the construction of roads and structures, shall be prohibited in the environmentally sensitive habitat areas-if it has been determined through the biological survey prepared for the project that the development's impact cannot be reduced to a level at which the long-term maintenance of the habitat is assured, (i.e. to an insignificant level). To approve any development within an environmentally sensitive habitat area, the decision making body must find that the disruption of such habitat caused by the development would not be significant. (Ref. Policy 3.3.2.1)

  Development and land use activities adjacent to riparian habitat shall not adversely impact the long-term maintenance of the habitat nor diminish the stream's surface flow to a level that causes loss of the riparian plant or wildlife habitat. Determination of the potential impacts shall be made through the biological survey and any other consultant reports deemed necessary by staff and/or consulting biologist in order to make an adequate assessment. Mitigation measures, as contained in the biological survey, shall be made conditions of approval where needed to minimize impacts. As well, the project shall be modified including modification of project intensity, location, siting, design, and size as necessary to minimize erosion, run-off, and water pollution. (Ref. Policy 3.3.3.A.3)

  Access routes, including recreational trails, driveways, and roads adjacent to riparian habitats shall not adversely impact the long-term maintenance of the habitat, as determined through the biological survey prepared for the project. Mitigation measures, such as those contained in the biological survey, shall be made conditions of project approval where necessary to reduce impacts to a level at which the habitats long term maintenance is assured. (Ref. Policy 3.3.3.A.5)

- This bullet has been added since release of the Draft Environmental Document. Monterey County Coastal Implementation Plan 20.145.060: A coastal development permit must be obtained for the removal of trees and other major vegetation--with the following exceptions:

a. removal of non-native or planted trees, except where this would result in the exposure of structures in the critical viewshed or where the tree(s) is/are determined to be a landmark tree as per Section 20.145.060.D.I.1;

b. removal of hazardous trees which pose an immediate I danger to life or structures;

c. thinning of small (less than 12 inch diameter) or dead trees from densely forested areas, especially as needed to reduce unsafe fuel accumulations adjacent to existing occupied buildings;

d. prescribed burning, crushing, lopping or other methods of brush clearing. which do not materially disturb underlying soils; or

e. a Timber Harvest Plan is required for the tree removal, in accordance with State requirements.

Consistency Analysis

The measures outlined in Section 2.4 of this document will ensure that the project will be consistent with coastal policies related to environmentally sensitive habitat areas. An approved 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 invasive weed treatment will be described in detail in the plan. The final mitigation and monitoring plan will be consistent with the agency requirements, as written in the 404, 401, 1602, and coastal permits, and will 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 will 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 will be used to minimize risk from geologic hazards to the greatest extent possible. The proposed project will 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 will 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, archaeological sites, and one historic district. The proposed project is anticipated to have a Finding of Adverse Effects. The project will 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 gullying, 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."
- This bullet has been added since release of the Draft Environmental Document. Monterey County Coastal Implementation Plan 20.145.150: Because preservation of the natural environment is the highest priority, all future access must be consistent with this objective. Care must be taken that while providing public access, the beauty of the coast, its tranquility and the health of its environment are not marred by public overuse or carelessness. The protection of visual access should be emphasized throughout Big Sur as an appropriate response to the needs of recreationists. Visual access shall be maintained by directing all future development out of the viewshed.

Consistency Analysis

Both proposed project alternatives will contribute to a cumulative increase in the overall built character of the Big Sur corridor. The measures proposed in Section 2.2.3 will 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 will maintain and enhance public access to the coast by maintaining access on State Route 1. Both alternatives will 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 will 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 will be part of the knoll where the southern abutment will be placed. It will not directly impact recreation areas in Limekiln State Park, but there will 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 three environmentally sensitive habitat areas within the project area, which include Smith's blue butterfly host plants (seacliff buckwheat), the perennial stream habitat of Limekiln Creek, and a sensitive natural community surrounding the stream habitat, Sitka willow thicket. There will be a total of 0.458 acre of temporary impacts on perennial stream and Sitka willow thicket areas during construction. However, there will 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.

The following text has been added since the release of the Draft Environmental Document. Impact area of buckwheat has not been calculated due to terrain limitations; however, it is anticipated that less than 100 individual plants will be affected by either project alternative. Surveys will be conducted to calculate impacts to buckwheat by area, and it is anticipated that the Coastal Commission may require a three-to-one replacement ratio by area.

Avoidance, Minimization, and/or Mitigation Measures

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

This paragraph has been updated since release of the Draft Environmental Document. The proposed project will 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 will require a temporary construction easement of 1.992 acres and no permanent acquisition.

Caltrans' Division of Right of Way and Land Surveys will 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 will 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 will 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 will 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 will 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 will 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.

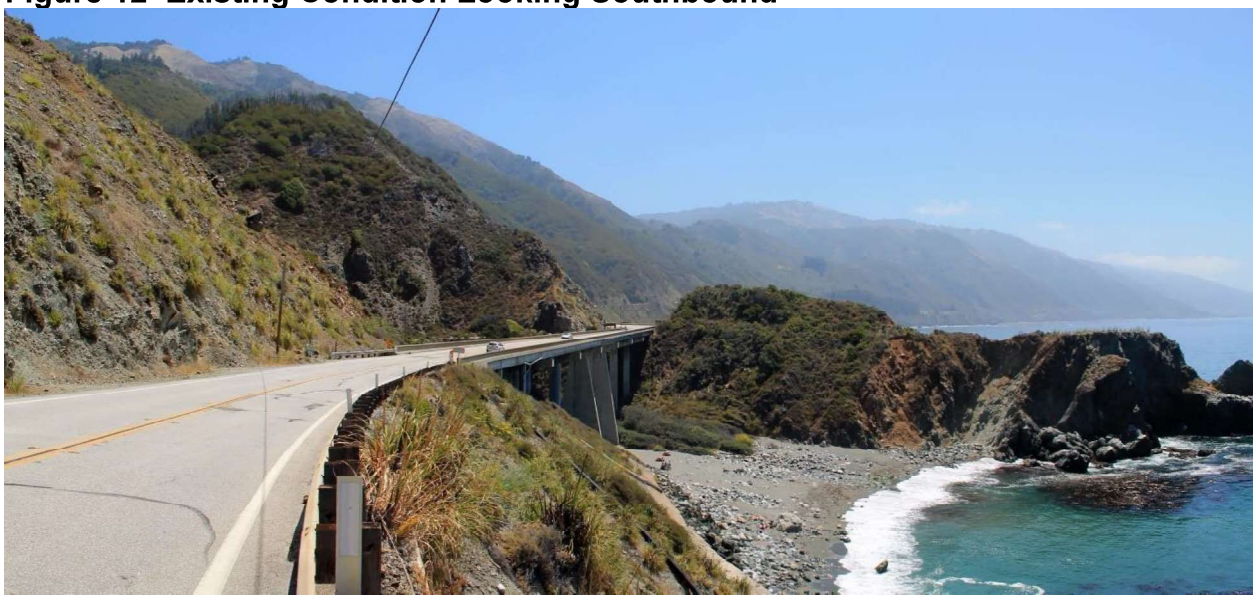
1. Vividness is the visual power or memorability of landscape features as they combine striking and distinctive visual patterns.

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 will 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.

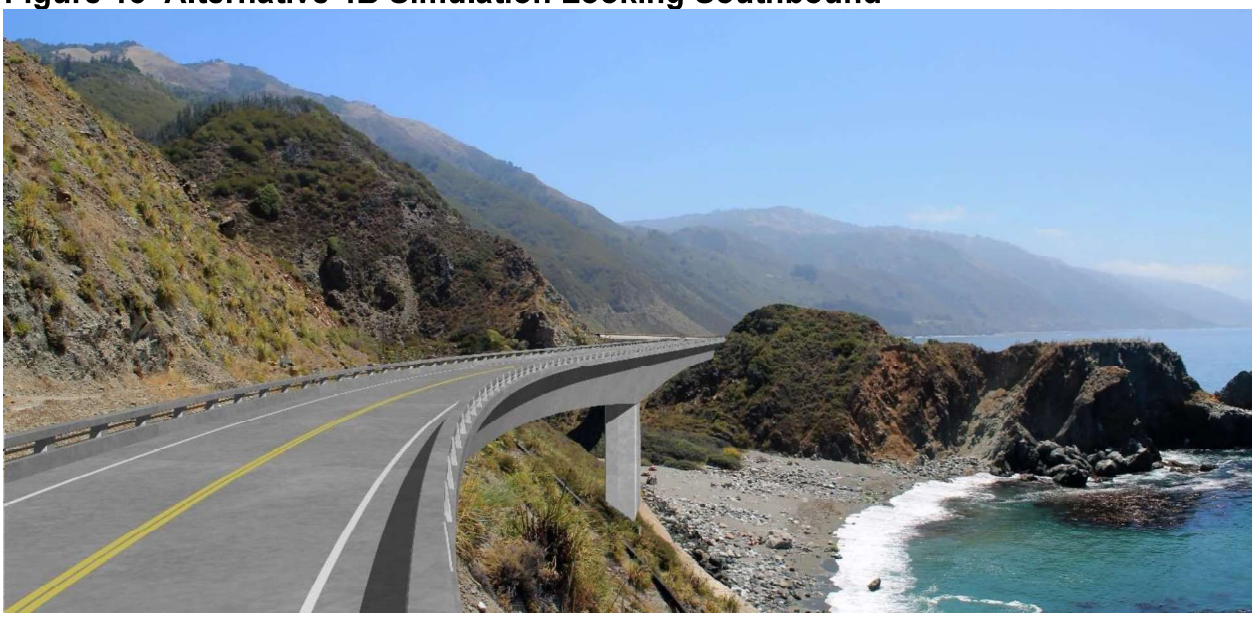
Observer Viewpoint 1-From State Route 1 Looking Southbound Near Limekiln Campground

Figure 12 Existing Condition Looking Southbound



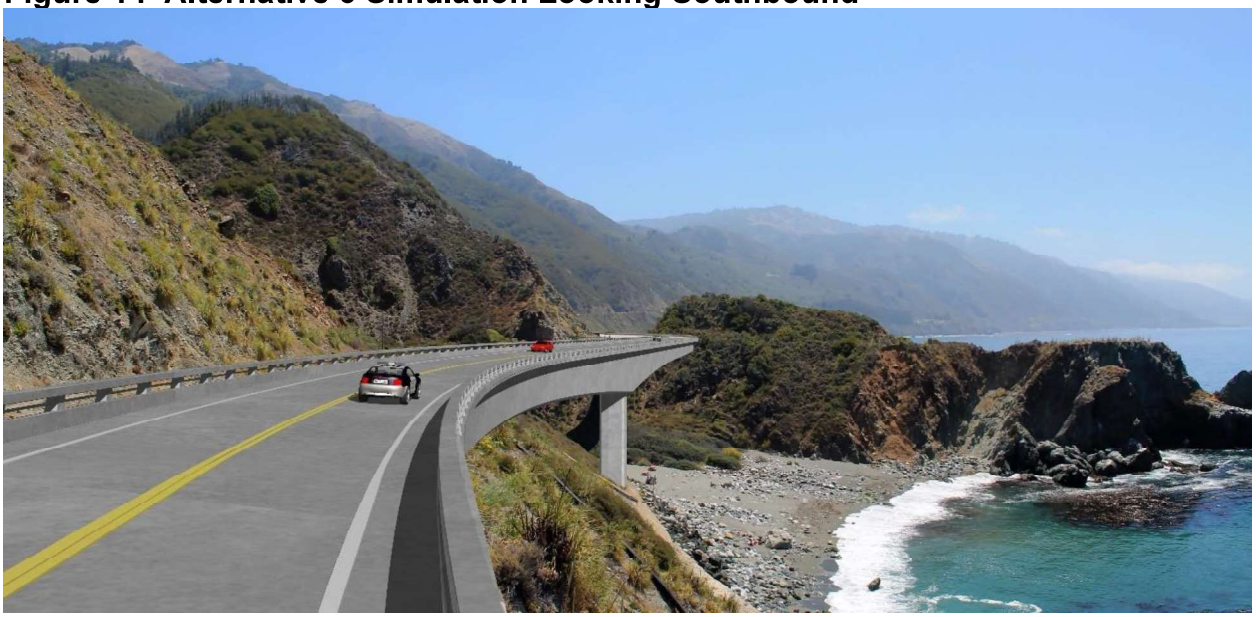
The existing view looking southbound from State Route 1 is considered high in visual quality because of the rocky outcropping, proximity to Limekiln Beach, and views of the Pacific Ocean and distant coastline. There is evidence of human influence due to the beach revetment, but the visual intactness 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 is 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 is 4.7, which would be a resource change reduction of 0.9.

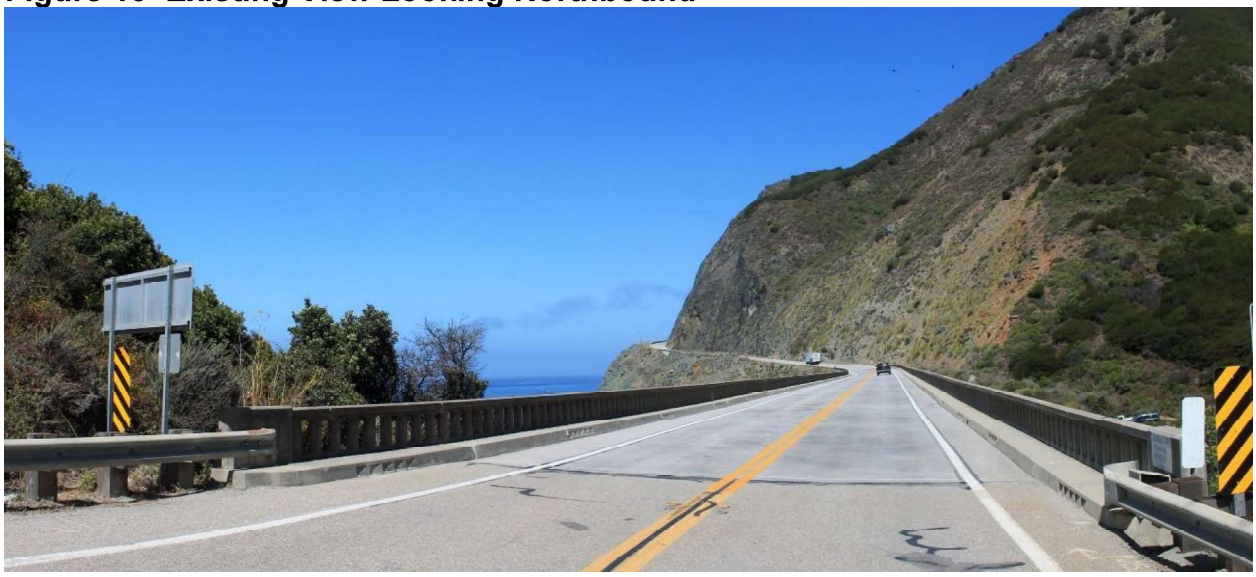
Figure 14 Alternative 6 Simulation Looking Southbound



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

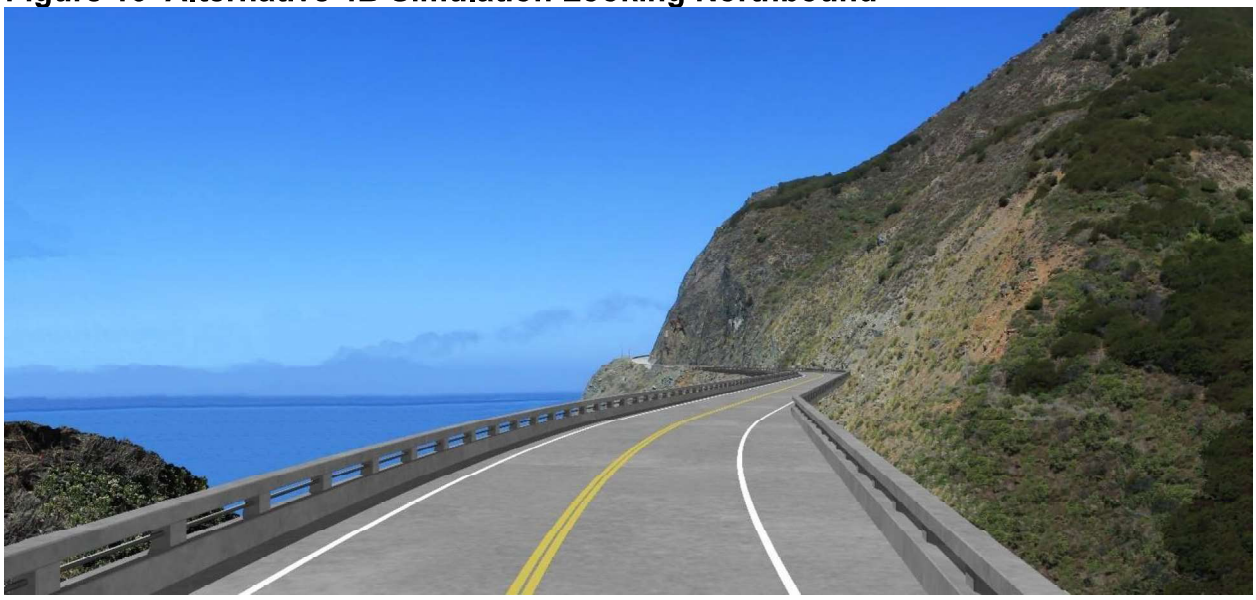
Observer Viewpoint 2-From State Route 1 Looking Northbound Near Limekiln Campground

Figure 15 Existing View Looking Northbound



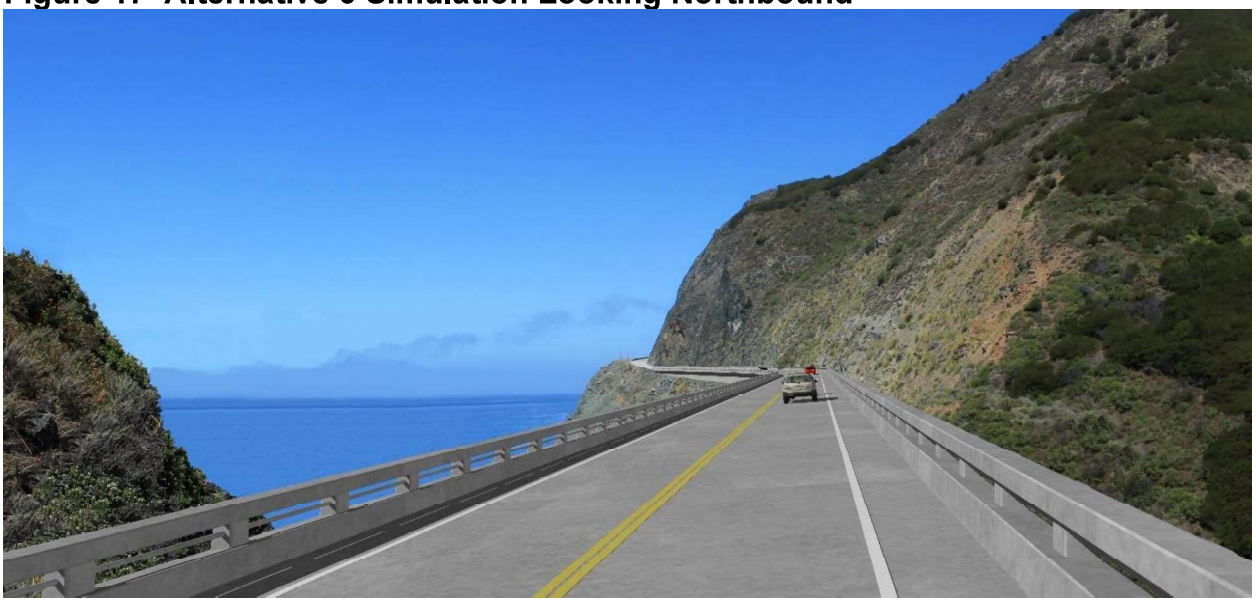
The existing view quality looking northbound from the southern abutment is somewhat compromised by the bridge and landslide to the north. The existing vividness rating is lower because of the close visibility of the bridge, slide, and landform scarring. This view is rated as 5.

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 is 4.6, which would be a resource change reduction of 0.4.

Figure 17 Alternative 6 Simulation Looking Northbound



At this location, the bridge will be realigned west, like Alternative 4B, but the placement of abutments will be different. The northern abutment will shift 80 feet northwest of the existing abutment, and the southern abutment will remain, resulting in a more linear alignment. The alignment west will create a more memorable view of the ocean, but the more linear alignment will have less of a connection to the surrounding landscape, slightly reducing intactness and unity. Just like Alternative 4B, the bridge rail will 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 is also 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 will also be 3.4, a reduction of 0.2.

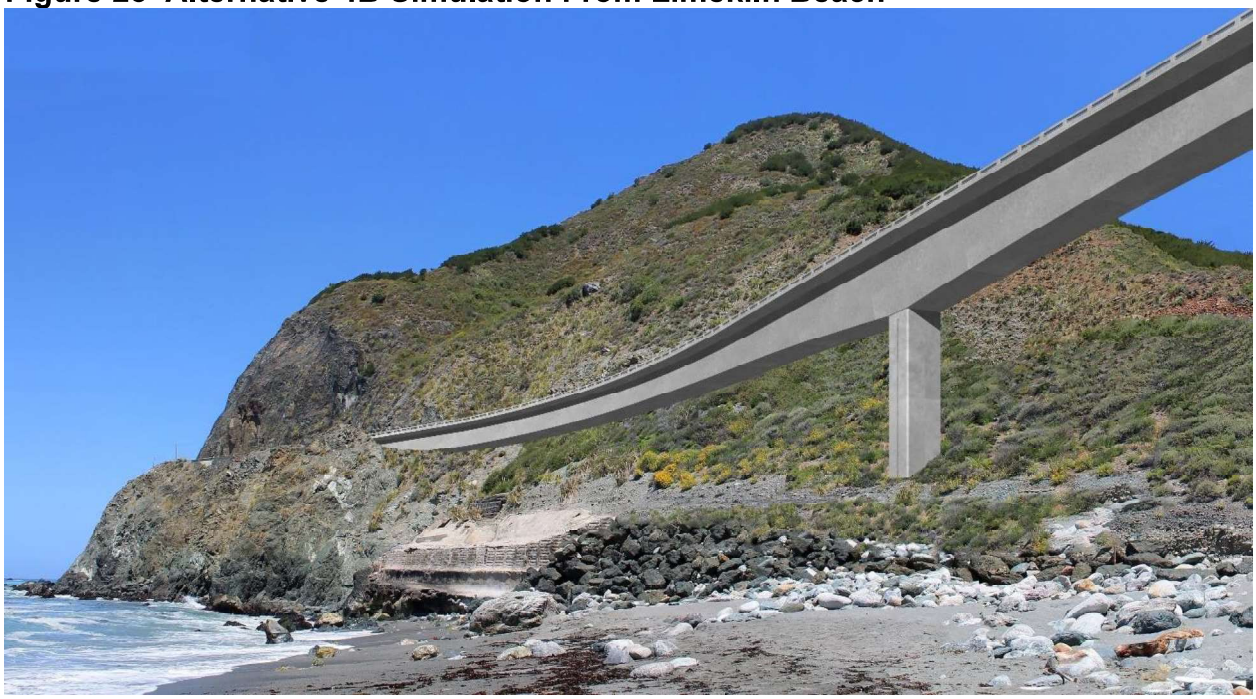
Observer Viewpoint 5-From Limekiln Beach Looking North

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 will be partially removed, increasing intactness and unity, but the alignment shift will cause shadows and a limited view, reducing memorability, intactness, and unity. The northern abutment will 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 will 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 will be visible within and near the project limits. Storage of construction materials, temporary K-rail, signage, orange cones, orange fencing, and other devices will be present. Workers will 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 will 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 will have larger impacts.

Cumulative Impacts

Both alternatives would result in a visual alteration of the project area. The highway traveler will experience Limekiln Bridge and Viaduct in conjunction with Pitkins Curve Bridge and Rain Rocks Rock Shed and Rain Rocks Sidehill Viaduct, which will likely feel like one continuous built element. The cumulative visual impact will increase the “man-made” presence in the area. The visual transition between the proposed bridge and its surroundings will 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 will 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 will 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

This paragraph has been updated since release of the Draft Environmental Document. 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. Additionally a Finding of Adverse Effect was approved in March 2024.

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 archaeological deposits within the study area. Test excavations by Hildebrant and Jones (1998) found archaeological 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 archaeological 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

This section has been updated since release of the Draft Environmental Document and only applies to the preferred alternative, Alternative 6.

One precontact site (MNT-1892) and one historic-era site (MNT-2452/H) will 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 will also be directly impacted. Both alternatives will 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 will impact the entire site and it is likely that the entire site deposit will be removed as a result of project activities.

Caltrans received concurrence from the State Historic Preservation Office that this site is eligible under Criterion D on July 8, 2021. There is a finding of adverse effect.

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

This paragraph has been updated since release of the Draft Environmental Document. No archeological artifacts or features are anticipated to be directly impacted.

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 have been impacted by Alternative 4B. This is discussed in more detail in Appendix A.

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

Carmel-San Simeon Highway Historic District

This section has been added since release of the Draft Environmental Document.

The parapet wall (Feature DM-343) will be impacted by both project alternatives. This parapet wall is one of 61 walls within the district that has diminished integrity. Impacting feature DM-343 will have no adverse effect to the district.

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 will likely demolish the remaining deposits. Site MNT-2452/H will 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.

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

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 will 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 will determine whether any additional features of the

doghole port are present in the intertidal waters off Limekiln Beach. Resource locations will 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 will 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 archaeological district record for the Rockland Lime and Lumber Company Historic Landscape District has been prepared and recommended for listing in the National Register. This will be compiled into a formal district nomination that will 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 will 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 will 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 will implement a program to ensure impacts on other archaeological resources will be avoided. This will 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 will 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 will not cause additional sedimentation in Limekiln Creek or the Pacific Ocean because the contractor will capture excess concrete and debris from demolition. However, rock slope protection and sea wall removal from the northern abutment will allow wave action to erode the newly exposed cliff face.

Dewatering may be necessary due to shallow groundwater. Dewatering activities will comply with the Caltrans Standard Specifications, and, if required, a separate dewatering permit will be obtained before the start of construction. A coffer dam (an enclosure where water is pumped out) or creek diversion will 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 will be greater than 10,000 square feet, as shown above in Table 5. Therefore, the project will be required to install treatment Best Management Practices to treat stormwater runoff from the newly created impervious surface. These treatment practices will collect stormwater runoff either in the

form of sheet flow or concentrated flow. This will 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 will 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 will 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 serpentinized 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 will 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 will likely be required at support locations for both alternatives. A Preliminary Geotechnical Report and Foundation Reports will be prepared. These reports will be based on subsurface investigations and laboratory soil tests. Geologic data, as-built plans, and bridge inspection records will 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 will 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 will be no difference in long-term air emissions, with or without the proposed project.

The project will 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 will 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 will 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 will be windblown dust generated during demolition, hauling, and various other activities. The impacts of these activities will vary each day as construction progresses.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans's Standard Specifications Section 14-9.02 (Air Pollution Control) will be used to minimize dust emissions from the project. The contractor will be responsible for complying with all local air pollution control rules, regulations, ordinances, and statutes. Additionally, the project-level Stormwater Pollution Prevention Plan will 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 will 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 will have a noise impact. If a proposed project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless those measures are not feasible. The rest of this section will focus on the NEPA/Title 23 Part 772 of the Code of Federal Regulations (23 CFR 772) noise analysis; please see Chapter 3 of this document for further information on noise analysis under CEQA.

National Environmental Policy Act and 23 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 will 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.

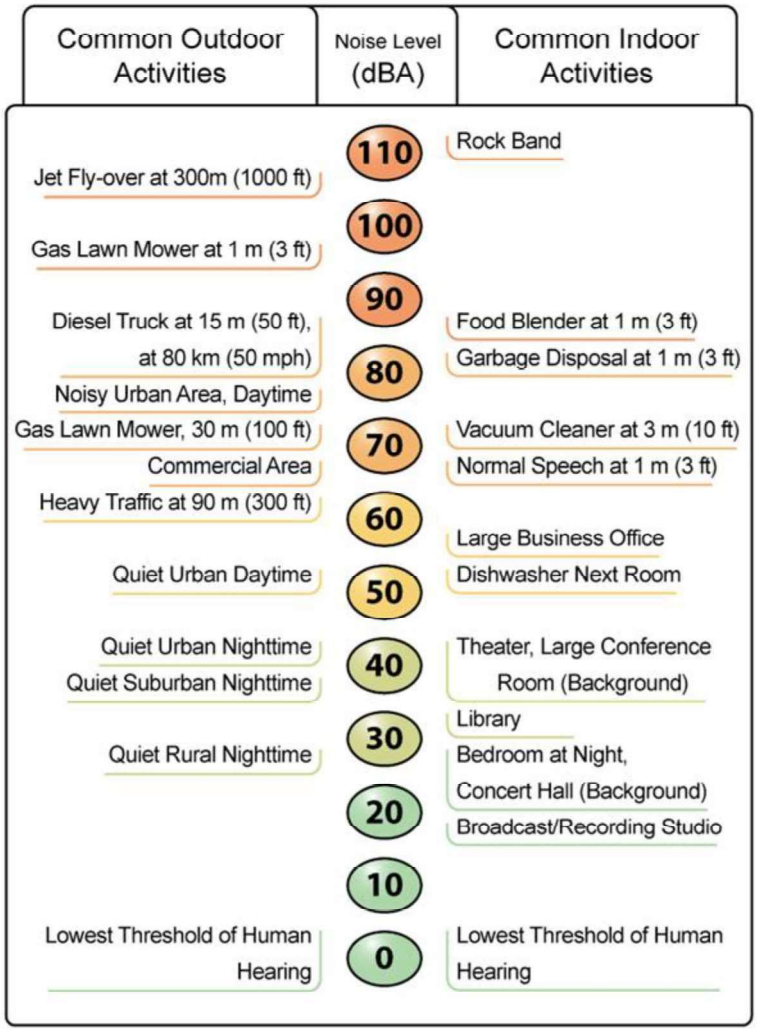
There are undeveloped lands permitted for Activity Categories B and C in Table 6 below.

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



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 will 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 will be the same as Alternative 6, are below the threshold that will 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 will 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 will move traffic towards the campground, increasing noise levels by approximately 3 decibels. This

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

The amount of construction noise will 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 will be required, but it is anticipated that it will not. The campground will be closed during construction. If night work occurs, the campground will not be affected by nighttime construction noise.

Avoidance, Minimization, and/or Abatement Measures

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

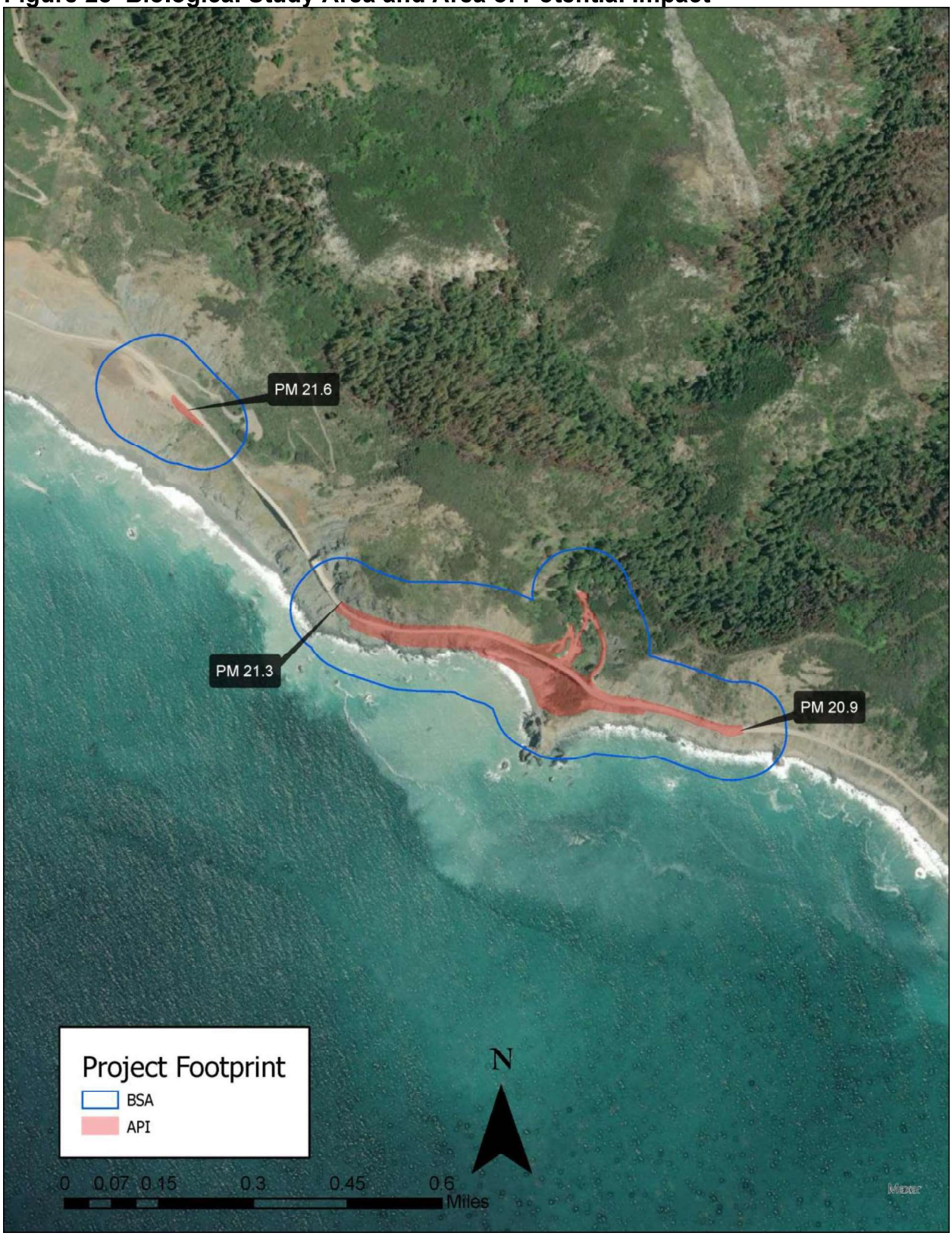
A Natural Environment Study was completed in July 2023, updated in May 2024, and is the main resource for this section.

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*).

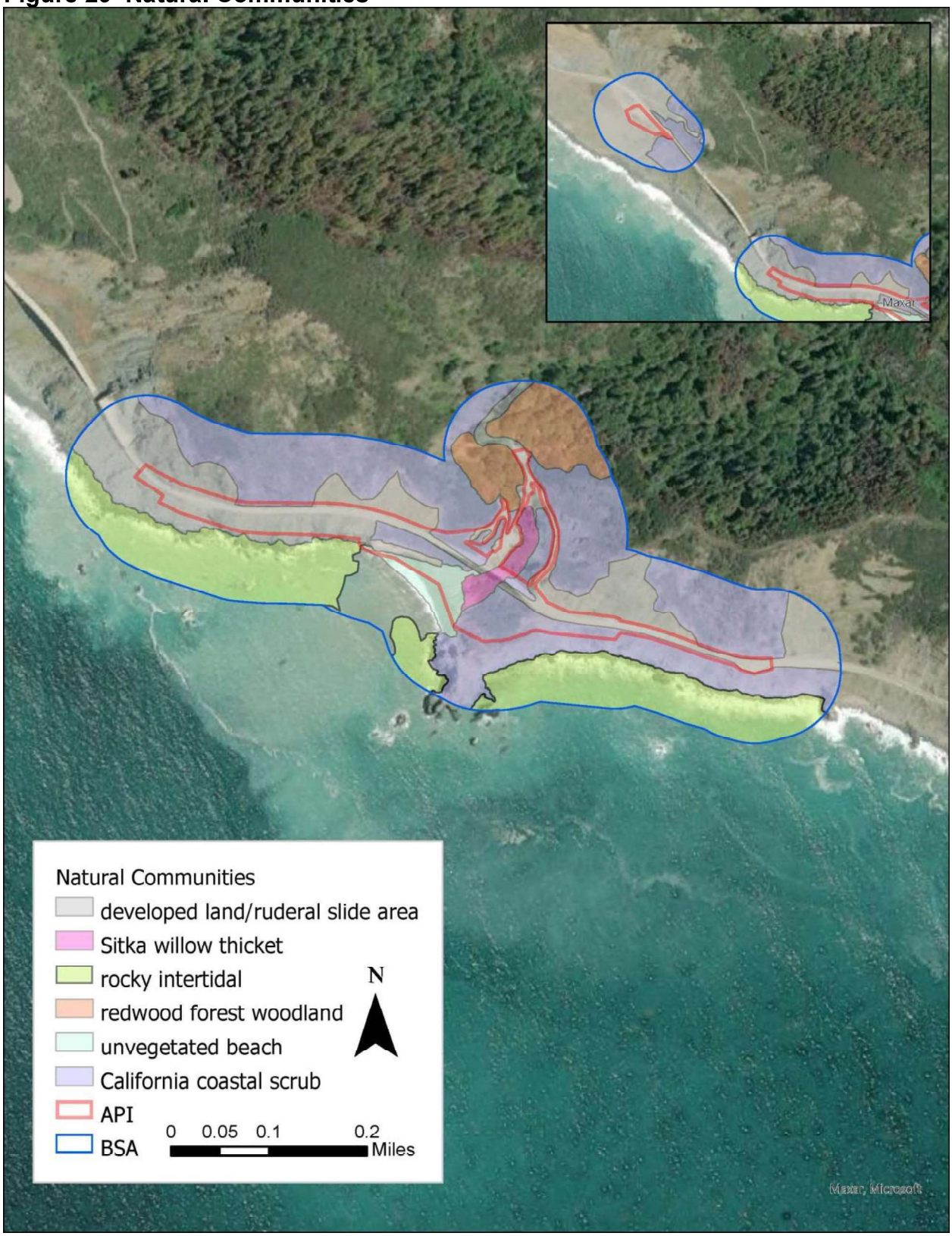
There are two types of coastal zone wetlands, known as environmentally sensitive habitat areas, within the biological study area. The first is the perennial stream habitat of Limekiln Creek. The second is the sensitive natural community mentioned above, the Sitka willow thicket.

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 following text has been added since release of the Draft Environmental Document. Small areas of coastal scrub community are dominated by toyon (*Heteromeles arbutifolia*) intermixed with blueblossom ceanothus (*Ceanothus thyrsiflorus*) and sage (*Artemesia californica* and *Salvia mellifera*), which is an alliance considered sensitive by California Department of Fish and Wildlife. These areas will not be impacted by construction. None of the other vegetation alliances or associations that comprise the coastal scrub habitat are considered sensitive (California Department of Fish and Wildlife Natural Community List, 2023).

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 arbora*), 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 will 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 will be removed as part of the project. The new bridge will 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 will include tree and vegetation removal, grading, compaction by construction equipment, and foot traffic. A work trestle will be constructed to reduce impacts on these natural communities to the extent feasible.

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

Temporary High Visibility Fencing will be installed along the disturbance area limits to minimize impacts on habitat outside the area of potential impacts. All temporary work areas will 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 will be a net increase. Considering the project area is not a high-traffic wildlife corridor and there will 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 will also protect natural communities.

The following measure has been added since release of the Draft Environmental Document.

- INW-1: Non-native noxious plant species removed as part of project activities will not be stored or stockpiled in areas dominated by native plants. Noxious plants will be bagged or contained and disposed of appropriately to prevent propagation.

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, updated in May 2024, 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.

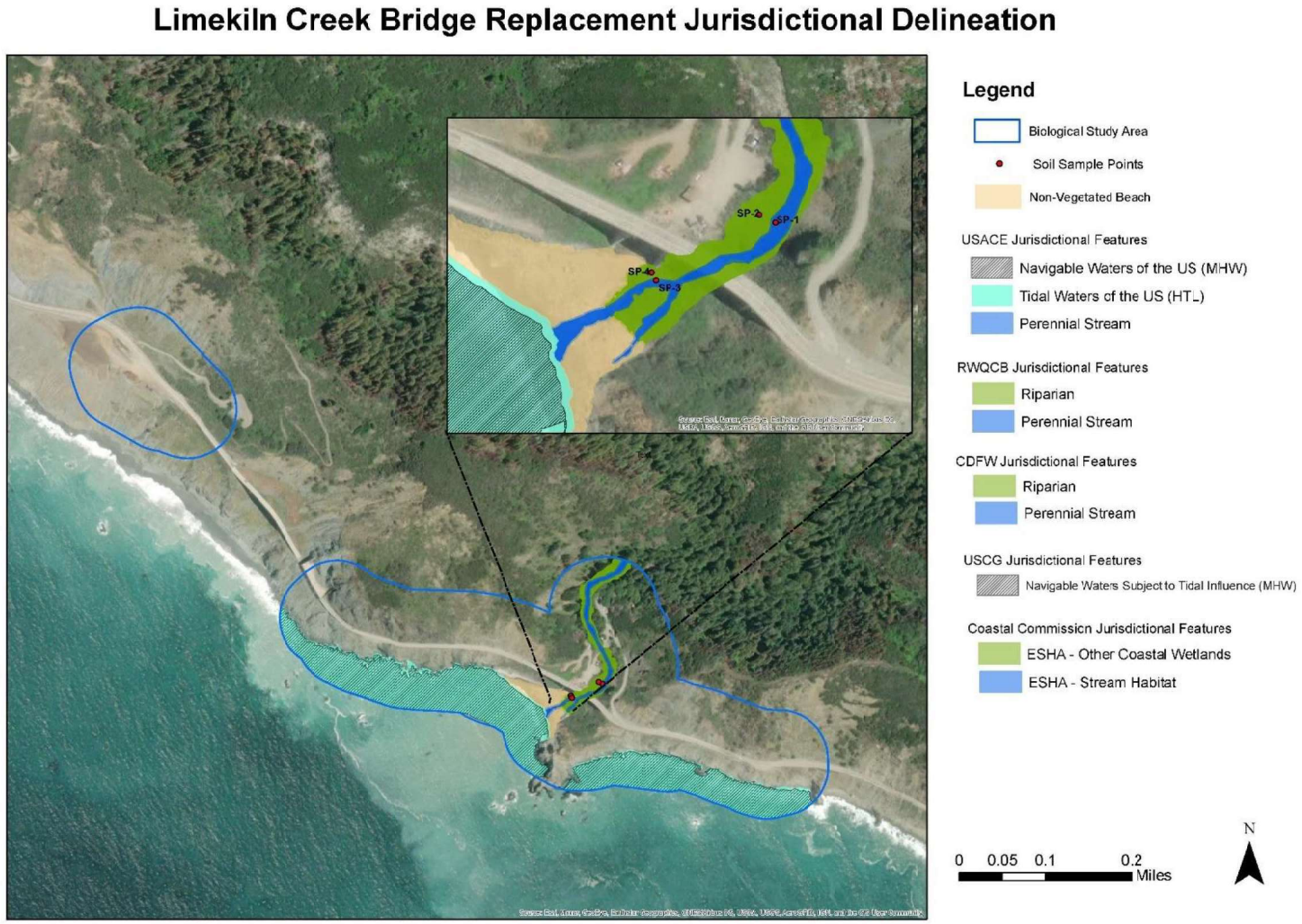
All waters of the United States subject to Clean Water Act Section 404 are also subject to Section 201 and are, therefore, waters of the state regulated by the Regional Water Quality Control Board. The riparian zone and streambanks, discussed below, are also treated as waters of the state.

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



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 will remove the existing bridge pier from Limekiln Creek and the associated riparian area. Temporary impacts on jurisdictional areas will be required for construction access; however, all proposed permanent bridge structures will span jurisdictional areas.

The table below summarizes anticipated impacts on aquatic resources, which are the same for both Alternative 4B and 6. There will 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 will 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 will 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 will 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 will 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 will 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 will result in temporary shading of the stream and riparian areas directly underneath. Wooden platforms and/or a debris containment system will ensure that no debris is dropped into the creek. The trestle will be removed when construction and demolition on

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

Work within jurisdictional streams and riparian areas will occur during the dry season when Limekiln Creek will be flowing at its lowest volume. The work trestle will 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 will 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 will be removed, to the extent that is safe. Heavy equipment, including excavators and/or loaders, will be required below the high tide line. Work on the beach will be restricted to negative tide events to avoid working in the ocean. It is anticipated that it will 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 will require work below the mean high-water mark.

Alternative 4B

For Alternative 4B, a stream diversion will 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 will ensure that no debris from the pier is dropped into creek waters. Once the pier is removed, the creek bed will be restored, and the diversion will 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 will ensure that no debris from the pier is dropped into the creek waters, and no work will occur within the water. Once the pier is in place, the creek bed will be restored, and the diversion will be deconstructed. After the temporary bridge is no longer required, the creek will be diverted again, the pier will be removed, the creek bed will be restored, and the diversion will 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 will have a long-term net benefit to the watershed due to the removal of piers within and adjacent to Limekiln Creek and, therefore, will not contribute to the cumulative impact on aquatic resources in this area.

Avoidance, Minimization, and/or Mitigation Measures

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

- JUR-1: Subject to change depending on permit coordination, riparian habitat will be replaced at an estimated four-to-one ratio. Temporary impacts are estimated to be replaced at a one-to-one ratio. 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 (this measure has been updated since release of the Draft Environmental Document): 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. A qualified biologist shall inspect fencing during or after installation to ensure appropriate placement and adjustments will be made as needed prior to construction.
- 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 (this measure has been updated since release of the Draft Environmental Document): 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). A designated representative will conduct inspections of containment each workday and as otherwise specified in the project Stormwater Pollution Prevention Plan.

- 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, updated in May 2024, 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 will 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 will 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 will not have a direct or indirect impact on open ocean waters (3 or more miles from shore), it will 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 will 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 will occur within oceanic waters. All access and work on the beach, including sea and crib wall modification and rock slope protection removal, will occur at low tide and on dry land; therefore, there will 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 will 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 will decrease water quality. Limekiln Beach is within a small cove, and it is likely that sedimentation will 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 will 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 will 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 will 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 will be a net benefit to the coastline because it will re-naturalize the area and increase long-term habitat quality.

Temporary Impacts

Within the Monterey Bay National Marine Sanctuary, there will be 0.030 acre of temporary impacts because of work below the high tide line that will be required to remove rock slope protection and portions of the existing sea and crib walls. Heavy equipment will be required below the high tide line for this work. Work on the beach will be restricted to low tides to avoid working in the ocean. It is anticipated that it will 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 will 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 will 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 will reduce indirect impacts on groundfish, essential fish habitat, and Monterey Bay National Marine Sanctuary.

The proposed project will 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, will not add to the cumulative impact on Pacific Coast groundfish essential fish habitat and Monterey Bay National Marine Sanctuary. This project will partially re-naturalize the coastline near

Limekiln State Park, which will 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) will 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, updated in May 2024, 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 will 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 will 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 ruderally developed areas and on the existing bridge.

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

The western pond turtle (*Actinemys marmorata*) was proposed threatened under the Federal Endangered Species Act on October 3, 2023. Pond turtle 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 will 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 will be highly unlikely that any of the species will be close enough to use the upland habitat. Additionally, the high vehicle traffic, hardpan, paved roads, noise, and disturbance in the campground will 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. Though habitat is suboptimal, the species may occur in the project area due to presence of woodland, perennial streams, and friable soils.

Caltrans anticipates the proposed project, per the Federal Endangered Species Act, is likely to adversely affect southwestern pond turtle. Caltrans will conduct conference or consultation (whichever is applicable) with U.S. Fish and Wildlife Service prior to construction.

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 runcates*), 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 will 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 will nest within the project area during project activities, but suitable foraging habitat may be impacted. Any blooming plants that will be removed will first be inspected by a qualified biologist to ensure that no bumblebees are on or near the plant. Because Crotch's bumblebees will 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 will be avoided to the extent feasible.

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

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 will 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 will not impact areas where all elements necessary for abalone occur.

Construction activities will require large equipment, such as excavators, to access the beach lower than the mean high-water mark. All work and access will be timed to occur only during negative tides, and no work or equipment will 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 will initiate consultation with the National Marine Fisheries Service after finalizing the environmental document.

South-Central California Steelhead Critical Habitat

The project will 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 will be restored, and the diversion will be deconstructed. Then, there will 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 will 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 will ensure that no debris from the pier is dropped into the creek waters, and no work will occur within the water. Once the pier is in place, the creek bed will be restored, and the diversion will be deconstructed. After the temporary bridge is no longer required, the creek will be diverted again, the pier will be removed, the creek bed will be restored, and the diversion will 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 will 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 will follow Best Management Practices. This will 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 will 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 will depend on temporary bridge pier placement for Alternative 6, and potential access road improvement needs for both alternatives.

These impacts will 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 will 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 will 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 will 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 will 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 will primarily be used for access (state park roads for public access to campgrounds) or for minor highway realignment; therefore, impacts on the host plants will 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 will 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 will 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, will 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 will be relocated to suitable habitat. Mortality, injury, or stress may occur because of handling, containment, or transportation. Amphibian handling best practices will 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 will 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 will 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 will have no direct or indirect impacts on suitable aquatic breeding habitat. Any individuals temporarily displaced from the biological study area will not need to travel far to find suitable upland habitat and will 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 will occur due to temporary construction access in riparian areas (Sitka willow thicket) and California coastal scrub for bridge removal. Direct impacts on nesting birds will be avoided by removing vegetation outside of the nesting bird season, conducting preconstruction nesting bird surveys, and avoiding any nests. Bird exclusion will 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 will temporarily reduce the availability of nesting and roosting habitat.

Because no suitable condor nesting habitat exists in the biological study area, project activities will 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 will 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 will be used to avoid impacts on condors and other nesting birds.

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

The proposed activities will not directly harm California condor or the least Bell's vireo; therefore, per California Endangered Species Act, there will 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 will 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 will be implemented to avoid any potential impacts.

Caltrans anticipates the proposed project, per the Federal Endangered Species Act, is likely to adversely affect Western Pond Turtle.

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 will 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 will be required to remove rock slope protection and portions of the existing sea and crib walls. Work on the beach will be restricted to negative tide events to avoid working in the ocean. It is anticipated that it will 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 will 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 will primarily be under water.

H-piles will likely be required for the work trestle and falsework installation. These piles will either be vibrated or driven into place. No construction activities will occur within ocean waters. Considering all work will be restricted to dry ground, there will 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 will 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 will 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 will initiate informal consultation with the United States Fish and Wildlife Service after finalizing the environmental document. There will 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
- Western pond turtle

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, CRLF-1 through CRLF-28, SAS-1 through SAS-2, and SBB-1 through SBB-16, the project will result in no adverse cumulative impacts on the Crotch's bumblebee, California red-legged frogs, western pond turtle and Smith's blue butterfly. No direct or indirect cumulative impacts are anticipated for marine mammals, 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 will 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 will 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 will negatively impact any steelhead using that section of Limekiln Creek for the duration of the diversion. The avoidance measures SCCC-1 through SCCC-5 will minimize impacts on steelhead and its critical habitat during construction.

The proposed project will 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, will not add to the cumulative impact on black abalone and associated critical habitat, South-Central California Coast steelhead, and associated critical habitat. This project will partially re-naturalize the coastline near Limekiln State Park, which will 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 will 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 (this measure has been updated since release of the Draft Environmental Document): Surveys will occur prior to ground disturbance for nesting bumblebees. Surveys will be performed by a qualified biologist and will follow California Department of Fish and Wildlife and Xerces Society guidance. 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 (this measure has been updated since release of the Draft Environmental Document): A Worker Environmental Awareness Training will be conducted by a qualified biologist for all construction personnel prior to the start of any ground disturbance or vegetation removal to discuss Crotch's bumblebee identification, ecology, habitat, their legal/protected status, proximity to the project site, avoidance and minimization measures, and the implications of violating the California Endangered Species Act.
- CBB-3 (this measure has been updated since release of the Draft Environmental Document): Any blooming flowering plants that are scoped for removal will 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 will not proceed until the bumblebee leaves the area of its own accord.
- CBB-4 (this measure has been updated since release of the Draft Environmental Document): 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. A qualified biologist shall inspect fencing during or after installation to ensure appropriate placement and adjustments will be made as needed prior to construction.
- CBB-5 (this measure has been updated since release of the Draft Environmental Document): 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 using native flowering food source plant species, woody debris placement, and/or recontouring, as needed, to restore affected habitat type.

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.
- BA-11 (this measure has been added since release of the Draft Environmental Document): Any unconsolidated material that results from project activities will not be permanently stored within the project area. Temporary storage of unconsolidated material during construction will incorporate Best Management Practices to prevent run-off and water sedimentation. Excess material will be disposed of in an offsite area where there will be no transport or sedimentation into sensitive aquatic resources, including black abalone habitat. A qualified biologist will survey and approve of all proposed disposal areas.

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 (this measure has been updated since release of the Draft Environmental Document): 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. The plan will require that a qualified biologist conduct all fish capture, handling, exclusion, and relocation activities. The plan will also require that industry best practices are used including equipment decontamination and ensuring that protected species are kept out of the water for the least amount of time possible. The qualified biologist will continuously monitor in-water activities (e.g., placement of cofferdams, dewatering of isolated areas) for the purpose of removing and relocating any protected species that were not detected or could not be removed and relocated prior to construction.
- 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 and Caltrans will coordinate with NMFS to avoid and/or minimize hydroacoustic impacts.
- 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 will 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 will 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 will 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 will 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 will be minimal. For example, work that will affect large pools that may support breeding will 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 will 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 will 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 will 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 will 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 in coordination with regulatory agencies (California Department of Fish and Wildlife, Coastal Commission, etc.) 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, in coordination with regulatory agencies 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 (this measure has been updated since release of the Draft Environmental Document): 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. A qualified biologist shall inspect fencing

during or after installation to ensure appropriate placement and adjustments will be made as needed prior to construction.

- 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 (this measure has been updated since release of the Draft Environmental Document): Preconstruction surveys will be conducted by a qualified biologist for aquatic and semi-aquatic species before work in the

creek or riparian areas occurs. If species are encountered, they will be relocated to appropriate habitat as close to their original location, but outside and protected from construction activities prior to work in the area.

- SAS-2 (this measure has been updated since release of the Draft Environmental Document): 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 will 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 will 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 µPa (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 will be limited to the minimum necessary to complete the project. A preconstruction survey will 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 will result in an increase in the roadway for the bridge and viaducts, bridge girder height, and a

realignment of structures. This will impact the existing views. Though it will 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 will be determined with input from the local community. Aesthetic treatments may reduce adverse impacts on community character, though impacts on visual quality and character will still occur.

The wider bridge, taller girder, and realignment will result in an incremental loss of visual quality and will 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 will 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 will 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 will 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 will 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 will have no impact relating to the loss or conversion of forest land.

The project site will 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 will 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 will have no impact on traffic volumes and will generate a less than significant amount of air pollutants during the limited construction time. Therefore, the proposed project will not conflict with the current Monterey Bay Air Resources District Air Quality Management Plan and will 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 will not increase operational emissions of particulate matter or any other air pollutant. There will be no change postconstruction. During construction, there will 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 will be closed to the public for the entire duration of construction. Motorists driving through the construction zone will not be allowed to linger and will, 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 and updated May 2024. 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, California red-legged frog, and western pond turtle. 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 (this measure has been updated since release of the Draft Environmental Document): Surveys will occur prior to ground disturbance for nesting bumblebees. Surveys will be performed by a qualified biologist and will follow California Department of Fish and Wildlife and Xerces Society guidance. 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 (this measure has been updated since release of the Draft Environmental Document): A Worker Environmental Awareness Training will be conducted by a qualified biologist for all construction personnel prior to the start of any ground disturbance or vegetation removal to discuss Crotch's bumblebee identification, ecology, habitat, their legal/protected status, proximity to the project site, avoidance and minimization measures, and the implications of violating the California Endangered Species Act.
- CBB-3 (this measure has been updated since release of the Draft Environmental Document): Any blooming flowering plants that are scoped for removal will 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 will not proceed until the bumblebee leaves the area of its own accord.
- CBB-4 (this measure has been updated since release of the Draft Environmental Document): 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. A qualified biologist shall inspect fencing during or after installation to ensure

appropriate placement and adjustments will be made as needed prior to construction.

- CBB-5 (this measure has been updated since release of the Draft Environmental Document): 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 using native flowering food source plant species, woody debris placement, and/or recontouring, as needed, to restore affected habitat type.
- 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.
- BA-11 (this measure has been added since release of the Draft Environmental Document): Any unconsolidated material that results from project activities will not be permanently stored within the project area. Temporary storage of unconsolidated material during construction will incorporate Best Management Practices to prevent run-off and water sedimentation. Excess material will be disposed of in an offsite area where there will be no transport or sedimentation into sensitive aquatic resources, including black abalone habitat. A qualified biologist will survey and approve of all proposed disposal areas.
- SCCC-1: Prior to construction, Caltrans will complete a Federal Endangered Species Act consultation with the National Marine Fisheries Service.
- SCCC-2 (this measure has been updated since release of the Draft Environmental Document): An aquatic species exclusion/relocation plan will be prepared and approved by the National Marine Fisheries Service and implemented before a diversion is installed. The plan will require that a qualified biologist conduct all fish capture, handling, exclusion, and relocation activities. The plan will also require that industry best practices are used including equipment decontamination and ensuring that protected species are kept out of the water for the least amount of time possible. The qualified biologist will continuously monitor in-water activities (e.g., placement of cofferdams, dewatering of isolated areas) for the purpose of removing and relocating any protected species that were not detected or could not be removed and relocated prior to construction.
- SCCC-3: No in-water pile driving will occur as part of project activities.
- SCCC-4 (this measure has been updated since release of the Draft Environmental Document): 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 and Caltrans will coordinate with NMFS to avoid and/or minimize hydroacoustic impacts.
- 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 will 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 will 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 will 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 will 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 will be minimal. For example, work that will affect large pools that may support breeding will 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 will 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 will 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 will 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 will 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 will include access and work areas needed to construct the new bridge and viaduct and remove the existing bridge. The associated temporary impacts will include tree and vegetation removal, grading, compaction by construction equipment, and foot traffic.

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

Temporary high-visibility fencing will 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 will 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 will 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 will 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) will be unavoidable.

A work trestle will 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 will ensure that no debris is dropped into the creek. The work trestle will be used year-round, but work within jurisdictional streams and riparian areas will occur only during the dry season when Limekiln Creek will be flowing at its lowest velocity and volume.

Additionally, under either build alternative, the use of heavy equipment, including excavators and/or loaders, will 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 will require 5 to 10 days of activity below the mean high-water mark. Work on the beach will 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: Subject to change depending on permit coordination, riparian habitat will be replaced at an estimated four-to-one ratio. Temporary impacts are estimated to be replaced at a one-to-one ratio. 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 (this measure has been updated since release of the Draft Environmental Document): 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. A qualified biologist shall inspect fencing during or after installation to ensure appropriate placement and adjustments will be made as needed prior to construction.
- 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 (this measure has been updated since release of the Draft Environmental Document): 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). A designated representative will conduct inspections of containment each workday and as otherwise specified in the project Stormwater Pollution Prevention Plan.
- 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 will span jurisdictional areas, and there will 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 will be temporary and will be reduced by the implementation of the measures specified in Section 2.4 of this document. For instance, Smith's blue butterfly will 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 will only occur during the dry season (June 1 to October 31). Upon completion of construction, the disturbed portion of the creek channel will be fully restored to a natural condition. Because of the bridge pier removal, there will 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 will 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 will alter the integrity of the Rockland Landing site by encroaching on the area of the historic doghole port. This will 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 archaeological site (MNT-1892). Demolition of the existing bridge will impact the entire site. It is likely that the entire site deposit will be removed as a result of project activities.

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

- ARC-1: Marine survey of the intertidal related to the Rockland Landing Doghole Port. This will determine whether any additional features of the doghole port are present in the intertidal waters off Limekiln Beach. Resource locations will 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 will 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 archaeological district record for the Rockland Lime and Lumber Company Historic Landscape District has been prepared and recommended for listing on the National Register. This will be compiled into a formal district nomination that will 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 will 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 will 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 will be incorporated, there will still be permanent impacts because of bridge demolition and realignment. These impacts will 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 will be incorporated into the project wherever feasible.

The proposed project is not capacity increasing and therefore will not increase energy usage over the long term (operational phase). Strategies implemented to reduce greenhouse gas emissions during the project's

construction phase will 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 will be considered less than significant.

b) No Impact

The proposed project will 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 will 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 will 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 will 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 will 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 will be required at the northern access road, and a temporary 200-foot retaining wall will 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 will also result in soil erosion in an attempt to restore the slope to its natural condition. Native seed and erosion control will 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, serpentinized 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 will be collected during the subsurface investigation, which will further help determine and avoid unstable geologic units. This will 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 will 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 will 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 will not increase operational roadway capacity, it will not be expected to result in any new or additional greenhouse gas emissions upon completion of construction. Activities during the project construction phase will 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 will 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 will 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 will be demolished. These materials will be handled in accordance with Caltrans Standard Special Provisions. Any hazardous materials used on the site will be handled appropriately as per Standard Provisions and Best Management Practices and will 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, will be handled in accordance with Caltrans Standard Special Provisions, and any hazardous materials used during construction and operation will 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 will 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 will

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 will be no impact from the proposed project pertaining to airports.

f, g) Less Than Significant Impact

A Traffic Management Plan will be implemented during project construction and the highway will remain open and passable during construction. Alternative 4B would maintain traffic on the existing bridge. Alternative 6 will 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 will 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 will 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 will 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 will not result in substantial degradation of water quality in either the short term or the long term. Best Management Practices will 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 will collect stormwater runoff either in the form of sheet flow or concentrated flow. This will allow infiltration and/or settlement of the stormwater runoff before flowing into the receiving water body. Thus, the project will 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 will further protect water quality.

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

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

The proposed project will result in an estimated 3.647 acres for Alternative 4B and 3.458 acres for Alternative 6 of disturbed soil area. However, the project will 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 will 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 will not adversely affect the Limekiln Creek watershed and the new bridge piers will 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 will be greater than 10,000 square feet. Therefore, the project will be required to install treatment Best Management Practices to treat stormwater runoff from the newly created impervious surface. These treatment practices will collect stormwater runoff either in the form of sheet flow or concentrated flow. This will 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 will 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 will 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 will require work to be completed in the channel of Limekiln Creek for up to 3 years, necessitating creek diversion, this work will 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 will be removed from the channel. Higher creek flows resulting from winter storms will 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 will 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 will be timed during a low tide and is not anticipated to release pollutants due to inundation.

e) Less Than Significant Impact

The proposed project will not conflict with or obstruct any water quality or groundwater management plan. The project will 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 will 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 will replace an existing structure and not divide an established community. There will be no impact regarding this topic.

Both alternatives will 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 will 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 will have no impact on any such resources.

There are no known locally important mineral resources in the project vicinity. The project will 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 will be the same, 57.6, and the noise level for Alternative 4B would be reduced to 56.4. There will be a temporary increase in noise during construction, but Limekiln State Park will be closed for the duration of construction. Therefore, the impact of project-related noise will 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 will 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 will be included:

- SCCC-1: Prior to construction, Caltrans will complete a Federal Endangered Species Act consultation with the National Marine Fisheries Service.
- SCCC-2 (this measure has been updated since release of the Draft Environmental Document): An aquatic species exclusion/relocation plan will be prepared and approved by the National Marine Fisheries Service and implemented before a diversion is installed. The plan will require that a qualified biologist conduct all fish capture, handling, exclusion, and relocation activities. The plan will also require that industry best practices are used including equipment decontamination and ensuring that protected species are kept out of the water for the least amount of time possible. The qualified biologist will continuously monitor in-water activities (e.g., placement of cofferdams, dewatering of isolated areas) for the purpose of removing and relocating any protected species that were not detected or could not be removed and relocated prior to construction.
- SCCC-3: No in-water pile driving will occur as part of project activities.

- SCCC-4 (this measure has been updated since release of the Draft Environmental Document): 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 and Caltrans will coordinate with NMFS to avoid and/or minimize hydroacoustic impacts.
- 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 will 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 will 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 will 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 µPa (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 will 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 will replace an existing structure, will not increase roadway capacity, and will not induce population growth in the project area. The project will have no impact pertaining to growth inducement.

The project will not displace any population or housing. There will 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 will not increase demand for fire or police protection services, schools, parks, or other public facilities. There will 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 will replace an existing bridge and will not add capacity that will increase the use of existing parks or recreational facilities. There will 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 will 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 will not conflict with any program, plan, ordinance, or policy addressing the circulation system. There will be no impact.

b) Less Than Significant Impact

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

c) No Impact

The project will meet State and federal highway standards. It will not substantially increase any hazards due to design features or incompatible uses. Therefore, there will 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 will be maintained. A Traffic Management Plan will be implemented to maintain traffic flow during this period. The public will 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 will be less than significant.

3.2.18 Tribal Cultural Resources

Will 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 will 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 will 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 will 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 will be included:

- ARC-1: Marine survey of the intertidal related to the Rockland Landing Doghole Port. This will determine whether any additional features of the doghole port are present in the intertidal waters off Limekiln Beach. Resource locations will 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 will 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 archaeological 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 will be compiled into a formal district nomination that will 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 will 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 will 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 will be incorporated, there will still be permanent impacts because of bridge demolition and realignment. These impacts will 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 will require the relocation of a telecommunications line. It is anticipated that the line could be moved underground during construction. The proposed project will not impact any other utilities. This impact will be considered less than significant.

b, c) No Impact

The project is to replace a deteriorating highway bridge and adjacent roadway sections. There will 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 will 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 will be solid waste as a result of project construction and existing bridge demolition. Additionally, Alternative 6 will have additional waste from the temporary bridge. Therefore, there is a less than significant impact relating to solid waste.

Caltrans Standard Specifications will 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 will 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 will be considered less than significant.

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

During construction, temporary infrastructure, such as a work trestle and a concrete batch plant, will be installed. Equipment, including earthmoving vehicles, generators, power cables, and lights, will be used. As noted above, Caltrans will use standard specifications for fire prevention. Therefore, this impact will 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 will avoid impacts from the landslide. The revetment on the northern part of the beach will be partially removed. A previous Coastal Development Permit requested full removal; however, this has been determined unsafe because full removal will likely cause a large landslide movement. As discussed in Section 2.3.1, the net impervious area will 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 will 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

This paragraph has been updated since release of the Draft Environmental Document. There will be a significant and unavoidable impact to an archaeological site, MNT-1892. Site MNT-1892 will likely be fully demolished due to the removal of the existing bridge for both alternatives. This is discussed further in Sections 2.2.4 and 3.2.5.

Both alternatives will 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 will be cumulative impacts on visual resources as a result of the proposed project. This project, along with existing projects, will 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 will replace an existing structure and will 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

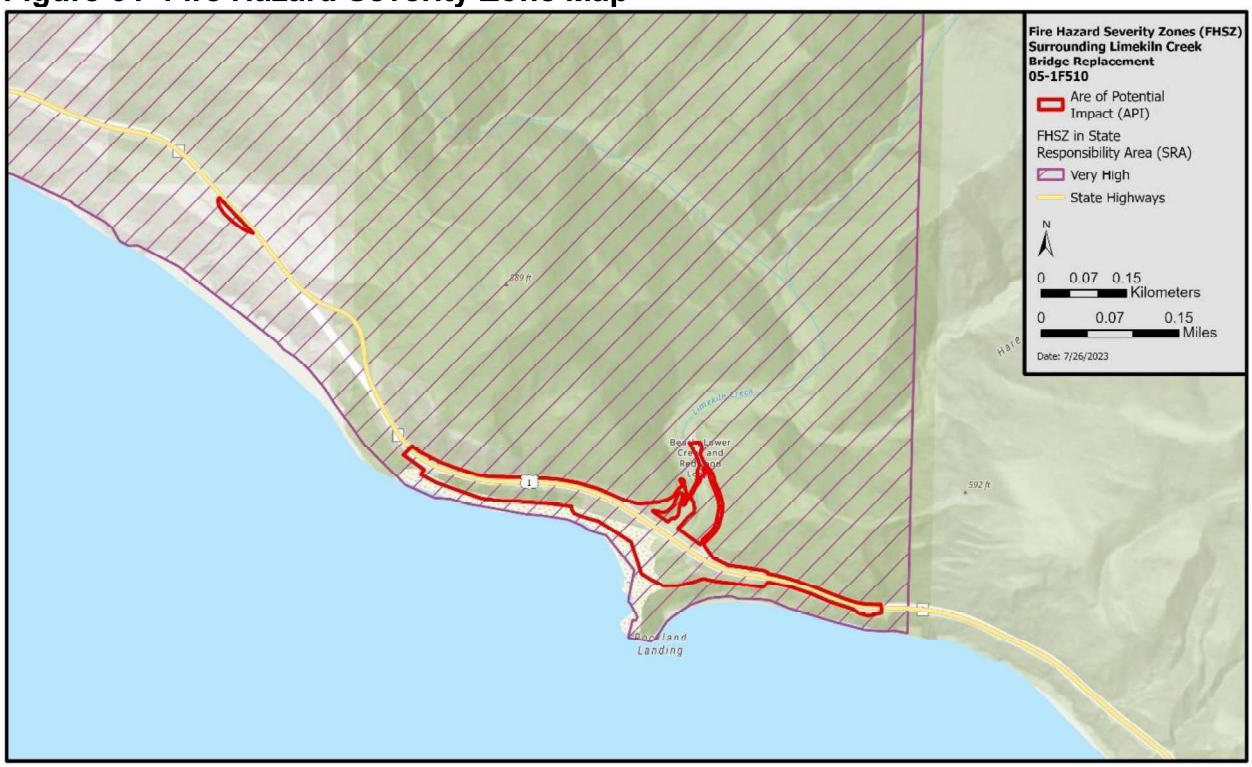
Regulatory Setting

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 will be used to avoid accidental fire starts during construction. The project will 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 will allow any potential landslide to fall under the bridge. There is a risk that construction activities will activate the landslide. Partial revetment removal on the north side of the beach near the northern abutment will also restore some level of natural erosion of the slope caused by wave action. Caltrans will remove what is feasible and safe.

Avoidance, Minimization, and/or Mitigation Measures

The following avoidance and minimization measures will 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.

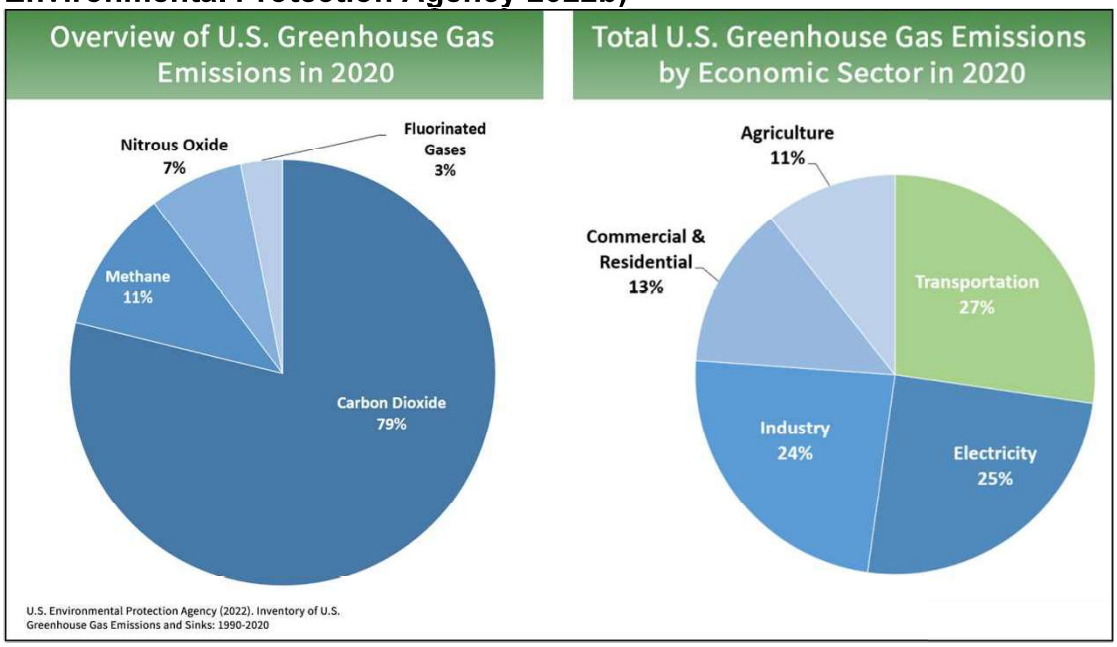
Greenhouse Gas Inventories

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)

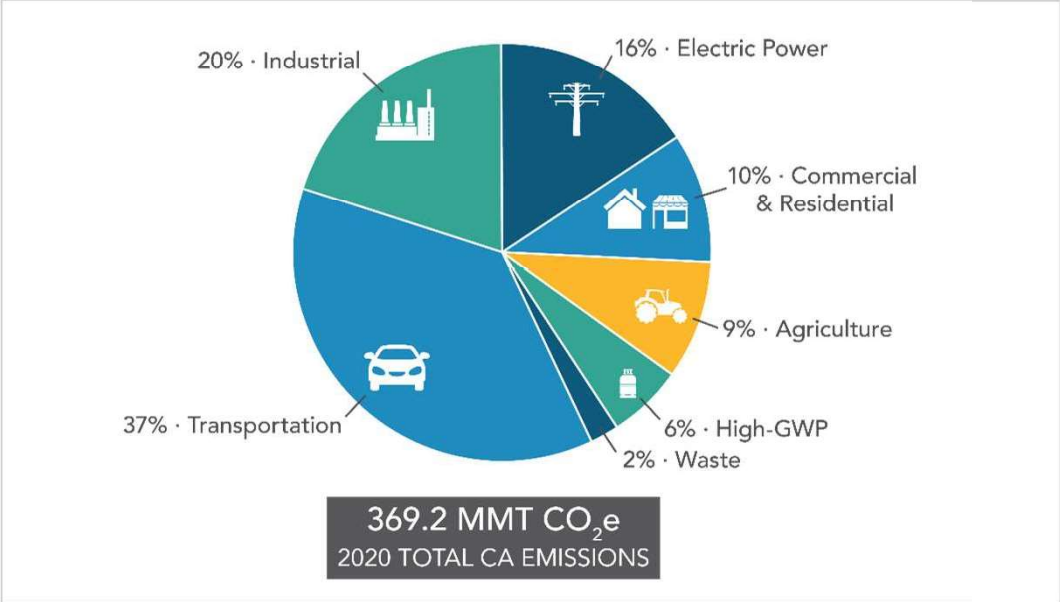
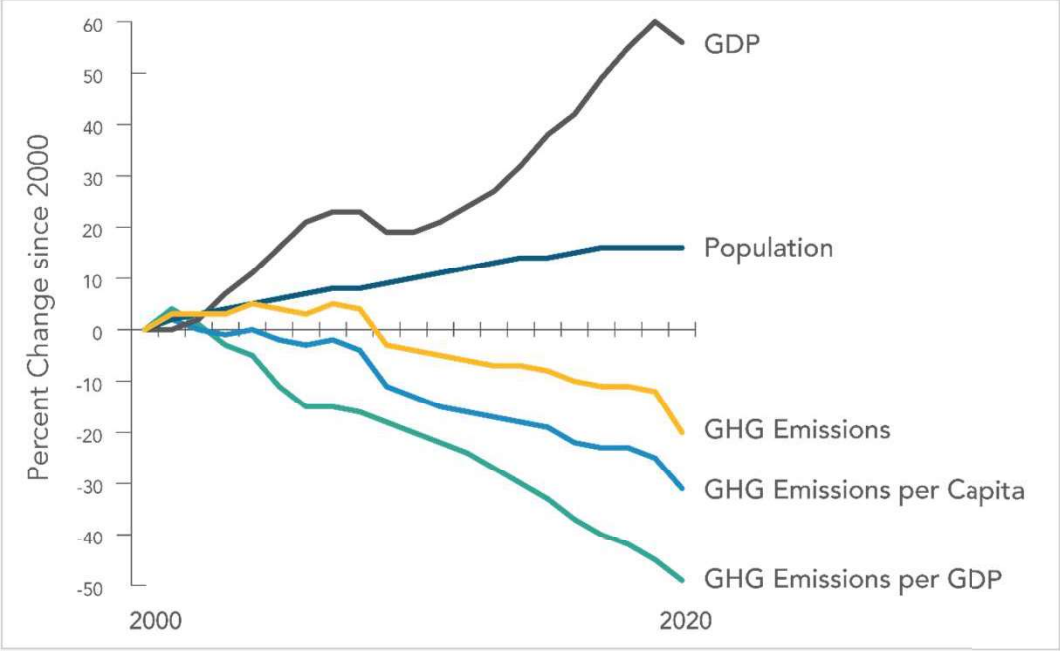


Figure 34 Change in California Gross Domestic Product, Population, and Greenhouse Gas Emissions Since 2000 (Source: California Air Resources Board, 2022a)



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
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)	These plans seek to reduce greenhouse gas emissions by: • 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
Caltrans Big Sur Highway 1 Sustainable Transportation Demand Management Plan (February 2020)	This plan includes greenhouse gas emissions reduction recommendations pertaining to: • 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
County of Monterey. General Plan – Conservation and Open Space Element (amended as of December 15, 2020)	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: • 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.
Transportation Agency of Monterey County. Active Transportation Plan for Monterey County (adopted June 2018)	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.

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 will increase the vehicle capacity of the roadway. While some greenhouse gas emissions during the construction period will 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 will result from material processing and transportation, on-site construction equipment, and traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

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 will result in greenhouse gas emissions during construction, it is anticipated that the project will 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 will 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 will 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 will 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 will 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 will 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 will be anchored in bedrock far below the existing sea level, and the construction materials used will 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, will help prevent these effects on the new bridge structure.

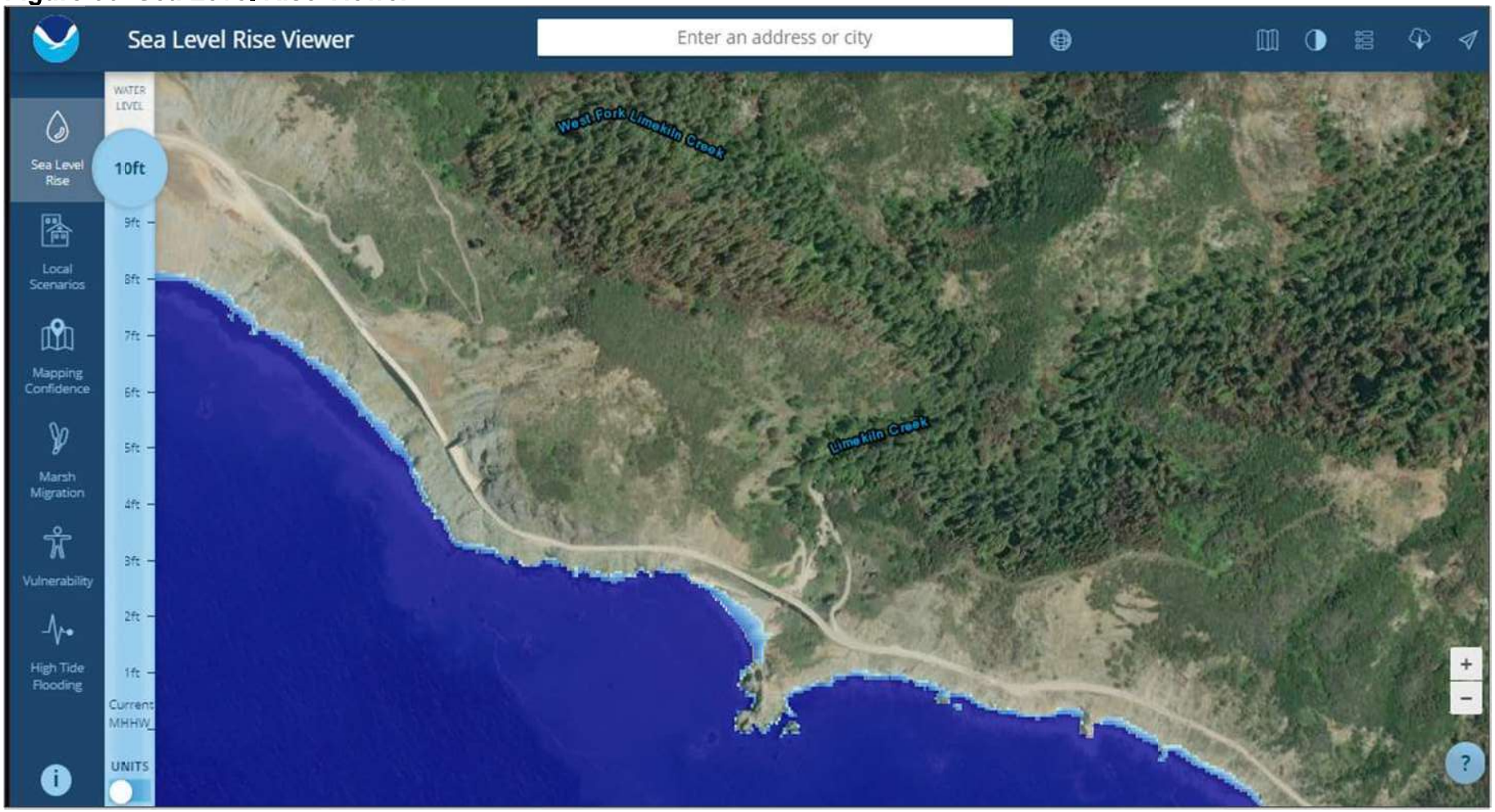
Additionally, the project is not expected to increase the vulnerability of the natural environment to the coastal conditions listed above (beach erosion, wave action, etc.). The project may, in fact, reduce these effects as compared to existing conditions because the multiple existing bridge piers will be removed and replaced by a single new pier. While part of the existing Limekiln Beach revetment (crib walls and large rock slope protection) will be removed to comply with a 2010 Coastal Development Permit condition, a portion of the revetment will remain and will 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 will 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.

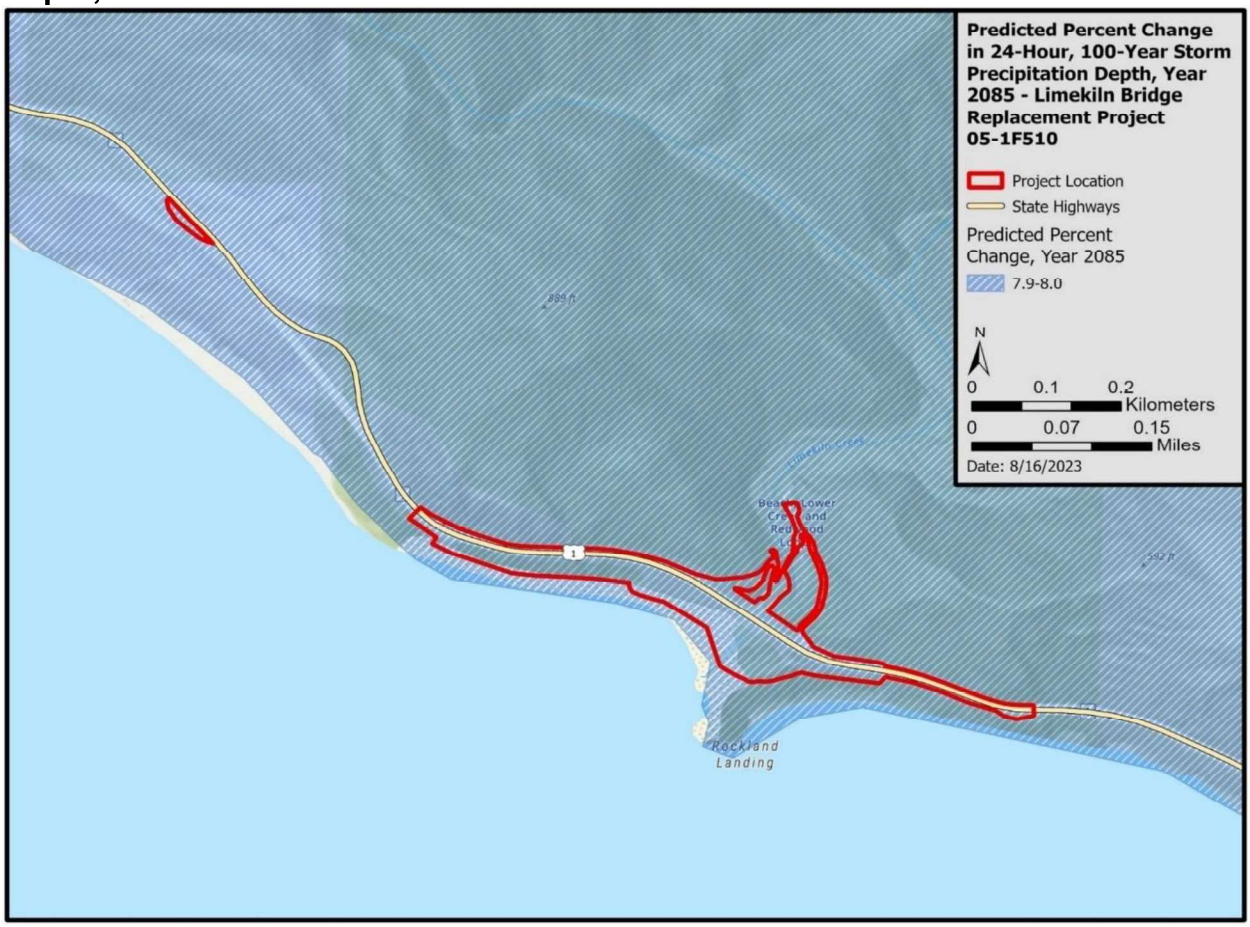
A review of State of California natural resources Geographic Information Systems (GIS) databases and the Caltrans Climate Change Vulnerability Assessment-District 5 Technical Report (Caltrans 2019) indicates that in the Limekiln Creek watershed, the 24-hour precipitation depth for a 100-year storm event 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 will 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 will be located outside the creek banks.
- Drainage systems on the new bridge and roadway at each end will 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 will not significantly increase the impervious surface in the watershed. Under build alternative 6, a one-lane temporary bridge will be constructed to the east of the existing bridge to accommodate highway traffic during construction. However, the temporary bridge will be removed upon project completion.
- There are no other known, anticipated land use changes in the Limekiln Creek watershed that will 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 will require adaptive changes in pavement design or maintenance practices.

Chapter 4 Coordination

This section has been updated since release of the Draft Environmental Document. Coordination with a date after December 2023 has been added.

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.

A public meeting was held during the public circulation period for the Draft Environmental Document on January 17, 2023. The meeting was held virtually over Webex and started at 5:30 pm. There were 38 participants. Alternative languages and accessible formats for the presentation were offered. There were five presenters from Caltrans that included the district engagement manager, project manager, design engineer, environmental

coordinator, and public information officer. Environmental specialists and other Caltrans staff were also available to answer questions. The meeting was informational, and the presentation included a project summary, covered environmental impacts, and how to officially comment on the CEQA document. Resource agencies and members from the public attended and asked questions. The meeting was an hour and a half and ended at 7 pm.

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.

Monterey County Historic Resources Review Board

Limekiln Bridge Replacement Project was on the agenda on February 1, 2024 for Monterey County's Historic Resources Review Board. County, Coastal Commission, and Caltrans District 5 cultural resources staff were present. County staff presented a summary of the project and relative historic resource issues. The Historic Resources Review Board did not take any formal action

on the project and directed staff to proceed with comments on the Draft Environmental Document to submit to Caltrans.

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.

February 9, 2024: Ali Thiel met with California Coastal Commission Ecologist, Rachel Pausch, to discuss Draft Environmental Document comments, including Environmentally Sensitive Habitats within the project area and potential mitigation ratios and strategies.

April 14, 2023: Ali Thiel and Laura Riccardelli conducted a survey to refine the natural community types.

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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

This section has been updated since release of the Draft Environmental Document.

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 on the purpose and need for the project can be found in Section 1.2.

Two build alternatives are proposed, Alternative 4B and Alternative 6. More information on these alternatives can be found in Section 1.5. The No-Build Alternative would leave the bridge and revetment in their existing condition. This alternative was used as the baseline against which the two build alternatives were compared.

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 will be directed to adjacent soils and will 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 will 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 will 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 will 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

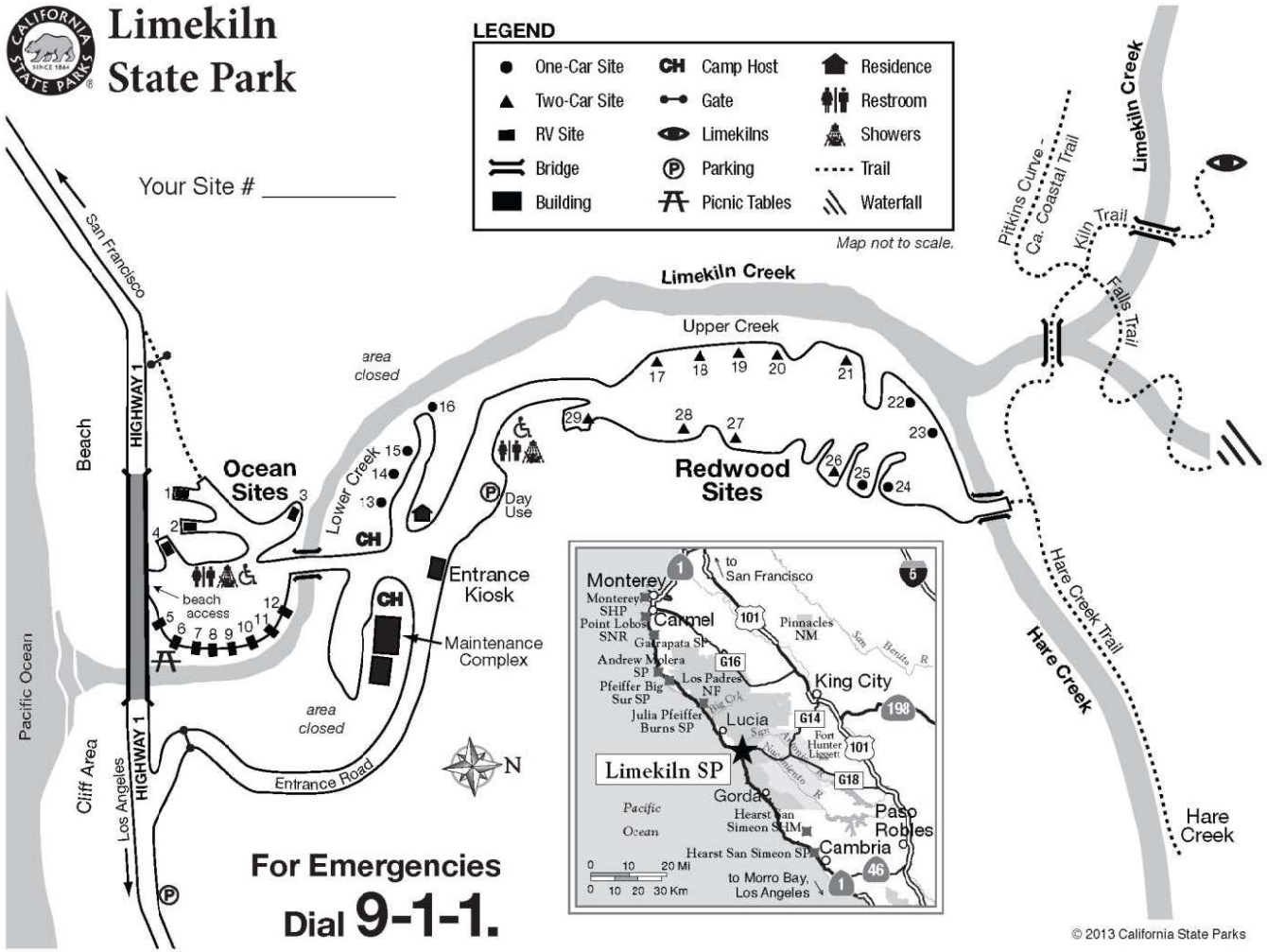
This paragraph has been updated since release of the Draft Environmental Document. Limekiln State Park is a Section 4(f) property because it is a public park owned by the State of California. The proposed bridge replacement is entirely within the park. Limekiln State Park is one of the few areas in Big 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. At the release of the Draft Environmental Document, Limekiln State Park and Highway 1 were temporarily closed due to Paul's slide. Highway 1 that was affected by Paul's slide reopened June 23, 2024, but not Limekiln State Park due to another slide, Regent's. Caltrans anticipates Highway 1 affected by Regent's slide to reopen late fall of 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 address 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 severe that the protected activities, features, and attributes of the property are substantially impaired.

Both permanent incorporation and temporary occupancy would apply to both proposed alternatives.

Permanent Incorporation

This section has been updated since release of the Draft Environmental Document.

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).

There will be no permanent land incorporation for Alternative 6.

The land acquisition for Alternative 4B 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 will involve heavy equipment within the park near the lower campsites and beach. It is anticipated that machinery will be placed below the bridge using a crane, and the northern entrance road will be used for vehicular access. Vegetation removal will be required to widen the existing access road. Using the northern entrance will 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 will be used for staging equipment. Campsites 1 through 12 will be disturbed but fully restored. The

picnic tables, fire pits, and boulders will be moved during construction but will be placed in their original location after the new bridge is constructed. Vegetation removal and stream diversion will 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 will take place during the dry season. The creek will 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 will 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).

This paragraph has been updated since release of the Draft Environmental Document. Alternative 6 will 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 will be near the northern abutment on the beach side of the bridge. The temporary bridge will be constructed at the lower campsites. Both alternatives would require one stream diversion.

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

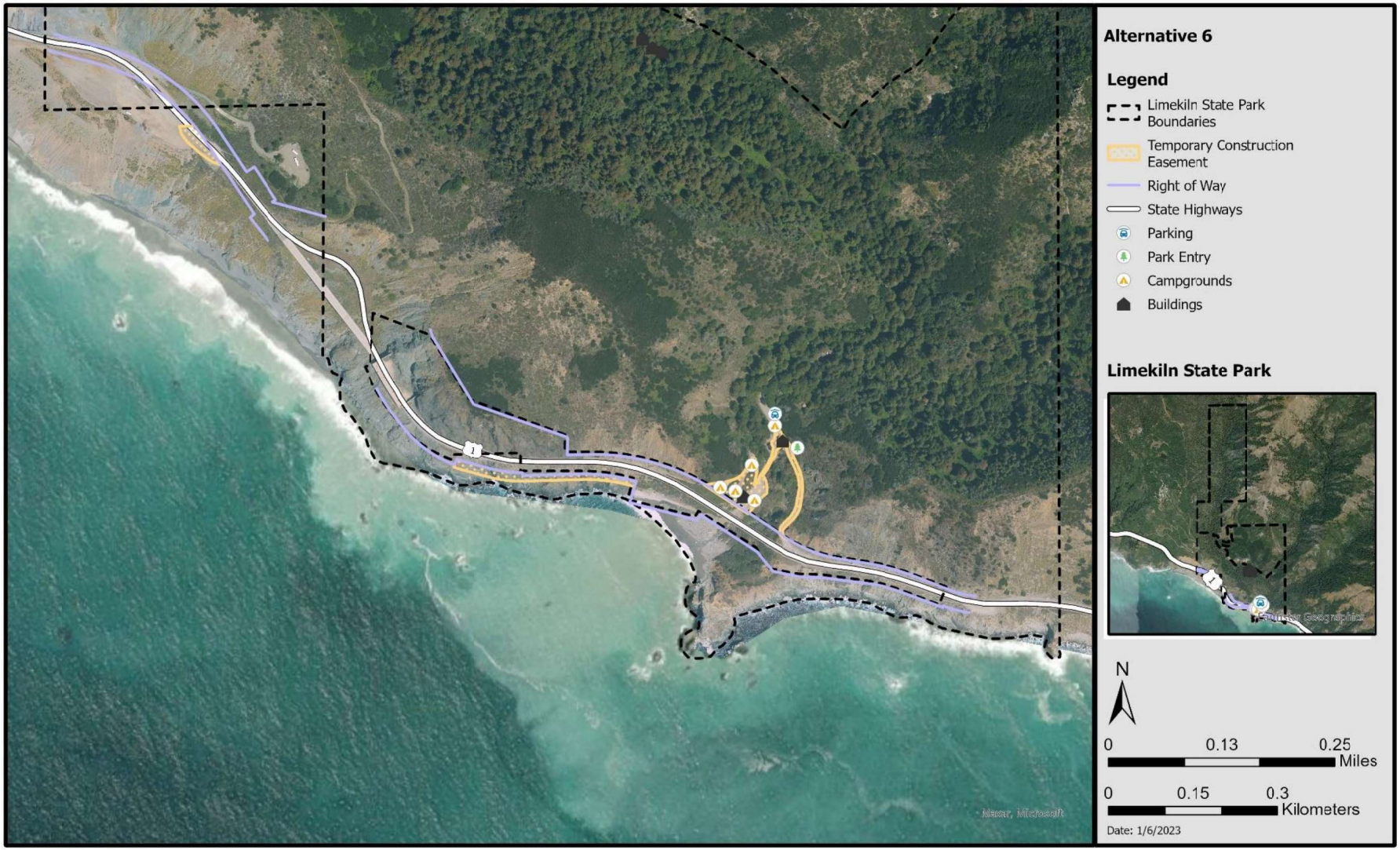


Figure 41 Alternative 6 Limekiln Campground Map



Consideration of Avoidance Alternatives

This section has been updated since release of the Draft Environmental Document.

Section 4(f) requires avoidance of 4(f) properties unless there is no feasible and prudent avoidance alternative, and if no feasible and prudent alternatives exist, the project must include 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 will 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 (and eliminated from further discussion; see Section 1.8) in consultation with California State Parks. Alternatives included various shifts in alignment both east and west. A realignment to the east is challenging due to steep cliffs and the active landslide. Further, while a realignment of State Route 1 a significant distance east would avoid Limekiln State Park, this would not avoid other Section 4(f) properties. 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. Therefore, any eastern alignment would not constitute a Section 4(f) avoidance alternative.

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 alternatives will completely avoid Limekiln State Park. The only alternative that would completely avoid Limekiln State Park is the No-Build Alternative.

The No-Build Alternative must be evaluated to determine whether it is feasible and prudent. There are six factors to consider. An alternative is not feasible if it cannot be built as a matter of sound engineering judgment. The feasibility factor, therefore, is not relevant to the No-Build Alternative. As for whether the No-Build Alternative is 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:
    - Severe social, economic, or environmental impacts;
    - Severe disruption to established communities;
    - Severe environmental justice impacts; or
    - Severe impacts to other federally protected resources.
4. Result in additional construction, maintenance, or operational costs of an extraordinary magnitude?
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?

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 issues mentioned above, there are no other unique problems or unusual factors that would cause impacts of extraordinary magnitude.

Weighing all of the circumstances, the No-Build Alternative is not prudent, as it would compromise the project in light of its stated purpose and need.

Measures to Minimize Harm to the Section 4(f) Property

This paragraph has been added since release of the Draft Environmental Document. Because it has been determined that there are no feasible and prudent alternatives that avoid the use of 4(f) properties, the project approval process requires that the action includes all possible planning to minimize harm to the Section 4(f) property resulting from such use.

All alternatives and associated measures 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 will 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 will be included:

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 Rockland Lime and Lumber Historic Landscape District

Description

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 address 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 severe that the protected 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 Rockland Landing 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

This paragraph has been updated since release of the Draft Environmental Document. Alternative 6 was designed to avoid impacts on the southern knoll and, therefore, its associated cultural resources. There will be no Section 4(f) use for Alternative 6 for the historic district. However, because Alternative 6 will still result in the use of Limekiln State Park, Alternative 6 is not discussed below under Avoidance Alternatives.

Consideration of Avoidance Alternatives

This section has been updated since release of the Draft Environmental Document.

Section 4(f) requires avoidance of 4(f) properties unless there is no feasible and prudent avoidance alternative, and if no feasible and prudent alternative exists, the project must include 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 (and eliminated from further discussion; see Section 1.8) in consultation with California State Parks. Alternatives included various shifts in alignment both east and west. A realignment to the east is challenging due to steep cliffs and the active landslide. Further, while a realignment of State Route 1 a significant distance east would avoid the Rockland Lime and Lumber Historic Landscape District, this would not avoid other Section 4(f) properties. 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 the historic district, it would impact Los Padres National Forest, another publicly owned protected resource. This would cause additional Section 4(f) and Section 6(f) impacts. Therefore, any eastern alignment would not constitute a Section 4(f) avoidance alternative.

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 alternatives will completely avoid the historic district. The only alternative that would completely avoid the Rockland Lime and Lumber Historic Landscape District is the No-Build Alternative.

The No-Build Alternative must be evaluated to determine whether it is feasible and prudent. An alternative is not feasible if it cannot be built as a matter of sound engineering judgment. The feasibility factor, therefore, is not relevant to the No-Build Alternative. As for whether the No-Build Alternative is 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:
    - Severe social, economic, or environmental impacts;
    - Severe disruption to established communities;
    - Severe environmental justice impacts; or
    - Severe impacts to other federally protected resources.
4. Result in additional construction, maintenance, or operational costs of an extraordinary magnitude?
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?

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 issues mentioned above, there are no other unique problems or unusual factors that would cause impacts of extraordinary magnitude.

Weighing all of the circumstances, the No-Build Alternative is not prudent as it would compromise the project in light of its stated purpose and need.

Measures to Minimize Harm to the Section 4(f) Property

This section has been updated since release of the Draft Environmental Document.

Because it has been determined that there are no feasible and prudent alternatives that avoid the use of 4(f) properties, the project approval process requires that the action includes all possible planning to minimize harm to the Section 4(f) property resulting from such use.

Had Alternative 4B been selected, the following mitigation measures would have been used to minimize harm to the Rockland Lime and Lumber Historic Landscape District, all of which were coordinated with and approved by California State Parks:

1. ARC-1: Marine survey of the intertidal related to the Rockland Landing Doghole Port. This will determine whether any additional features of the doghole port are present in the intertidal waters off Limekiln Beach. Resource locations will 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 will 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 archaeological district record for the Rockland Lime and Lumber Company Historic Landscape District has been prepared and recommended for listing in the National Register. This will be compiled into a formal district nomination that will consider nominating the doghole port as part of a Maritime Cultural Landscape. Standard Caltrans practice is to determine eligibility, but this additional step will 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 will 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.

No measures to minimize harm to the historic district would be necessary if Alternative 6B were chosen, as Alternative 6B completely avoids the Rockland Lime and Lumber Historic Landscape District. (See previous discussion on mitigation measures for the larger Limekiln State Park.)

Individual Evaluation for the Carmel-San Simeon Highway District

This section has been added since release of the Draft Environmental Document.

Description

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 Carmel-San Simeon Highway Historic District (P-27-002775) follows the alignment of State Route 1 and extends through the Big Sur region of Monterey and San Luis Obispo counties. It has been determined eligible for the National Register as a historic district. There are 241 contributing elements, including roadside water fountains, retaining walls, culvert headwalls, and concrete arch bridges constructed between 1922 and 1938.

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.

Use

The Federal Highway Administration regulations at 23 Code of Federal Regulations 774 address 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 severe that the protected activities, features, and attributes of the property are substantially impaired.

Both Permanent Incorporation and Temporary Occupancy would apply to both proposed alternatives.

There is a battlement-style parapet wall (feature DM-343) within the project area. Both alternatives will impact the wall. This parapet wall is one of 61 walls within the district that has diminished integrity. Impacting feature DM-343 will have no adverse effect to the district. However, this would still be a Section 4(f) use.

The construction of the replacement bridge would also introduce a new visual element to the historic district. Considering the district was originally defined as noncontiguous, the spaces between the contributing resources do not have potential to adversely affect the district.

Consideration of Avoidance Alternatives

This section has been updated since release of the Draft Environmental Document.

Section 4(f) requires avoidance of 4(f) properties unless there is no feasible and prudent alternative, and if no feasible and prudent alternative exists, the project must include 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 (and eliminated from further discission; see Section 1.8) in consultation with California State Parks. Alternatives included various shifts in alignment both east and west. A realignment to the east is challenging due to steep cliffs and the active landslide. Further, while a realignment of State Route 1 a significant distance east would avoid the Carmel-San Simeon Highway Historic District, this would not avoid other Section 4(f) properties. 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 the historic district, it would impact Los Padres National Forest, another publicly owned protected resource. This would cause additional Section 4(f) and Section 6(f) impacts. Therefore, any eastern alignment would not constitute a Section 4(f) avoidance alternative.

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 alternatives will completely avoid the historic district The only alternative that would completely avoid Carmel-San Simeon Highway Historic District is the No-Build Alternative.

The No-Build Alternative must be evaluated to determine whether it is feasible and prudent. An alternative is not feasible if it cannot be built as a matter of sound engineering judgment. The feasibility factor, therefore, is not relevant to the No-Build Alternative. As for whether the No-Build Alternative is 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:
    - Severe social, economic, or environmental impacts;
    - Severe disruption to established communities;
    - Severe environmental justice impacts; or
    - Severe impacts to other federally protected resources.
4. Result in additional construction, maintenance, or operational costs of an extraordinary magnitude?
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?

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 issues mentioned above, there are no other unique problems or unusual factors that would cause impacts of extraordinary magnitude.

Weighing all the circumstances, the No-Build Alternative is not prudent, as it would compromise the project in light of its stated purpose and need.

Measures to Minimize Harm to the Section 4(f) Property

This paragraph has been updated since release of the Draft Environmental Document. Measures to minimize harm to this resource were considered, but none have been established to minimize harm to this resource. Coordination with the State Historic Preservation Office concluded that the wall has already been substantially altered and infilled with concrete and therefore, does not display a high degree of historic integrity. It is one wall that is not the best representative example of a contributing feature of its type and removing the wall would not diminish the integrity of the district overall. Therefore, and with the approval of the State Historic Preservation Office, no measures to minimize harm are necessary or appropriate.

Least Harm Analysis

This section has been updated since the Draft Environmental Document.

There is no prudent and feasible alternative that avoids harm to Section 4(f) properties. Accordingly, under Section 4(f), the following seven factors have been used and balanced to determine the alternative that causes the least overall harm:

1. Ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property);
2. Relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection;
3. Relative significance of each Section 4(f) property;
4. Views of the officials with jurisdiction over each Section 4(f) property;
5. Degree to which each alternative meets the purpose and need for the project;
6. After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f); and
7. Substantial differences in costs among the alternatives.

The first four factors relate to the net harm that each alternative would cause to Section 4(f) property. The last three factors allow taking into account any substantial problem with any alternative on issues beyond Section 4(f).

It is noted that the impacts to the Carmel-San Simeon Highway District would be the same under both alternatives; thus, the below analysis balances the factors as related to Limekiln State Park and Rockland Lime and Lumber Company Historic Landscape District.

For Limekiln State Park, mitigation measures for both alternatives are the same. State Parks would receive full compensation for revenue loss and the park would be fully restored to its original condition. For the historic district (Rockland Lime and Lumber Company Historic Landscape District), there would only be adverse impacts and mitigation measures under Alternative 4B since Alternative 6 would avoid use.

This paragraph has been updated since release of the Draft Environmental Document. For Limekiln State Park, there would be more adverse impacts under Alternative 4B—even with the mitigation measures, including permanent land acquisition, more impacts to cultural resources, and visual impacts to the beach because of the more westerly proposed alignment. Conversely, Alternative 6 avoids these impacts. Similarly, Alternative 4B would result in more harm to the historic district as it would impact the cultural resource, while Alternative 6 would avoid impacts to this Section 4(f) property.

Limekiln State Park is one of the few accessible beaches along the Big Sur Coast. It also has camp sites on the beach, as well as hikes, fishing, and historic features such as the limekiln namesake. These factors contribute to the park's significance. The cultural resources that would be directly impacted, the doghole port and wagon road, are contributing resources to the historic district. These contributing resources are significant when combined because they form the historic district.

The official with jurisdiction over Limekiln State Park is California State Parks. State Parks submitted Comment 6 which is included in Appendix F. State Parks commented in support of Alternative 6. The comment outlined that permanent impacts to the knoll and associated cultural resource impacts, land acquisition impacts, and impacts to the visitor experience and public access are not permissible. The official with jurisdiction over the historic district is the State Historic Preservation Office. The State Historic Preservation Office does not give a preference of alternatives but instead either accepts or rejects Caltrans's determination of how cultural resources would be impacted and any associated mitigation measures. Caltrans evaluated both Alternative 4B and Alternative 6 as part of the Section 4(f) analysis. The State Historic Preservation Office determined that there would be no adverse effect to the historic district under Alternative 6, because Alternative 6 avoids the historic district.

In summary, under the comparable (equal) mitigation measures, Alternative 6 causes the least net harm to the 4(f) properties.

Both alternatives meet the purpose and need of the project.

After reasonable mitigation, there is no difference in the magnitude of any adverse impacts to resources not protected by Section 4(f) between the two alternatives.

Alternative 4B would cost $99,200,000 while Alternative 6 would cost $107,000,000. Alternative 6 would cost $7,800,000 more than Alternative 4B.

Though Alternative 6 has a higher cost, the difference is not substantial, especially given that Alternative 6 would cause the least net harm and is the preferred alternative of State Parks.

In summary, the consideration of issues beyond the Section 4(f) properties themselves does not weigh against the conclusion that Alternative 6 causes the least net harm and, accordingly—balancing all the factors—it is determined that Alternative 6 would cause the least overall harm.

Based on the above considerations, there is no feasible and prudent alternative to the use of land from Limekiln State Park, Rockland Lime and Lumber Company Historic Landscape District, and Carmel-San Simeon Highway District. The proposed action, utilizing Alternative 6, includes all

possible planning to minimize harm to Limekiln State Park and Rockland Lime and Lumber Company Historic Landscape District resulting from such use and causes the least overall harm in light of the statute's preservation purpose.

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 archaeological 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 archaeological site. This resource will be impacted by the proposed project under both alternatives. For a resource to qualify for Section 4(f), it must be eligible for or on the National Register, except in those instances when the resource is important chiefly because of what can be learned from data recovery and has minimal value for preservation in place (23 Code of Federal Regulations 774.13(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.

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

This section was updated since release of the Draft Environmental Document.

Following consultation with California State Parks in October 2023, it appeared that Limekiln State Park did 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, Limekiln State Park is not a Section 6(f) property.

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.
10. A letter was sent on February 14, 2024, to the U.S. Department of the Interior. This letter served the purpose of announcing the availability of the Draft Section 4(f) evaluation. No comments were received during the 45-day review period.
11. The updated Section 4(f) Carmel-San Simeon Highway District evaluation was sent to State Parks on June 7, 2024.

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.

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 will determine whether any additional features of the doghole port are present in the intertidal waters off Limekiln Beach.

Resource locations will 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 will 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 archaeological district record for the Rockland Lime and Lumber Company Historic Landscape District has been prepared and recommended for listing on the National Register. This will be compiled into a formal district nomination that will 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 will 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 will 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 will be limited to the dry season, and the creek will 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 will avoid impacts on nesting birds. Other work windows will be applied to minimize impacts on sensitive species. Preconstruction surveys will be conducted for special-status species; if individuals were found, they will be relocated. Applicable measures of the California red-legged frog and Smith's blue butterfly programmatic biological opinions will be adhered to, and these measures will 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 will 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 in coordination with regulatory agencies (California Department of Fish and Wildlife, Coastal Commission, etc.) 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, in coordination with regulatory agencies 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 (this measure has been updated since release of the Draft Environmental Document): 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. A qualified biologist shall inspect fencing during or after installation to ensure appropriate placement and adjustments will be made as needed prior to construction.
- 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 (this measure has been updated since release of the Draft Environmental Document): Preconstruction surveys will be conducted by a qualified biologist for aquatic and semi-aquatic species before work in the creek or riparian areas occurs. If species are encountered, they will be relocated to appropriate habitat as close to their original location, but outside and protected from construction activities prior to work in the area.
- SAS-2 (this measure has been updated since release of the Draft Environmental Document): 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, as needed, to coordinate appropriate avoidance and minimization measures.
- 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 will 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 will 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 µPa (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 will be limited to the minimum necessary to complete the project. A preconstruction survey will 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.
- INW-1: Non-native noxious plant species removed as part of project activities will not be stored or stockpiled in areas dominated by native plants. Noxious plants will be bagged or contained and disposed of appropriately to prevent propagation.

The following mitigation measures are proposed to reduce significant impacts on biological resources under CEQA to less than significant.

- JUR-1: Subject to change depending on permit coordination, riparian habitat will be replaced at an estimated four-to-one ratio. Temporary impacts are estimated to be replaced at a one-to-one ratio. 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 (this measure has been updated since release of the Draft Environmental Document): 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. A qualified biologist shall inspect fencing during or after installation to ensure appropriate placement and adjustments will be made as needed prior to construction.
- 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 (this measure has been updated since release of the Draft Environmental Document): 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). A designated representative will conduct inspections of containment each workday and as otherwise specified in the project Stormwater Pollution Prevention Plan.
- 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 (this measure has been updated since release of the Draft Environmental Document): Surveys will occur prior to ground disturbance for nesting bumblebees. Surveys will be performed by a qualified biologist and will follow California Department of Fish and Wildlife and Xerces Society guidance. 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 (this measure has been updated since release of the Draft Environmental Document): A Worker Environmental Awareness Training will be conducted by a qualified biologist for all construction personnel prior to the start of any ground disturbance or vegetation removal to discuss Crotch's bumblebee identification, ecology, habitat, their legal/protected status, proximity to the project site, avoidance and minimization measures, and the implications of violating the California Endangered Species Act.

- CBB-3 (this measure has been updated since release of the Draft Environmental Document): Any blooming flowering plants that are scoped for removal will 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 will not proceed until the bumblebee leaves the area of its own accord.
- CBB-4 (this measure has been updated since release of the Draft Environmental Document): 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. A qualified biologist shall inspect fencing during or after installation to ensure appropriate placement and adjustments will be made as needed prior to construction.
- CBB-5 (this measure has been updated since release of the Draft Environmental Document): 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 using native flowering food source plant species, woody debris placement, and/or recontouring, as needed, to restore affected habitat type.
- 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.
- BA-11 (this measure has been added since release of the Draft Environmental Document): Any unconsolidated material that results from project activities will not be permanently stored within the project area. Temporary storage of unconsolidated material during construction will incorporate Best Management Practices to prevent run-off and water sedimentation. Excess material will be disposed of in an offsite area where there will be no transport or sedimentation into sensitive aquatic resources, including black abalone habitat. A qualified biologist will survey and approve of all proposed disposal areas.
- SCCC-1: Prior to construction, Caltrans will complete a Federal Endangered Species Act consultation with the National Marine Fisheries Service.
- SCCC-2 (this measure has been updated since release of the Draft Environmental Document): An aquatic species exclusion/relocation plan will be prepared and approved by the National Marine Fisheries Service and implemented before a diversion is installed. The plan will require that a qualified biologist conduct all fish capture, handling, exclusion, and relocation activities. The plan will also require that industry best practices are used including equipment decontamination and ensuring that protected species are kept out of the water for the least amount of time possible. The qualified biologist will continuously monitor in-water activities (e.g., placement of cofferdams, dewatering of isolated areas) for the purpose of removing and relocating any protected species that were not detected or could not be removed and relocated prior to construction.
- SCCC-3: No in-water pile driving will occur as part of project activities.
- SCCC-4 (this measure has been updated since release of the Draft Environmental Document): 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 and Caltrans will coordinate with NMFS to avoid and/or minimize hydroacoustic impacts.

- 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 will 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 will 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 will 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 will 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 will be minimal. For example, work that will affect large pools that may support breeding will 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 will 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 will 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 will 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 will 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

STATE OF CALIFORNIA
GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

EDMUND G. BROWN JR.
GOVERNOR

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: Inyo OR

SCH# 2018071017

Resources Agency

- Resources Agency — Nadell Gayou
- Dept. of Boating & Waterways — Denise Peterson
- California Coastal Commission — Allyson Hitt
- 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 Resouces 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.

Appendix F Comment Letters and Responses (added to Final Environmental Document)

The following Appendix contains the comments received during the public circulation period for the Draft Environmental Document and responses to those comments.

Comment 1 Stan Harlan

Stan Harlan, January 29, 2024
I have a special interest in this bridge and Mill Creek bridge (no. 44-62), since I was employed by the contractor in the summer of 1956 to do various jobs on both bridges. I had an injured right hand, so I was limited to flagging, time keeping, water truck driving, and later, to arduous jack hammer work on Mill Creek bridge. A flooding storm of December 23, 1955 had washed out the abutments at each end of the Mill Creek bridge. This caused the steel beams at one end to drop a number of feet, making the bridge totally useless.

Reconstruction cost of the original wooden timber bridge to a concrete structure at Lime Kiln (Contract number 67-14TC8 dated 4/29/56 to J. B. Allen and Les Arnold) was for $384,578.25.

On April 11, 1963, additional minor repairs were made for $4,00.00; and on September 11,1963, $18,434.00 was paid for correcting subsidence of approach at north end of the bridge.

I do not have access to records of expenditures between 1963 and the present, but I am sure a large sum has been expended on additional subsidence problems at the north end of the bridge.

I have personally experienced unbelievable wave action there. Boulders as large as automobiles are thrown about in the undertow, shaking the ground nearby like an earthquake.

I understand that a need for replacement is caused by intrusion of salty air into the concrete causing rusting and expansion of the steel rebar, thereby creating cracks in the concrete and its eventual failure.

I also understand from current estimated cost of replacement of the bridge to be $102,369,091, and will take over six and one half years to complete. This is an inflationary cost of over 266 times the cost in 1957!

Though I am not an engineer, I would suggest using stainless steel rebar on coastal concrete bridges

An excerpt follows:
'CORROSION PROTECTION - CONCRETE BRIDGES
Publication No.: FHWA-RD-98-088 September 1998
STAINLESS STEEL RE-BAR

To provide even longer service life to the concrete decks; G years or longer-without any need to repair corrosion-induced concrete damage, a number of alloys and cladding have been developed for rebars. Most notable are solid stainless steel 316 rebars and stainless steel clad black bars, which have performed exceedingly well in accelerated screening corrosion tests. Both of these two new alternative reinforcing bars have the potential to provide an excellent corrosion protection system, albeit at a higher initial cost.'

An added note from Stan Harlan: "G years"? G stands for a Galactic year!! Even stainless steel would not last this long!!

Response to Comment 1

Thank you for your interest in the project and taking the time to provide feedback. The use of stainless-steel reinforcement (rebars) in concrete bridges is not commonly used because of high cost. However, the Federal Highway Administration, and other agencies, continue to research the use of solid stainless steel rebars or rebars coated with stainless steel.

There was a recent study released by the Transportation Research Board that proposed epoxy coated rebars. The title is 'Stainless Steel Coated Rebar for Chloride Resistant Concrete Highway and Bridges' (Idea Project NCHRP-240, June 2023).

Comment 2 NOAA

Steve I. Lonhart, National Oceanic and Atmospheric Administration, February 2, 2024
I am submitting, by email, the following comments on the Limekiln Cr. Bridge Replacement. Thank you for having a virtual public hearing in January, it was very informative. I have been to the Limekiln site with CT staff and with contracted biologists, and have interacted with CT biologists regarding black abalone both at the Limekiln site and at other sites in Big Sur (e.g., Mud Creek, Alder Creek, RSP removal near San Simeon) during my time at Monterey Bay National Marine Sanctuary as a research ecologist.

During the January 2024 hearing, I asked what would happen to material generated by grading or excavating or otherwise disturbing intact soils as part of the construction process, and I was told that ultimate disposition of the unconsolidated material (UM; i.e. soil, rocks) would be up to the winning contractor. Since a contractor has not yet been selected, it is unclear how

they or CT plan to manage UM generated by construction (e.g., road cuts, grading, slope removal) and removal of RSP above the beach.

As noted in the December 2023 Draft EIR/EA, black abalone and their critical habitat are present at the site. "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." (Page 110 of EIR)

Movement of UM mobilized by on-site activities will head downslope and into Monterey Bay National Marine Sanctuary, leading to increased turbidity, burial, and scour in the nearshore subtidal environment. The ultimate disposition of UM is very important, not only to black abalone and their critical habitat, but to all species inhabiting the intertidal and nearshore subtidal. Having it not enter and injure species and habitats is preferred.

It remains unclear to me whether UM will be placed on site, perhaps as part of the construction, and in such a way to minimize any future movement by rainfall down the slope. As we have seen in other parts of Big Sur, intact soils are much less likely to enter into the sanctuary, whereas current CT deposition sites are essentially conveyor belts for UM to move into the sanctuary during heavy rains, generating massive turbidity plumes. And while landslides occurred prior to coastal occupation by humans, there is no question that human activities and redistribution of UM have exacerbated the situation, increasing the amount and rate of UM deposition into the sanctuary.

I ask that there is a concerted plan, developed by CT, the contractor, and Federal biologists, to ensure that generating UM is handled in a way that does not increase the rate or frequency of its deposition into the sanctuary, smothering black abalone critical habitat, and killing black abalone directly. For example, simply trucking UM from the Limekiln site and adding it to the "disposal" sites at Paul's Slide or Willow Creek or Mud Creek would not be appropriate. That would simply add to the massive UM burdens already at those sites, and broaden the potential impacts at Limekiln to more of the Big Sur coastline. Spreading the damage is not appropriate.

I look forward to working with you and your staff on this issue, and I am sure we can do what is best for the biota and habitat in the area without compromising CT safety, engineering goals, and achieving them in a timely and cost effective manner.

Response to Comment 2

Thank you for taking the time to provide feedback. Caltrans looks forward to working with you and the Administration to meet each agency's goals.

The project will be designed to balance cuts and fills of material, as much as feasible, to eliminate or reduce the amount of excess material. All project fill

will be compacted and treated with erosion control per design standards. Any excess or unusable unconsolidated material will be permanently moved off-site. There will be no long-term storage or stockpiling of material onsite. Caltrans must approve of the Contractor's proposed offsite disposal location. Caltrans will ensure that material is disposed in an area with no potential for sediment transport into sensitive aquatic resources. A qualified biologist will survey and approve the disposal site prior to material disposal.

Measure BA-11 has been added to the document to accommodate this and is reflected in Section 2.4.4, 3.2.4, and Appendix C.

Comment 3 Coastal

Eric Stevens, Coastal Commission, February 5, 2024

Thank you for the opportunity to provide comments on the Draft Environmental Impact Report (DEIR) for the proposed Limekiln Creek Bridge Replacement (project) along State Route 1 in Big Sur. The existing Limekiln Creek Bridge was constructed in 1957 and Highway 1 here provides a very important transportation, commerce, recreation, and public safety link along the Big Sur coast. It is also an extremely important public access facility for both vehicles and bicycles and offers dramatic views of the mountains and ocean, and the interface between the two.

Caltrans and Commission staff have been in engaged in early coordination on this project for multiple years now. We greatly appreciate all the opportunities for input over the years, the ongoing dialogue, and Caltrans responsiveness to Commission staff comments on this project. Overall, the project is in a substantially better place than earlier alternatives, and permitting of this project should be much more streamlined because of the extensive early engagement Caltrans has done on this project.

Project Description. As noted in the DEIR, there are two alternatives under consideration.

Alternative 4b consists of replacement of the existing bridge with a new bridge with a new southern abutment located slightly further seaward than the existing southern abutment, a northern abutment located seaward and north of the existing abutment. This new bridge would sit some 65 feet west of the existing bridge and would require the closure of the Limekiln State Park campground and beach for approximately four years. Alternative 4b is the same or very similar to earlier alignments east of the existing bridge that Caltrans has discussed with Commission staff over the years.

Alternative 6 is a new alternative and consists of replacement of the existing bridge with a new bridge with a new southern abutment located at approximately the same location as the existing southern abutment, a new northern abutment located seaward and north of the existing northern

abutment, construction of a temporary bridge inland of the existing bridge, and the construction of a temporary retaining wall adjacent to the northern abutment of the temporary bridge. Alternative 6 is closer to the existing alignment and would require the closure of the Limekiln State Park campground and beach for approximately four and a half years.

Both alternatives also include removal of all the existing bridge piers and construction of one new bridge pier, construction of two viaducts between the new bridge's northern abutment and just south of the Pitkins Curve Rain Rocks viaduct, 12-foot lanes and 4-foot shoulders for the new bridge and viaducts, construction of a soldier pile wall on the east side of the highway adjacent to one viaduct, replacement of the existing retaining walls between the bridge and the Rain Rocks Rock Shed, removal of portions of the existing shoreline armoring on the beach, implementation and use of a batch plant on the turn out on the seaward side of the Highway just north of the rockfall, and drainage improvements.

Permitting Jurisdiction. The project location extends from just south of the Limekiln State Park entrance (MON 1 PM 20.9) north to just south of the Pitkins Curve Rain Rocks viaduct (MON 1 PM 21.3) in Big Sur, Monterey County. Most of the project components are located on state lands above the mean high tide line (MHTL) within the coastal permit purview of Monterey County. However, the project components related to construction and/or removal of bridge foundation piers and removal of existing shoreline armoring on the beach extend down to or below the MHTL and require permitting from the California Coastal Commission (CCC). The project elements located within the County's permitting jurisdiction will also be appealable to the CCC. The S-3 Project Impacts table on p. vi of the DEIR should be updated to note the project is within both Monterey County and CCC jurisdiction.

In cases where jurisdiction sits in both the state and local coastal jurisdictions, the Commission can consolidate the Coastal Development Permit (CDP) application, if Caltrans and the County concur. We support this consolidation to improve the permitting process. Regardless, even if consolidated, extensive outreach and engagement with the local community will be essential for this project. We recommend that Caltrans continue to have regular community meetings and carefully consider all community input on the bridge project.

Bridge Alignment. As noted in the DEIR, Caltrans undertook early coordination with staff from CCC and Department of Parks and Recreation (State Parks) related to bridge alignment alternatives. During this early coordination process, CCC and State Parks staff expressed concerns regarding the previous bridge alignment alternatives that involved construction of the bridge significantly further seaward than the existing bridge alignment.

The foremost concern on these alignments related to the visitor-serving experience at the beach. The previous alignments considered by Caltrans

would have aligned the replacement bridge out over the beach recreation area, creating a ceiling over the beach and introducing urban-style development into the beach and shoreline setting with increased noise, visual, and shading impacts to an extremely important public recreation area, which would significantly and irreparably degrade the visitor experience. CCC staff commends Caltrans for meaningfully considering this feedback and developing alternative 6 that would greatly reduce these drastic adverse impacts to the beach recreation area. CCC staff also commend Caltrans for designing a bridge structure that reduces the number of support piers from seven to one.

Prior alternatives also required locating the new southern bridge abutment seaward of the existing southern abutment, which would involve removing a significant coastal bluff landform that is documented to contain sensitive archaeological resources. This area, historically known as Rockland Landing, has been documented to include elements of the historic district related to the original operation of the limekilns, the namesake of the park, by the Rockland Lime and Lumber Company in the late nineteenth century, and has been determined to be eligible for listing in the National Register of Historic Places. Beyond this significant cultural value, the area contains natural habitat and contributes visually to the naturally varied topography that defines the landscape of Big Sur. As identified in the DEIR, Alternative 4b would result in the impacts to Rockland Landing, while Alternative 6 substantially avoids those impacts.

The DEIR does not provide much analysis on the feasibility of further curving the Alternative 6 bridge alignment inland, including east of the existing alignment, other than a brief mention of a 2004 study. Further analysis will be needed for the coastal permitting phase on whether it is feasible to further curve the alignment inland or the explanations of why it is not.

Overall, CCC staff continues to recommend that Caltrans proceed with Alternative 6 to minimize impacts to the visitor-serving experience at the beach and avoid impacts to Rockland Landing, unless other alternatives become apparent that further shift the bridge alignment east.

Viaducts and Soldier Pile Wall. Provide additional rationale to justify the need for the two viaducts and the soldier pile wall adjacent to the east side of the highway and discuss any alternatives to the viaducts that were considered. The first viaduct directly north of the bridge is described as “half-width.” Please explain the difference between a half-width and full width viaduct.

Existing Blufftop Retaining Wall Replacement. DEIR p. 10 states that “...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...” Please provide a detailed analysis to justify replacement of the blufftop retaining walls and plans to show the location and extent of the existing and replacement retaining walls.

Temporary Bridge Pier. The DEIR states that “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.” Staff strongly recommend that the temporary bridge pier not be placed in the creek. If it is not feasible to avoid placement of the temporary bridge pier in the creek, additional habitat mitigation would be required. Impacts to Limekiln Creek should be minimized to the maximum extent possible. Please note that the CCC typically requires 3:1 mitigation for permanent impacts to riparian habitat (e.g., Sitka willow) and 4:1 for wetlands. The DEIR also references stream diversion, that may be extended for construction of the temporary bridge, please explain the exact avoidance measures by which the dewatering will avoid impacts to fish passage. Overall, Caltrans should provide an analysis of the potential impacts of the temporary bridge during construction on any park facilities, timing of the park closure, or to habitat.

Visual Resource Analysis. At this stage, the final design of the proposed bridge has not been completed. We look forward to working with Caltrans to gain input from the local community and finalize plans that detail the height, size, length, materials, and colors, etc., of the proposed project components. Highway 1 in Big Sur is designated as an All-American Road (generally reserved for highways considered destinations in themselves), an American National Scenic Byway, a state scenic highway, and it is an intrinsic and an important element of what is commonly described as the one of the most scenic areas in the world. All new development should reflect the historic character of Big Sur. Caltrans must evaluate alternative bridge railing designs to ensure that the proposed new railings do not impinge on public views, but rather enhance and maximize views of the coast, and are reflective of the historic character of the area. Final bridge design should also sit as lightly on the landscape as possible, given the location directly adjacent to the beach and state park- minimizing its intrusion on the visitor recreational experience will be significant concern in final bridge design. We look forward to participating in the process as the design develops.

Existing Shoreline Armoring. Prior shoreline armoring exists on the beach at Limekiln State Park and Caltrans has placed or updated versions of the shoreline armoring to protect the north slope and the north edge of the existing bridge and highway pursuant to CDPs stretching back to the 1980s. Most recently, the Commission approved CDP 3-09-020 in 2009 for a new shoreline armoring system. Given the need for a long-term solution to the armoring here, which sits directly on a public beach, the CDP required Caltrans to undertake long-term planning to address erosion here and Special Condition No. 9 of the CDP stated that the authorization term for the CDP would expire ten years following issuance unless extended (December 17, 2019). The condition further required that all shoreline armoring (revetment, seawall/cribwall, splash apron, drainage, imported rock, metal, and concrete) be removed and the affected area restored to natural bluff and beach conditions by expiration of the CDP or upon completion of the long-term highway protection measures, whichever occurred first. Thus, this CDP has

expired and there is no longer CCC approval for the existing armoring on the beach and bluff and Caltrans is currently obligated to remove all shoreline armoring at this location.

The DEIR on p. 12 states the following regarding the existing shoreline armoring:

"...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..."

As we move into the permitting phase, please provide a detailed exhibit showing which aspects of the existing shoreline armoring are proposed for removal and which aspects are proposed for retention. For each aspect proposed for retention, provide analysis to justify why it cannot be removed and a thorough discussion of removal alternatives that were considered. For instance, one alternative that should be considered is expanding grout, which may help break up the armoring with improved safety for workers. If a constraint to full removal of the armoring involves long-term bluff stability safety for beach users, please provide an analysis of temporarily roping off portions of the beach directly below the armoring if instability is observed rather than retaining the armoring. Caltrans should also provide an analysis of any aesthetic treatment options for remaining portions of the shoreline armoring, including planting to help stabilize the bluff and obscure remaining portions.

Significant questions also remain related to the long-term retention of any of this armoring. Would armoring proposed for retention be maintained over time or allowed to fail? Will Caltrans retain responsibility for maintaining the armoring or will State Parks. If State Parks takes over maintenance, how will Caltrans compensate State parks for the maintenance obligation? How will maintenance of the existing armoring be authorized given there is currently no coastal act authorization for the structure? Regardless, some long-term plan for the gradual removal of elements of the shoreline armoring over time will be required. If removal of the entirety of the shoreline armoring is deemed infeasible, a long-term management and funding plan for maintenance/removal of remaining portions will be required. Mitigation for public access and sand supply impacts would also be required if any portion of the shoreline armoring is retained.

Slope Stability Documentation. The DEIR document does not contain a detailed investigation of the slope stability issues at the site. As we move into our permitting phase of the project, please provide copies of any existing and updated geologic assessments for the project.

Minimize Energy Consumption and Vehicle Miles Traveled. Coastal Act Section 30253 states, in part:

New development shall do all of the following: ... (c) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Board as to each particular development. (d) Minimize energy consumption and vehicle miles traveled.

Some greenhouse gas (GHG) emissions will result from the construction activities of the project, and as acknowledged in the FEIR for the project, GHG emissions are cumulative, and even these relatively small emissions will still contribute to the cumulative load of GHG emissions. Caltrans has identified some mitigation measures to reduce GHG emissions associated with construction activities. These steps include measures designed to reduce the number and duration of idling vehicles, to limit construction activities that will create traffic back-ups and increase idling vehicles, and to require proper maintenance and operation of all equipment. Overall, the new bridge by itself is not expected to increase GHG emissions or vehicle miles traveled (VMTs). The project also includes improved and safer roadway shoulders to support cycling activities which may contribute to a reduction in GHG emissions and VMTs. The shoulder improvements will also make cycling safer, which will encourage the use of bicycles for transportation through the corridor as an option instead of cars.

The DEIR indicates that a batch plant is needed to manufacture concrete and is proposed to be located within an existing pullout along the west side of State Route 1 north of the Rain Rocks Sidehill Viaduct. The batch plant is proposed to be located on a significant turnout area along the seaward side of the highway. The proposed batch plant will result in adverse impacts to the coastal views and will reduce available public parking that could otherwise be used by the public for viewing the ocean while sitting in their cars or parking to walk to an ocean viewing spot. Please provide information about the materials management plan required for Cast-In-Place (CIP) vs. Pre-Cast Concrete (PCC), particularly relative to potential locations and areas needed to stockpile or store the PCC elements. Please also analyze the expected GHG emissions related to CIP vs. PCC.

Due to the project site's remote location, another project component that should be analyzed for the potential to reduce emissions is whether construction personnel can use the campground as a temporary housing location to reduce VMTs. Reducing daily traffic and congestion on the Highway would also benefit public access. Would housing personnel onsite result in a decrease in the construction timeline?

Caltrans should also explore if there are other options to reduce GHG emissions and air pollution impacts through the project. While the project does include a modest improvement for cycling safety, are there other improvements, such as EV charging at the State Park or in the vicinity that

could help reduce emissions, consistent with the Coastal Act and Caltrans strategic plans?

Overall, Commission staff strongly supports project features that will minimize GHG emissions here and look forward to exploring those options with you.

Sea Level Rise. Staff appreciates the precautionary approach to the DEIR sea level rise (SLR) assessment (i.e., use of the H++ scenario).

In practical experience, most of these bridges remain in place for closer to 100 years and it makes more sense to extend the SLR analysis for that time frame as opposed to the identified 80-year design life, at least in terms of understanding risk. However, we also recognize that the analysis here includes higher SLR amounts that essentially cover those time frames and that the upcoming Ocean Protection Council (OPC) revised SLR projections may in effect be lower. Therefore, we feel this analysis is adequate to inform preliminary project design decisions. As we get closer to an actual CDP permit application, an update to this analysis will likely be needed that includes updated SLR projections and updated information on project design alternatives. At that time, we would also recommend a 100-year design life analysis.

A second consideration for the hazards analysis is to analyze wave run-up with a plan view of the beach as it evolves over time. This analysis should include an interpretable portrayal of projected shoreline positions and beach widths under different SLR scenarios. These plan views would enable us all to understand better the implications for public access and bridge design at the site. Please also provide an analysis as to how the proposed bridge design may interact with any other necessary future SLR adaptation in the region and detail strategies for keeping the highway stable north and south of the project site.

Public Access. The beach at Limekiln State Park is unique in Big Sur in that it provides one of only four significant coastal beach access and recreation experiences available to the visiting public along 75 miles of coastline that is relatively easy and affordable to access for both day-use and overnight visitors. The project is likely to have significant impacts on public access and recreational opportunities at Limekiln State Park over a multi-year period. Staff recognize that public safety may require full closure of the campsites and day use areas, including the public beach, to visitors during construction.

Given the expected extent and duration of the project's impacts, Caltrans should identify methods to avoid impacts where possible and should further develop mitigation strategies for unavoidable impacts. Please provide a detailed construction and staging schedule that analyzes whether there are opportunities to intermittently open the campground and/or day use areas during the construction period. Please also provide a detailed plan showing how nearby trails can be accessed and how the public parking areas within and near the project site can be maximized throughout the construction

period. Are there nearby trail parking areas that could be enhanced/expanded to provide for additional access during the park/beach closure?

There appear to be multiple combinations of options to fully mitigate all the proposed project's impacts including via direct compensation to Limekiln State Park that would provide for facilities replacement, campground improvements, trail creation and maintenance, access, and recreation improvements, etc. Additionally, consideration must be given to the construction of the California Coastal Trail (CCT) and the planned alignment in the vicinity of the project site. This includes the rehabilitated Alvin Trail component and the restoration of the overgrown Gerald Trail. Caltrans should also analyze opportunities for offsite public access mitigation in Big Sur that can be implemented prior to or concurrent with construction of the project to supplement, if necessary, the public access package. Extensive coordination between the local community, the County, State Parks, Caltrans, and the Commission will be necessary to design a substantial public access mitigation package to mitigate the impacts of the project. The DEIR incorrectly states that the project area is part of the "CCT Bike Route." Please correct the statement to reflect that the project area (specifically Hwy 1) is instead part of the "Pacific Coast Bike Route."

Environmental Justice. The DEIR states: "No minority or low-income populations that would be adversely affected by the proposed project have been identified..." However, the campground and day-use facilities, including the public beach, are free or low-cost public coastal access points used by people throughout California and the world, including those living in disadvantaged communities, such as visitors from Salinas Valley. Limekiln is also in a census tract identified as low-income per AB 1550. If there is available cell phone park data for park users, this may be a way to identify the primary communities that the extended park/beach closure will impact.1 Please conduct outreach to nearby disadvantaged communities to solicit feedback on the project, including potential mitigation actions that can be implemented in the near term and upon project completion.

Environmentally Sensitive Habitats (ESHA). Please be advised that Commission staff will need a complete draft Habitat Mitigation and Monitoring Plan (HMMP) for a complete CDP application before this item can be considered for scheduling for a Commission hearing on the CDP application. That HMMP will need to estimate temporary and permanent construction impacts on ESHA and wetlands, provide a plan for on-site restoration and mitigation, and a plan for off-site mitigation if required. Commission staff have prepared memos summarizing the Commission's mitigation practices for Caltrans staff, and on general requirements for an HMMP, and we can provide these to you. Tabulating impact acreage to ESHA and defining impacts as temporary (vegetation recovery occurs within 12 months of the initial point of disturbance), long term temporary (intermittent or sustained for up to a 24-month period such that vegetation recovery may require more than 12 months from the initial point of disturbance but no more than 12 months

from the conclusion point of disturbance), and permanent (lost to development, frequently disturbed in order to maintain development, involve significant ground disturbance, or necessitate more than 12 months for recovery following the conclusion of disturbance), will expedite the application process for a CDP. The duration of these impacts may affect the mitigation required and the CCC may require further mitigation depending on the nature of impact.

DEIR p. 47 notes that there are two ESHA types within the project area. However, we would also consider the Eriogonum parvifolium ESHA, as it supports the rare Smith's Blue Butterfly. Please provide a map of the extent of E. parvifolium by area to account for impacts to seed bank. Coastal scrub may also count as ESHA if it contains rare species, but if the species composition consists only of the species listed in the DEIR, as identified on DEIR p. 86, mitigation would not be required for this scrub. The CCC often requires a 300-foot buffer for passerine bird nests during nesting season. Please update DEIR p. 142 to increase the buffer for passerine bird nests from 100 feet to 300 feet.

Staff is extremely concerned about the possible impacts to South Central California Coast steelhead and look forward to collaborating on an avoidance, minimization, and mitigation plan with Caltrans and National Marine Fisheries Service (NMFS) to avoid impacts. As mentioned above, we see a critical component of this as minimizing the seasons in which stream diversions or in-water work would need to occur, especially for alternative 6.

Invasive/Noxious Weeds. The DEIR states that the mitigation and monitoring plan would address invasive weed treatment and that noxious weeds would be removed and replaced by natives. Additionally, DEIR p. 86 notes the presence of Cortaderia jubata, which could be referred to as jubata grass rather than pampas grass. Staff recommend that the project include eradication of all non-native invasive species within the project area to support the proposed habitat enhancements.

Marine Resources/Noise Impacts. The Biological Study Area was cited as a 300-foot buffer from the area of potential impact. Harbor seal haul outs and other marine mammals past that distance may need to be considered for acoustic disturbance. As identified in the DEIR, Limekiln Creek supports steelhead trout passage to and from the Pacific Ocean. Elevated sound levels from pile driving could result in additional impacts to steelhead trout, harbor seals, other fish or marine mammals. Please prepare a plan to implement avoidance and mitigation measures to limit the impacts on steelhead and marine mammals hauled out near the project area from pile driving. Please be aware that the Commission has imposed special conditions limiting hydroacoustic impacts of construction and pile driving, and we may need to discuss those limits in the CDP application phase.

The presence of black abalone in the area suggests that relocation and mitigation may be required if impacts occur from construction activities. We

look forward to working with Caltrans and National Marine Fisheries Service (NMFS) on a plan to avoid impacts to this critically endangered population.

Hydrology and Water Quality. The DEIR has limited information related to existing/proposed drainage and water quality measures within the project area. As identified on DEIR p. 71, the impervious surface area for the project area will increase by approximately 40-50% for both alternatives as compared to the existing site condition. Due to the significant increase in impervious surface area resulting from the project, we recommend that Caltrans analyze numeric sizing standards for treatment BMPs. Specifically, this includes treating the runoff from the 85th percentile 24-hour design storm for volume-based BMPs (such as a bioretention basin), or the runoff from the 85th percentile 1-hour design storm (multiplied by a safety factor of 2) for flow-based BMPs (such as a vegetated swale). Is it possible for all runoff from the new bridge and viaducts to be directed to infiltration BMPs? Careful attention should be given to options for addressing pavement and bridge runoff appropriately to avoid any impacts. Please describe the technology and methodologies that will be used to maximize the efficiency of the removal of trash, sediment, metals, nutrients, and petroleum products from runoff.

Both the County (if necessary) and the Commission, through the CDP processes, will be requiring adherence to the applicable BMPs and the SWPPP. As we move into the permitting phase, please provide additional information for all existing and proposed drainage features, including plans showing the number, location, and design of the culverts to be replaced or other drainage facilities proposed to be installed as part of the project.

Archaeological Resource Impacts. Site MNT-1892 is identified in the DEIR as a small midden deposit that will be entirely removed because of the existing bridge demolition. Please describe in more detail why the entire deposit must be removed and analyze any feasible alternatives to preserve the site. Please also describe all coordination with the relevant tribal entity on these cultural remains.

Utilities. The DEIR states that the "...Overhead utility lines in conflict with project improvements shall be undergrounded..." Please clarify if all utility lines within the project area will be undergrounded regardless of whether they conflict with the project improvements. The Coast Highway Management Plan (CHMP), Big Sur Land Use Plan, and Public Utilities Commission regulations all strongly favor, if not require, the undergrounding of utilities. Staff strongly recommend that the project description include the removal of all utility poles and the undergrounding of phone/electrical facilities from south of the Rain Rocks viaduct to Limekiln State Park to enhance the visual resources and increase dependability of utility services for residents and visitors to the area.

Grading. Both project alternatives will involve significant grading. Please provide information on the expected import and export quantities of soil, as well as the plan for removal of any soil or other materials.

Once again, we appreciate the hard work and extensive study undertaken for this environmental document, which will greatly help guide all of us as we move forward with designing and analyzing various project alternatives.

Response to Comment 3

Thank you for taking the time to provide feedback. Responses below are coordinated with the associated comment sections. Caltrans looks forward to further coordination with Coastal Commission.

Permitting Jurisdiction. The S-3 Project Impacts table as well as Section 2.2.1 have been updated. Caltrans anticipates an Aesthetic Design Advisory Committee during the next phase of the project to get input from the public.

Bridge Alignment. The existing highway location is not stable. The original six-span structure has undergone retrofit, lengthening, and numerous repair projects since construction in 1957. The northern abutment has experienced slope stability issues since the first winter following the original construction. This led to a three-span extension of the bridge, construction of a steel bin wall, and two adjacent reinforced concrete crib walls to support the bridge and highway. In addition, a concrete sea wall was built near the toe of the slope (the beach) and the slope above it reconstructed to the highway.

In the 1970's and 1980's two crib walls were constructed on the beach behind the sea wall. Rock slope protection has been placed in front of the wall for decades. Historical project and maintenance records indicate that the structures and rock slope protection experience damage and distress due to high wave action during winter storms and require continued maintenance and replenishment of rocks (8-ton and larger). There is also evidence of movement at the roadway level and failures in the slope between the bridge and shoreline protection structures. There are two large landslides mapped above the highway by the California Geological Survey (Wills et al., 2001) and identified and delineated in the Structure Preliminary Geotechnical Report (Turner et al., 2014).

Replacing the bridge in the same alignment would mean continued maintenance efforts to retain the highway on an unstable slope. Placing the bridge east of the existing bridge would still leave the highway on a landslide and require large retaining walls. This would require continued maintenance of damage as movement continues. Alternative 6 will span the landslide area which will allow the slope to change naturally.

Viaducts and Soldier Pile Wall. The proposed viaducts would span the area that is currently retained by the existing distressed crib wall north of the Limekiln Creek Bridge as shown in Figure 31 in Appendix G.

These crib walls were constructed 60 years ago. There is cracking in the concrete crib members, and they are nearing the end of their service life. The crib walls will be spanned by viaducts 1 and 2. This location also experiences

rock fall frequently. The viaducts width and alignment will provide more area for rock catchment which will reduce damage to vehicles and improve safety.

Viaduct 1 is needed to align the bridge with the highway. A retaining wall alternative was considered but would require large excavation below the highway on the ocean side to build. This would be much more difficult to construct and maintain then the viaduct. No feasible alternatives to Viaduct 2 were found.

The half width viaduct will be one lane wide, on the ocean side (the southbound lane). The northbound lane will be reconstructed to complete the two-lane conventional highway. Viaduct 2 will be full width meaning that both lanes will be on the viaduct. The full width is necessary due to the steepness of the slope at this location and the alignment which will allow rock catchment between the lane and cut slope as mentioned above.

To build the north abutment, part of the southbound highway lane must be removed. The northbound lane will remain for traffic during construction; however, a retaining wall must be used to shore the highway for traffic on one side and allow excavation for the abutment on the other side. After the bridge is complete, the retaining wall and remaining highway lane can be removed.

Existing Blufftop Retaining Wall Replacement. The previous response also applies. Slides are a recurring phenomenon north of the existing bridge. These slides have led to the construction of Rain Rocks Sidehill Viaduct, Raiin Rocks Shed, and Pitkins Curve Bridge. Based on maintenance records, inspections, and geotechnical studies, it was decided to remove old crib walls and replace them with modern viaducts.

Temporary Bridge Pier. After the Draft Environmental Document was circulated, Caltrans confirmed the temporary bridge pier can avoid the creek. Therefore, Alternative 6 will not require additional impacts to Limekiln Creek compared to Alternative 4B. A creek diversion will 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. A stream diversion is required to reduce impacts to aquatic species from working directly in the water. All riparian impacts will be replanted at a one-to-one or three-to-one ratio depending on tree species and size and duration of impact. Caltrans will coordinate with the Coastal Commission and other regulatory agencies to determine replanting/mitigation ratios. All temporarily disturbed areas will be recontoured and restored upon completion of construction activities.

Any stream diversion installed will impact fish passage to some extent, regardless of design. To reduce impacts to fish passage, downstream fish passage will be maintained with a culvert/pipe. Confining the stream diversion to the dry season, when water levels are lowest and steelhead are not typically traveling upstream, will reduce potential disruptions to steelhead migration and spawning. Section 2.4.4 includes the current measures for

South-Central California Coast steelhead; however, it is anticipated that additional measures will be identified during Section 7 consultation with National Marine Fisheries Service and as design develops. Immediately upon completing in-channel work, all in-channel structures will be removed in a manner that minimizes disturbance to downstream flow and water quality.

The temporary bridge pier(s) will be positioned to avoid sensitive habitats, such as riparian areas and endangered species habitats, to the greatest extent feasible. The temporary bridge will be in place when the park is anticipated to be closed for bridge construction (as described in the Draft Environmental Document) and will not permanently impact park facilities.

Visual Resource Analysis. The design of Limekiln Bridge will continue to develop during the next project phase. The local community, partner agencies, and advisory groups will have an opportunity to review these details as the design progresses as well as during the Coastal Development Permit process.

Existing Shoreline Armoring. The Limekiln Bridge Replacement Project was intended to address Special Condition Number 9 of the Coastal Development Permit 3-09-020. Caltrans was not able to complete the approval process for the project before the expiration of Special Condition Number 9. Caltrans is coordinating with Coastal Commission to address this as part of the Coastal Development Permit process. Currently, Caltrans Maintenance monitors the existing revetment and would complete any necessary repairs.

Beach revetment removal is planned after the construction of the new bridge. The slope that the crib walls on the beach support is one and a half-to-one (horizontal to vertical) at the southeast end and steeper than one to one at the north-west end. The crib wall dimensions are 25 feet high and 15 feet wide. The width is buried under the slope and supporting it. The slope height to the highway is between 80 to 100 feet. The slope above the highway continues more than 700 vertical feet. Removal will start at the southeast end and work northwest.

As removal moves northwest, slopes will be significantly steeper than one-to-one. This will lead to short-term safety and slope stability risks in construction and potential long-term destabilization of the mapped landslides above the road. Caltrans cannot responsibly create those hazards when they are not needed to complete the bridge replacement. Proposed removal is highlighted in yellow in Figure 32 in Appendix G.

Move removal may be possible including removing man-made features to three feet below the grade and/or aesthetic treatment of remaining wall. All rock slope protection can be removed and gabion baskets (wirework container filled with rock, concrete, or fill material) in front of the revetment also can be removed (if any remain at the time of construction).

Plants do not exist on this slope due to its rocky composition and on-going movement. Planting to stabilize the slope would be unsuccessful. If parts of shoreline armoring remain, it may be buried, or aesthetic treatments applied.

The highway and new bridge reliability will not be dependent on the slope stability. The slope will be allowed to move naturally. The requirement of the Coastal Development Permit from 2009 is to implement a solution where the beach and slope will return to its natural state. Armoring will be removed to extent that is safely possible including removal below the finished grade. No maintenance will be performed. If, in the future, armoring is uncovered, Caltrans will be responsible to remove what is exposed. A more detailed discussion of the current revetment state and proposed plan is discussed in Section 1.5.

Slope Stability Documentation. Slope stability investigation reports will be provided during the permitting stage of the project.

Minimize Energy Consumption and Vehicle Miles Traveled. Within the project vicinity there are limited areas where the proposed batch plant could be placed. Given the footprint needed to accommodate the batch plant's structure, material stockpiles, plant operating equipment, construction vehicle ingress/egress, and proximity to the bridge site, the selected location is the most reasonable and feasible for the project. In addition, this location has been utilized as a batch plant and materials storage in the past for projects like Paul's Slide, Rain Rocks/Pitkins Curve Construction, and various Maintenance Activities. It would be less ground disturbance to reuse this area rather than disturb a different area that has not been utilized for staging in the past. After construction the pullout would be restored to its existing state.

Since the proposed batch plant would only be utilized during the bridge construction, any impacts to parking or views would be short-term and only for the minimum duration necessary to facilitate construction. Caltrans vision statement is to provide a safe and reliable transportation network that serves all people and respects the environment. By utilizing previously disturbed areas, near the bridge site, helps to reduce VMT during construction, minimizes conflicts between the travelling public and construction vehicles, protects biological resources, and speeds up the overall process minimizing the duration of the construction process.

A materials management or site plan would be a required contractual bid item and prepared by the contractor. A site-specific stormwater management plan (SWPPP) would also be a required part of the contract, these two bid items would effectively provide oversight management of the batch plant location, the bridge construction site, and any associated disturbance to State Parks property.

Worker trips contribute negligible amounts of greenhouse gas/vehicle miles traveled to the overall emissions of the project. Given the site location, carpooling will likely be utilized to transport workers to the project. There is

also the opportunity to utilize the campground to provide housing for the construction workers. This would reduce the greenhouse gas/vehicle miles traveled associated with the project. Housing personnel onsite would also not have a significant effect on the construction timeline.

Caltrans has analyzed greenhouse gas and construction emissions through the environmental process. An Air Quality/greenhouse gas emissions technical study was completed for the project. Because the anticipated construction emissions are not anticipated to exceed air quality thresholds, it's difficult to determine impacts for which mitigation would be necessary. Additionally, there are no sensitive air receptors in the project vicinity.

The project will implement reasonable and feasible minimization measures as outlined in the environmental document. Additionally, the project level site-specific stormwater management plan (SWPPP) will address water pollution control measures that correlate with standard dust emission minimization measures such as covering soil stockpiles, watering haul roads, watering excavation and grading areas, etc. By incorporating appropriate engineering design and storm water Best Management Practices during construction, minimal short-term air quality impacts are anticipated.

An electric vehicle charging station is outside the scope of the project. The recommendation to locate a charging station on State Parks property could result in additional State Parks and Section 4(f) impacts. Caltrans focus remains on implementing strategies to mitigate coastal bluff erosion and optimize efficiency for the Limekiln Creek Bridge Replacement Project.

Sea Level Rise. Caltrans will coordinate with Coastal Commission staff during the permitting stage regarding sea level rise and potential hazards analysis.

Public Access. Campsites in the lower half of the campground will be needed for construction staging. Although campsites in the upper half of the campground will not be needed, State Parks is concerned that construction noise and equipment nearby would degrade the recreational user's experience. To mitigate this, Caltrans has offered to compensate State Parks for the entire campground rental during construction (approximately four years). Caltrans will conduct additional coordination with State Parks during the next project phase to determine if limited openings for day use of the park would be feasible.

Caltrans has coordinated with the local community, the County, State Parks, and the Coastal commission to create the mitigation package for this bridge replacement project. We look forward to continuing this coordination as final design progresses.

Environmental Justice. Though Limekiln State Park may be used by minority or low-income populations, its closure is temporary and would not disproportionately affect environmental justice communities. Caltrans public

outreach efforts included Monterey County, not just the immediate project vicinity.

Environmentally Sensitive Habitats (ESHA). Caltrans will prepare and submit a Mitigation and Monitoring Plan (which will contain the required Habitat Mitigation and Monitoring Plan information, following the Commission's guidance) to regulatory agencies, including the Coastal Commission prior to the Coastal Development Permit application hearing.

Language has been added to Section 2.2.1 to describe *Eriogonum parvifolium* as an Environmentally Sensitive Habitat Area. Due to access constraints associated with terrain, mapping of *E. parvifolium* by area has not yet been completed. Additional surveys will be conducted during seasonally appropriate botanical survey periods to map this species by area.

Within the project area, the coastal scrub vegetation community is not known to contain rare plant species or California Native Plant Society ranked sensitive vegetation alliances. Additional surveys for this level of vegetation community composition were conducted by Caltrans staff on April 14, 2024 to address this comment. Section 2.4.1 has been updated. With the exception of Sitka willow, no Environmentally Sensitive Habitat Area vegetation communities (including alliances and associations described in the Manual of California Vegetation and California Department of Fish and Wildlife Natural Communities List, 2023) are present within impact areas. If additional Environmentally Sensitive Habitat Areas are identified, Caltrans will coordinate with the Commission to identify appropriate avoidance and minimization measures.

Nesting buffer distance within the document (measure NB-2) has been clarified.

Since release of the Draft Environmental Document, Caltrans has determined that Alternative 6 will be selected and will confine stream diversion activities to one dry season. This will include creating a dry area to remove the existing bridge pier, thus reducing in-stream work to the minimum extent possible. Caltrans will continue to coordinate with National Marine Fisheries Service and the Commission as related to potential South Central California Coast steelhead impacts, and avoidance and minimization measures.

Invasive/Noxious Weeds. Eradication of all non-native invasive species in the project area is not a feasible measure, however non-native invasive species within restoration areas will be controlled to the extent feasible, as required by permit approvals. Non-native invasive species will be removed from all impact areas during initial ground disturbance and temporarily stored and disposed of appropriately to prevent propagation. These areas of disturbance will be reseeded and/or planted with native plant species. A measure (INW-1) has been added to Section 2.4.1.

Marine Resources/Noise Impacts. Caltrans has and will continue to coordinate with National Marine Fisheries Service and the Marine Mammal Protection divisions of the National Oceanic and Atmospheric Association Fisheries and U.S. Fish and Wildlife Service for potential impacts to steelhead and marine mammals. Using the best available information (Section 2.4.4), there are no known marine mammal haul-outs within or adjacent to the Biological Study Area (300-foot buffer around impact area). Airborne acoustic and hydroacoustic impacts will be avoided as feasible; however, geotechnical investigations have not been completed and pile type and size required are not yet determined. Additional avoidance and minimization measures identified in the document (MM-1 through MM-6) may be included if there is potential for acoustic impacts to regulated species. Caltrans will continue to coordinate with regulatory agencies to avoid, minimize and or mitigate for acoustic impacts.

Caltrans appreciates the Commission's collaboration in working to avoid impacts to sensitive species. Species experts conducted focused surveys of the area to assess habitat quality and gather quantified population data in the biological study area. Based on these surveys, abalone relocation is not anticipated due to the very low-quality habitat and species absence within impact areas. Caltrans will continue to coordinate with National Marine Fisheries Service related to black abalone and any potential for relocation.

Hydrology and Water Quality. Because of the topography surrounding the bridge, the options for Treatment Best Management Practices are limited and will likely be a vegetated strip of swale. This will be determined during the next project phase as design progresses. Sediment, metals, nutrients, and petroleum products from runoff are generally treated with biofiltration within the vegetated areas. Once the Treatment Best Management Practice is selected, Caltrans can provide greater detail and calculations.

Archaeological Resource Impacts. Site MNT-1892 is located directly beneath the existing Limekiln Creek Bridge and demolition of the existing structure, along with construction of the temporary bridge and new bridge will require impacts to the entire site area under either alternative. It is likely that the entire site deposit will be removed because of project activities. Consultation has been ongoing with the Salinan Tribe of Monterey and San Luis Obispo Counties. They have monitored the Phase II testing that took place at the site, and have reviewed all draft reports (Testing Proposal, Archaeological Excavation report).

Utilities. There is only one utility in the project location-overhead communication lines on utility poles. These are in-conflict with the project and will be undergrounded.

Grading. The project will be designed to balance cuts and fills of material, as much as feasible, to eliminate or reduce the amount of excess material. Import is not anticipated. All project fill will be compacted and treated with erosion control per design standards. Any excess or unusable unconsolidated

material will be permanently moved off-site. There will be no long-term storage or stockpiling of material onsite. Caltrans must approve of the Contractor's proposed offsite disposal location. Caltrans will ensure that material is disposed in an area with no potential for sediment transport into sensitive aquatic resources. A qualified biologist will survey and approve the disposal site prior to material disposal.

Measure BA-11 has been added to the document to accommodate this and is reflected in Section 2.4.4, 3.2.4, and Appendix C.

Comment 4 Keep Big Sur Wild

Christina McGinnis, Keep Big Sur Wild, February 5, 2024

Keep Big Sur Wild (KBSW) is a group of residents concerned with protecting the scenic landscape, sensitive natural resources, and wild, rural character of the Big Sur coastal region. We appreciate the opportunity to provide our initial impressions of the alternatives presented for the Limekiln Bridge Replacement project.

Our comments focus primarily on the design options presented for the bridge in CalTrans' draft EIR/EA. The following text highlights several items that warrant a reconsideration of the design of the bridge rails (in particular) in the context of existing policy and the guidance provided by the Coast Highway Management Plan (CHMP) and the Big Sur Land Use Plan (BSLUP). Additionally, the visual assessment and analysis in the DEIR/EA is inadequate in light of the requirements in these documents.

1. The visual simulations do not properly depict the existing or proposed conditions.

The photographs used to show the existing conditions obscure the views of the existing railing design, and must be re-done to properly show how the views to the ocean would be altered with the new rail design. The new photographs and simulations must accurately depict the change and feel that would occur by the more modern design of the bridge rail as is currently proposed. Photos looking out to the ocean (while driving) with existing/proposed rails should be included side by side in the environmental document's visual resources section in order for proper assessment and analysis to occur. We have provided photographs of the existing Limekiln corridor and its bridge rail openings (sent under separate cover), which mirror several other bridge rail openings along Highway 1, such as for BR 44-46 (Torre Canyon-picture attached) and others. They each offer views to the ocean, with a square viewing portal that pays homage to the historic arches of bridges such as Bixby and Garrapata. While we acknowledge that these rail examples (as currently exist for the Limekiln bridge) are not part of the suite of arched opening historic bridges dating back 90 years or so, they still honor the type of design that allows for visual access while not appearing "modern".

We respectfully request that a more thoughtful design for the bridge rail be presented and prepared for the public's consideration-one that honors the historic character of the highway, as is required by the CHMP and the BSLUP (see discussion below).

2. Coast Highway Management Plan and the Big Sur Land Use Plan

The Coast Highway Management Plan is a document that must be adhered to as the Highway One corridor management plan. The Guidelines for Corridor Aesthetics element of the Coast Highway Management Plan specifically address the construction of new bridges as follows (*emphasis added*):

"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.*

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. 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*."

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 visual analysis document (sent separately to KBSW for review) acknowledges the following: "*Bridge rails are noticeable components of both historic and non-historic structures. The railings of the coastal bridges are important in their ability to define the architectural style of structures as well as their potential effect on ocean views*. Open style railing is associated with older structures and design, while the railing constructed since the 1970's is typically solid with no articulation on the roadway side of the rail. *Recent safety testing has allowed open style railing to once again be used on structures along the roadside*.

Additionally, the Big Sur Highway 1 Sustainable Transportation Demand Management Plan highlights iconic visual access as one of the core values, and states "*The aesthetic value of the ocean viewshed sets Highway 1 apart from many scenic drives*."

The visual analysis in the DEIR confirms that “Both proposed project alternatives would contribute to a cumulative increase in the overall built character of the Big Sur corridor.” And: “The cumulative visual impact would increase the “man-made” presence in the area.” Highway 1 is an All-American Historic Road that must be preserved to the maximum extent. To simply acknowledge an impact is not acceptable; *an agency must reduce impacts to the maximum extent feasible, as required by CEQA*.

The proposed project design options for the railings do not comply with the need to maintain, at a minimum, the aesthetic qualities, visual compatibility and *historical context* of Highway One. Visual access is considered to be the primary means of public access to Big Sur, as is reflected in the Big Sur Land Use plan. Other policies in the BSLUP also protect the historic and rural character of Big Sur. These policies must be weighed when considering the design of the new bridge. As is mentioned in the DEIR, Communication with the California Coastal Commission and California State Parks has been ongoing since August 2021, and both agencies *brought up concerns with the visual impacts and shadowing effects of the new bridge*. Visual access and the historical context of Highway 1 matter and are required to be protected by the BSLUP and the CHMP.

Finally, mitigation measures can’t require future design-the design must be disclosed now before any conclusions can be reached in the environmental document regarding the impacts of the project.

KBSW looks forward to future iterations of the draft EIR/EA as well as additional design options for consideration for the bridge rails, and providing additional input.

Response to Comment 4

Thank you for taking interest in this project and providing feedback. There will be further coordination regarding aesthetic design with special interest groups, resource agencies, and the public in the next phase of the project.

1. The visual simulations do not properly depict the existing or proposed conditions.

The viewing locations, called Observer Viewpoints in the document in Section 2.2.3, are consistent with the Federal Highway Administration guidance. Because of the number of potential viewpoints, it would be impossible to attempt to depict every viewing scenario. The locations were selected because they best showcase the typical visual character of the project, show unique project components and affected resources, and represent affected viewer groups. Additional renderings are anticipated for the next project phase.

2. Coast Highway Management Plan and the Big Sur Land Use Plan

The bridge rail currently proposed and shown in the visual simulations is Type 86 modified. It was selected because it is consistent with Pitkins curve. Other "open-style" bridge rail types that meet current safety requirements may be considered during the next project phase.

The plans presented in the document, along with the associated mitigation measures, is the most current design available. The design details are subject to change during the final design phase based on public input, project permitting, and available funding.

Regarding mitigation measures, as discussed in Section 3.2.1, the visual impacts are considered significant under CEQA. Though Caltrans will implement measures to reduce the impact, the visual impact is not fully mitigable.

Comment 5 Monterey County

Anna Ginette Quenga, Monterey County Housing and Community Development, February 5, 2024

Thank you for allowing the County of Monterey – HCD to opportunity to review and comment on the draft environmental document for the bridge replacement project. As you are aware, Coastal Development Permits for the project will be required and unless the California Coastal Commission takes jurisdiction, the County of Monterey will process the entitlements in accordance with our Local Coastal Program. Therefore, we have taken the time to extensively read through the DEIR/EA and provide comprehensive comments so that if/when acting as a Responsible Agency, the County would be able to consider the FEIR, find the document adequate, and make the appropriate CEQA findings.

General Comments

Additional graphics illustrating the project would aid in understanding the scope of the project. In addition, the document did not adequately quantify project specifics (grading, tree removal, vegetation removal, etc.), which would make it difficult to determine if impacts were accurately identified and if mitigation measures sufficiently address the impacts.

Much of the project area is within the County of Monterey's jurisdiction and would be subject to the policies of the Big Sur Coast Land Use Plan (BSC LUP) and regulations contained in the accompanying Coastal Implementation Plan (CIP). Often, these policies and regulations address resource impacts specific to Big Sur and through consistency, can provide a path for protection of those resources. As such, the DEIR/EA should reference applicable BSC LUP and CIP policies and regulations and address project consistency.

Visual/Aesthetic Resource Comments

1. Please provide HCD-Planning with a copy of the Visual Impact Assessment, dated August 2023.

2. Protection of the unparalleled beauty and cultural characteristics of the Big Sur Coast is identified as the main philosophy and goal of the Big Sur Land Use Plan (LUP Chapter 2.1 and 2.2). To this end, the "critical viewshed" was defined as everything visible from Highway 1 and associated major public viewing areas including turnouts. The critical viewshed heavily restricts development and in most cases prohibits development visible from Highway 1. Although development is generally not allowed within the critical viewshed, there is an exception for road maintenance and safety improvements (Policy 3.2.5.C.1). Road maintenance and safety improvements are allowed if they are consistent with applicable policies of the LUP. Chapter 4 of the LUP directs Monterey County to take an active role in guiding the use and improvement of Highway 1, with the objective to maintain and enhance the highway's aesthetic beauty and to protect its primary function as a recreational route (Key Policy 4.1.1). The guiding policies require improvements to Highway 1 in order to increase its service capacity and safety, consistent with its retention as a scenic two-lane road (General Policy 4.1.2.1). Road capacity and safety improvements along Highway 1, require standard 12-foot lanes and 2 to 4-foot wide shoulders where physically practical and consistent with other policies, in order to maximize vehicular access to the Big Sur coast (Specific Policy 4.1.3.A.1). The proposed project is consistent with these goals and objectives as a safety improvement designed to protect the integrity of the highway, thereby increasing enjoyment and reliability of this recreational route, while retaining its capacity as a two-lane road with 12-foot lanes and 4- foot shoulders throughout the project site. The following comments relate to visual impact concerns.

3. In designing management, maintenance, and safety improvements, the objective is to maintain the highest possible standard of visual beauty and interest (General Policy 4.1.2.2). Overall design themes for the construction and appearance of improvements within the Highway 1 right-of-way are set forth to ensure that all improvements to the extent feasible, are inconspicuous and in harmony with the rustic natural setting of the Big Sur Coast (Coastal Implementation Plan (Part 3) section 20.145.130.B.2 of the). The Big Sur Coast Highway Management Plan Design was developed by Caltrans, in cooperation with other agencies and local citizens, to ensure that new construction, where it occurs, is in keeping with the unique character and setting to the Big Sur corridor (Aesthetic Improvement Policy 4.1.3.B.4). The Big Sur Coast Highway Management Plan contains five elements, including Guidelines for Corridor Aesthetics. The proposed project shall be designed consistent with the Big Sur Land Use Plan policies, the Big Sur Coast Highway Management Plan, and Title 20 (Coastal

Zoning Ordinance), which includes regulations for projects within the Design Control District.

4. Draft Environmental Assessment (DEA) section 2.2.3 states “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.” This statement is misleading and dismissive of the applicable aesthetic requirements enforced by the Big Sur Coast Land Use Plan, Coastal Implementation Plan (Part 3), and Big Sur Coast Highway Management Plan. Caltrans is required implement the recommendations of the Big Sur Coast Highway Management Plan (2004) per California Streets & Highway Code section 121. Further, the Big Sur Coast Highway Management Plan is supplemental to the Big Sur Coast Land Use Plan and is enforced by reference. While a single bridge style may not be apparent along Big Sur’s segment of Highway 1, there is a uniform aesthetic theme. Per the Big Sur Coast Highway Management Plan, “Any new bridge 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 [emphasis added].” The proposed bridge (Alternatives 4B and 6) incorporates shallow arched spandrels, rather than the more dramatic arched spandrel seen on many of Big Sur’s historic bridges.

5. The Draft Environmental Impact Report (DEIR) notes that “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.” In addition to local community input, the forthcoming Coastal Development Permit would subject to review by the South Coast Land Use Advisory Committee, who’s recommendation would ultimately be considered by the Monterey County Planning Commission and/or Board of Supervisors.

6. Avoidance, Minimization, and/or Mitigation Measures of the DEA/DEIR only address coordination with Caltrans District 5 Landscape Architecture. The DEIR’s Visual/Aesthetic Avoidance, Minimization, and/or Mitigation Measures should be consistent with or incorporate the recommendations of the Big Sur Coast Highway Management Plan. Further, the following mitigation measures noted in Section 2.2.3 of the DEA should be added as mitigation measures in Section 3.2.1 of the DEIR: VIS-6, -7, -9, -10, -11, -13, -14, -15, -16, and -17. These additional mitigation measures complement the resource protection policies of the Big Sur Coast Land Use Plan.

7. The following Big Sur Coast Highway Management Plan recommendations pertaining to new bridges and guardrails shall be considered and/or implemented into the design:

    A. Any new bridge along this Coast must complement the architecturally significant historic bridges in the corridor;

    B. Incorporate common design theme: the concrete arch spandrel;

    C. 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;

    D. In the interests of overall visual 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;

    E. New retaining walls visible from the highway or other public viewing areas should be designed and constructed for visual compatibility with the rural character. Use of natural appearing materials, such as stone and timber, will be preferred when appropriate to the local setting.

    F. Newly constructed guardrails or any other roadside safety features should be designed for visual compatibility with the rural character. Natural-appearing materials, such as stone and timber, are preferred where they are appropriate to the local setting. Metal beam guardrail is commonly used along Highway 1 and is visually acceptable in most situations. Wood rather than steel elements are generally more consistent with the overall rustic character. Further options should be considered for application of alternative guardrail designs that are more compatible with the rural character. New guardrails should incorporate natural or natural appearing materials such as stone, timber, or textured and stained concrete. Where steel elements are required based on other considerations, treatments that limit the overall visibility and effect of galvanized steel elements should be integrated to the extent maximum extent practicable. Treatments include minimizing the overall profile of the feature and etching or painting the steel elements.

G. Specific to guard rails: A design that allows views through the rail (a feature of the historic open balustrade rail) and an overall appearance that shares a family resemblance with the historic open balustrade rail, thus creating a sense of continuity among the historic bridges and new bridges.

8. Highway 1 facilities are exempt from the Critical Viewshed policies of the Big Sur Coast LUP (Policy 3.2.5.C.1). However, Highway 1 facilities, including new bridges, shall be of a design complementary to the rural setting and character of Big Sur, with preference for natural materials. Public Access policies (Chapter 6.1 of the Big Sur Coast LUP), specifically visual access policies, need to be taken into consideration when designing the proposed replacement bridge. Visual Access is access for scenic viewing of the shoreline and/or ocean from either a vista point or public road or trail. Figure 2 – Shoreline Access Plan, Central Section, of the Big Sur Coast LUP indicates that the subject project site is in an area where public access is required (Priority 1; major access area). Section 20.145.150 of the Big Sur Coast CIP (Public Access Development Standards) states "[T]he protection of visual access should be emphasized …[and] Visual access shall be maintained by directing all future development out of the viewshed." As proposed, both alternatives introduce visually dominating structures and impact visual access. General Policies 6.1.4 requires that visual access be protected for long term public use. When viewed from Limekiln State Parks campground (looking west) the DEIR accurately notes that the "wider bridge deck and taller girder would dominate the natural elements of the beach and vegetation, negatively affecting its unity and intactness value." While visual access of the ocean and horizon would be reduced due to the taller girders when compared to baseline conditions, reducing the number of columns significantly increases contiguous ocean views. Relative to project views along Highway 1, Alternative 6 appears to minimize changes to the physical environment by not removing the rock outcropping at the southern abutment and locating the required column further south to reduce its visual presence. Visual access through the guardrail should be better addressed and analyzed in the FEIR. Guardrail alternatives are recommended. The project should be better designed to maximum and enhance the public's visual access of the Critical Viewshed (views from Highway 1, beaches, turnouts, and other major public viewing areas) while also ensuring safety. Please provide additional technical information needed to justify the impacts to the Critical Viewshed and substantiate the proposed replacement build design.

9. In summary, the Monterey County Planning Commission, and ultimately the Board of Supervisors, must make the finding that the project is consistent with the applicable goals, text, and policies of the Big Sur Coast LUP, Coastal Implementation Plan, Title 20, and the

1082 General Plan. The DEIR section 3.2.1 concludes that the proposed project is inconsistent with these required Coastal planning documents, “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” and “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.” Consistency with the above-mentioned documents will be required for staff to support the proposed project.

Biological Environment/Biological Resources Comments

1. Section 2.1.14 of the DEIR/EA identifies that suitable habitat for 12 special-status plant species occurs in the project area, but no plants were seen and that 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. This appears to be differed mitigation which would be improper and inconsistent with BSC LUP Policies 3.3.1; 3.3.1.1; and 3.3.3.A.5.

2. Section 2.1.15 of the DEIR/EA identifies that 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. This should occur in accordance with BSC LUP Policy 3.3.3.A.10. Although nonnative animals may not have the same protections as special status animals, appropriate care should be taken during their removal and this section makes no mention of how this would occur.

3. Section 2.4.1, pg 88 – Fish Passage, of the DEIR/EA states that 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. Construction of the bridge would involve creek diversion, but potential impacts were not identified and addressed. This should be done for adequacy of the document as well as for consistency with BSC LUP Policies 3.4.3.B.3 and 3.4.3.B.5 and accompanying regulations in CIP sections 20.145.050.B.3 through 5.

4. Section 2.4.1, pg 88 – Temporary Impacts, of the DEIR/EA states that there would be temporary impacts to natural areas to remove the existing bridge and construct the new bridge and viaduct and that theses impacts would include tree and vegetation removal, grading,

compaction and foot traffic. It is mentioned that a trestle would be constructed to reduce impacts to the extent feasible. However, the approximate area of disturbance, tree removal, vegetation removal, and grading were not quantified. Nor was tree or vegetation species identified. In order to clearly decern potential impacts, this information must be identified. The following paragraph states that the project would have temporary impacts on 0.295 acres of Sitka willow thicket. However, it is not clear if this area is included or in addition to the area of disturbance discussed in the paragraph above. This should be clarified. Quantification and clarification shall also address project consistency with BSC LUP biological resource protection policies 3.3.1; 3.3.2.1; 3.3.3.A.3 and 3.3.3.A.5 and accompanying regulations in CIP sections 20.145.040.B.1; 20.145.040.C.1.c and 20.145.040.C.1.e as well as forest resource protection policies 3.5.1 and 3.5.2.2 and accompanying regulations in CIP sections 20.145.060.A.1; 20.145.060.B and 20.145.060.D.1 through 9.

5. Section 2.4.2, Table 8 of the DEIR/EA indicates that the project would result in temporary impacts to approximately 22,259 square feet perennial stream, tidal/navigable waters and riparian area/coastal wetlands and mitigation measures are identified that would potentially avoid or minimize impacts to aquatic resources. The Temporary Impacts discussion states that construction access and work areas may require minor clearing and grubbing, tree trimming or removal, ground compaction, and temporary shading of the stream and riparian areas. The amount of vegetation and tree removal should be quantified to adequately identify the impact and to determine if the mitigation measure addresses the impact. Quantification and clarification shall also address project consistency with BSC LUP biological resource protection policies 3.3.1; 3.3.2.1; 3.3.3.A.3 and 3.3.3.A.5 and accompanying regulations in CIP sections 20.145.040.B.1; 20.145.040.C.1.c and 20.145.040.C.1.e.

6. Section 2.4.3, Animal Species, identifies potential impacts to special status species that are considered environmentally sensitive in the BSC LUP. Therefore, this section should address project consistency with BSC LUP biological resource protection policies and the accompanying regulations contained in the CIP.

Aquatic Resources “Avoidance, Minimization, and/or Mitigation Measures”

1. Mitigation Measure JUR-1 states that all trees removed will be replanted at a 1:1 or 3:1 ratio, depending on species and size, and that a mitigation and monitoring plan will be used to ensure restoration of the disturbed riparian corridor. As written, this mitigation measure lacks sufficient detail to ensure proper implementation and improperly defers mitigation actions.

2. Mitigation Measure JUR-3 requires installation of protective fencing. The language should be modified to include involvement with a qualified biologist to ensure the fencing is installed appropriately and adequately.

3. Mitigation Measure JUR-5, as written, this mitigation measure lacks sufficient detail to ensure proper implementation. The language should be modified to include involvement with a qualified biologist to ensure barriers are installed appropriately and adequately.

4. Mitigation Measures JUR-4, 6, 7, 8 and 9, as written, lacks sufficient detail to ensure proper implementation.

Crotch's bumblebee "Avoidance, Minimization, and/or Mitigation Measures"

1. Mitigation Measure CBB-1 should identify that a qualified biologist shall perform the survey. Additional detail should also be included to ensure proper implementation.

2. Mitigation Measure CBB-2 should identify that a qualified biologist shall conduct the worker environmental awareness training. Additional detail should also be included to ensure proper implementation.

3. Mitigation Measure CBB-3 the words "would" should be replaced with "shall".

4. Mitigation Measure CBB-4 should identify that a qualified biologist shall be consulted to ensure protective fencing is installed appropriately and adequately.

5. Mitigation Measures CBB-5, as written, this mitigation measure lacks sufficient detail to ensure proper implementation.

South-Central California Coast steelhead critical habitat "Avoidance, Minimization, and/or Mitigation Measures"

1. Mitigation Measures SCCC-4 and 5, as written, lacks sufficient detail to ensure proper implementation.

Smith's blue butterfly, seacliff buckwheat, and seaside buckwheat "Avoidance, Minimization, and/or Mitigation Measures"

1. Mitigation Measure SBB-1 does not read as a mitigation measure.

2. Mitigation Measures SBB-2, 3, 4, 5, 10, 11, 15 and 16, as written, lacks sufficient detail to ensure proper implementation.

Bird "Avoidance, Minimization, and/or Mitigation Measures"

1. Mitigation Measures NB-3 and 4, as written, lacks sufficient detail to ensure proper implementation.

Western pond turtles, coast range newts and other semi-aquatic species "Avoidance, Minimization, and/or Mitigation Measures"

1. Mitigation Measures SAS-1 and 2, as written, lacks sufficient detail to ensure proper implementation.

Cultural Resources (Archaeological) Comments

1. Archaeological: The Historic Properties Treatment Plan states "Specific project-related activities would impact the western portion of MNT-2452H and likely all remaining deposits at MNT-1892. These impacts include substantial cut-and fill activities associated with access roads and laydown areas, installation of utilities and signage, slope protection, and geotechnical boring." The impacts analysis continues "It is likely that the entire site deposit will be removed as a result of project activities." This is potentially inconsistent with the Monterey County Local Coastal Program:

    A. Monterey County Coastal Implementation Plan section 20.147.120.D.1 requires construction activity proposed on properties with an identified archaeological site be designed and located to avoid development on or impacts to the site. This regulation requires alternative siting or location, reduction of project size, and other techniques be utilized where resulting in reduced impact to or avoidance of the archaeological site. The DEIR and accompanying reports don't' appear to analyze alternative sitings to preserve the resource. It is recommended to consider alternative sitings, access roads, laydown areas, installation of utilities and signage, slope protection, and geotechnical boring.

    B. If such construction impacts cannot be avoided, as verified in an archaeological report prepared for the project, a mitigation plan shall be required that is consistent with Monterey County Coastal Implementation Plan section 20.145.120.D.3.

Environmental Justice Comments

1. Ensure the ongoing local participation in decisions concerning the planning and development of Limekiln Bridge Replacement to ensure it has no adverse effects public access to the Big Sur region. Engagement efforts will include nontraditional communication methods, for example, the use of social media, flyers, community

meetings, town halls, surveys, language translation services and focus groups targeted at populations who face barriers to participation.

2. Public access to the coast is important to the health and well-being of the public, and promoting public access for all citizens provides low-cost, outdoor recreation that can improve the overall quality of life of the public, including low-income and underserved communities. The replacement bridge should be constructed and positioned to effectively mitigate the impacts of sea-level rise and extreme weather conditions, ensuring its ability to withstand long-term challenges. This approach will minimize short-term maintenance requirements, enabling continued public access to the Big Sur coast and ensuring the long-term preservation of the coast's environmental quality.

Historic Resource Comments

1. Outreach Efforts: The project was referred to the County's Historic Resources Review Board (HRRB) on February 1, 2024 for input. County staff, Coastal Commission staff, and Caltrans District 5 Cultural Resources staff were present. County staff presented a summary of the project and historical resource issues related to it, and the HRRB asked questions of County staff and Caltrans, particularly regarding Rockland Landing and the wagon trail leading to it. After discussion, the HRRB did not take any formal action on the project, and directed staff to proceed with compiling comments on the project DEIR to submit to Caltrans. At the lead agencies discretion, this could be included as documentation of outreach undertaken for the project.

2. Historical Report: There is narrative discussion of both Rockland Landing and the Rockland Lime and Lumber Company in the Big Sur Coast Land Use Plan's historical resources chapter. Staff appreciates the significant amount of research conducted by Caltrans staff and Far Western Anthropological Research Group in documenting and analyzing this important part of our coastal history. Monterey County Coastal Implementation Plan section 20.145.110.B requires a historical report be prepared identifying historical resources on project sites, analyzing potential impacts to them, and recommending mitigation measures or alternatives to reduce such impacts. Once Caltrans is ready to submit for a Coastal Development Permit, a historical report will be required that can be made available to hearing bodies (such as the County's Historic Resources Review Board) and the public. This could either be a new report or an executive summary of the previous historic resources analyses supplemented to address the Monterey County Local Coastal Program requirements:

    A. Here are links to the relevant historical resources guidelines, policies, and regulations:

i. the County's Guidelines for Historic Assessments: https://www.co.monterey.ca.us/home/showpublisheddocument/75635/636880648839070000

ii. The Big Sur Coast Land Use Plan: https://www.co.monterey.ca.us/home/showpublisheddocument/127044/638346221048930000

iii. The section of the Monterey County Coastal Implementation plan that contains regulations for development in Big Sur: https://www.co.monterey.ca.us/home/showpublisheddocument/37875/636371077975300000

iv. The Historic Resources Zoning of Monterey County Coastal Implementation Plan part 1 (the zoning ordinance): https://library.municode.com/ca/monterey_county/codes/code_of_ordinances?nodeId=TIT20COZO_CH20.54REHIREZODIHRDI

v. The Monterey County local historic register criteria: https://library.municode.com/ca/monterey_county/codes/code_of_ordinances?nodeId=TIT18BUCO_CH18.25PRHIRE

B. The DEIR sates that the Limekiln Creek Bridge is neither individually eligible for historic listing or a contributing structure to the Carmel San Simeon Highway Historic District (CSSHHD), and the historic properties treatment plan includes analysis indicating the bridge has diminished integrity. The historical report prepared for the Coastal Development Permit should include an analysis of why the bridge is not a historical resource (because it lacks significance, integrity, or both) or a contributing feature to the CSSHHD (such as being built after the period of significance, etc.). This should be supported by citing the appropriate local, state, and federal historic register criteria. While Caltrans historic bridge inventory is helpful in this regard, it should not be the sole basis for the conclusion that the bridge is not a historic resource.

C. Some basic discussion of the CSSHHD feature that is present in the project area, a battlement style parapet (DM-343), and why the project would not impact it should be included.

D. An analysis of the potential impacts to the Rockland Lime and Lumber Company Historic Landscape District and Rockland Landing as discussed in the comment below.

E. Appropriate analysis of how the replacement bridge design fits within the historic context of Big Sur as discussed in the comment below.

3. Historic Impact Analysis: The project is within the Rockland Lime and Lumber Company Historic Landscape District, an extensive cultural landscape associated with their operation, which processed lime in the creek between 1887 and 1890. The only feature of the district present which could be impacted is Rockland Landing, a doghole port or schooner landing, and its associated features.

   A. Big Sur Coast Land Use Plan Policy 3.10.2.1 states that new development shall, where appropriate, protect significant historical buildings, landmarks, and districts because of their unique characteristics and contribution to the cultural heritage of the County, and Monterey County Coastal Implementation Plan section 20.147.110.C.1 requires that development on properties with an identified historical site be compatible with it through incorporation of appropriate design, structural and architectural features, siting, location, and other techniques as recommended in the historical survey.

   B. The DEIR concludes that both alternatives would impact the historic landscape district and Rockland Landing, though it isn't explained in the DEIR how having a new bridge would diminish the integrity of the district. Alternative 4(b) also has a direct impact on Rockland Landing. The DEIR pg. 63 describes this as being due to movement of the abutment and bridge, and acquisition of right of way. The historic properties treatment plan shows that the bridge re-alignment would encroach on a small portion of one of the original wagon trail segments. As written it isn't clear in the DEIR how the project would impact this historic resource or the level of severity of this impact.

   C. Analysis of the level of impact of both alternatives, with recommendations to reduce these impacts should be included in the environmental document and historical report prepared for the Coastal Development Permit submittal. It is recommended to utilize the Secretary of the Interior's Standards for the Treatment of Historic Properties, with Guidelines for the Treatment of Cultural Landscapes and discussion of the different aspects of integrity and how they would be impacted from National Register Bulletin 15, How to Apply the National Register Criteria for Evaluation.

   D. Generally to be consistent with these policies and regulations, mitigations or alternatives which avoid or reduce impacts to historic resources should be included in the historical report and considered prior to mitigating through documentation/outreach.

4. Big Sur Highway 1 New Bridges & Continuity: While the bridge may not be significant, it is along Highway 1 in Big Sur, which was the first scenic highway in the state scenic highway system and is one of the nations first “All American Roads.” The Guidelines for Corridor Aesthetics in the Big Sur Coast Highway Management Plan states new bridges along this corridor must complement the architecturally significant historic bridges in the corridor, with specific guidelines to achieve this while being authentic in design rather than emulating historic bridges. The final bridge design should be consistent with these guidelines. The County’s Historic Resources Review Board (HRRB) should be consulted for feedback regarding the final design in accordance with proposed Mitigation Measure No. VIS-2 on pg. 57 of the DEIR.

Land Use/Planning Comments

1. CEQA Guidelines Appendix G question XI.b asks if the project would cause a potentially significant effect due to conflict with any plan, policy, or regulation adopted for the purpose of avoiding or mitigating environmental effects. However the DEIR Land Use and Planning section states no impacts with very limited discussion. This section should include analysis of the applicable policies in the Big Sur Coast Land Use Plan and their accompanying regulations in the Monterey County Coastal Implementation Plan, which contain policies and regulations protecting scenic resources, public access (visual and physical), environmentally sensitive habitat areas, and cultural resources. This could either be in this section or cross referenced with other sections in the EIR that discuss these policies and regulations. The County cannot approve Coastal Development Permits inconsistent with any of these policies or regulations per Title 20 section 20.02.060. There are extremely limited circumstances to allow an exception to this in Title 20 section 20.02.060.B. Overriding considerations cannot be used to approve a Coastal Development Permit inconsistent with any of these policies or regulations, so ensuring that the project is consistent with them as early as possible in the project review process is beneficial to all parties.

2. There is a finding of No Impact for Land Use/Planning and in reviewing the BSC LUP policies under 3.11.2, I have a concern as to paleontological resources:

    A. Paleontological resources were, up until December 2018, included under Archaeological Resources, prior to the change to Geology/Soils.

    B. Five of the six BSC LUP policies consider paleontological resources as requiring protection commensurate with those protections required for archaeological resources.

C. Given the previous categorization of paleontological resources with archaeological resources, a distinction between the two types of resources was overlooked.

D. This IS/MND provides a finding of LTS Impact on paleontological resources under Geology/Soils based on the argument there is a low chance of uncovering such resources within previously disturbed soil. However, Archaeological Resources and Tribal Cultural Resources have findings of Significant and Unavoidable Impact. Given that MNT sites will be destroyed by project construction, it would follow that the same areas being destroyed should undergo a reasonable reconnaissance distinctly for paleontological resources in an effort to meet the CEQA standard for "substantial evidence".

E. Now that Appendix G makes the distinction clear, and Section 5097.5 of the California Public Resources Code specifies that any unauthorized removal of paleontological remains is a misdemeanor, and with provision of a less than defensible argument for LTS Impact, there is risk of "fair argument" to require an EIR.

Noise Comments

The DEIR for the Limekiln Creek Bridge Replacement, in reference to noise impacts, targets sensitive receptor sites in Limekiln State Park, wildlife in the vicinity of the project area, and people residing or working in the project area. A technical report titled “Air Quality, Greenhouse Gas, and Noise Assessment Memorandum, August 4, 2023” was prepared for the proposed bridge replacement. At the time of staff’s assessment of the DEIR’s statements regarding noise impacts the report had not yet been provided after a request was sent. Staff’s comments are based upon policies in the 1982 Monterey County General Plan, and the Big Sur Coast Land Use Plan and their application to the DEIR’s CEQA Significance Determinations for Noise.

The DEIR asks, 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?

A summary of the DEIR determinations is:

a) Less Than Significant Impact. Limekiln State Park will be closed during construction, and there will be no sensitive receptors there. After construction, the predicted noise level there will be 0.2 decibels (dBA) less than current noise levels of 57.6, or will be the same.

b) Less Than Significant Impact with Mitigation Incorporated. Caltrans outlines mitigations to avoid and minimize adverse effects to marine life.

c) No Impact. There are no airports within the project vicinity. Therefore there would be no impact from the proposed project pertaining to airports.

The 1982 Monterey County General Plan outlines mitigation measures for noise impacts, which are listed below.

1. The impacts of new development on existing noise levels would be mitigated by the policies below:

   Policy 22.2.1 – The County shall require new development to conform to the noise parameters established by Table 6, Land Use Compatibility for Exterior Community Noise Environments.

   Policy 22.2.6 – The County shall make available to the public methods and existing noise data which can be employed to reduce unwanted noise from the environment.

2. Noise impacts resulting from development adjacent to existing noise generators would be reduced to insignificant levels by the policies below:

   Policy 38.1.3 – The County shall encourage travel in non-peak hours.

   Policy 42.2.1 – The County shall coordinate with the appropriate agencies to investigate impacts of airport operations on surrounding areas.

   Policy 48.3.1 – The County shall encourage coordination between the County Health Department, Social Services Department, and all related public and private human service agencies.

3. Noise impacts generated by specific new land uses would be mitigated by the policies below:

Policy 22.2.4 – The County shall specify working hours as part of the use permit for industries where on- and off-site noise is a concern to adjacent land uses.

Policy 22.3.2 – The County shall encourage the state to establish and enforce noise emission regulations for recreational off-road vehicles, motorboats, and other recreational vehicles.

Policy 48.1.1 – The County shall increase the extent and frequency of health inspections in areas of food, milk and dairy operations, water systems, public housing, institutions, labor camps, swimming pools and recreation places as well as inspections related to hazardous substances, occupational health and noise hazards.

Table 6 from the 1982 Monterey County General Plan identifies the noise ranges for Land Use Categories. The Limekiln Creek Bridge, as built according to Alternative 4B or Alternative 6, is predicted to reach 57.4 dBA or 57.4 dBA, respectively, at the sensitive receptor site of Limekiln State Park. Limekiln State Park is in the Land Use Category of "Actively used open spaces—playgrounds, neighborhood parks," which specifies a range of 50-67 dBA as "Normally Acceptable." This range encompasses the predicted dBA levels for both bridge construction proposals Alternative 4B and Alternative 6.

Tribal Cultural Resources Comments

1. DEIR Section 3.2.18 states that two sites identified through the DEIR are eligible for listing in the California Register of Historical Resources (under Criterion 4).

   The BSLUP Section 3.11.2.2 states that: when developments are proposed for parcels where paleontological resources or archaeological or other cultural sites are located, project design shall be required which avoids or substantially minimizes impacts to such cultural sites. To this end, emphasis should be placed on preserving the entire site rather than on excavation of the resource, particularly where the site has potential religious significance.

   A. Measures to preserve these two sites have not been considered in the DEIR. According to the Archaeological Evaluation Report (AER) By A. Whitaker and A. Parker dated February 2021, Site 1 has yielded several artifacts through various investigations between 1997 and 2021. The AER states that Site 1 is eligible under Criterion D of the National Registry of Historic Places (and Criterion 4 of the California Register of Historical Resources) due to meeting four of the seven aspects of integrity. Site 1 is a pre-contact site dating to the Late Period with the site being occupied from at least 500 to 150 calibrated years before present. Furthermore, the archaeological deposits

found at both sites can be considered character-defining traits of the site since the data is consistent between Site 1 and Site 2.

B. The DEIR states under Section 3.2.18.b that the sites were determined to not be significant to associated Native American tribes. The AER has identified that the site is related to the Late Period, falling between 500 to 150 calibrated years before present. According to the AER, the Late Period also falls within the same timeline as the San Carlos Mission and subsequent missions that settled in the area. During this time, natives were allowed to hunt and gather along the coast to gather food resources for the mission. There is enough data to further pursue whether or not the two sites have any significance to associated Native American tribes.

2. DEIR Section 3.2.18.a states the following:

"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."

The BSLUP Section 3.11.2.5 states that: when sufficient planning flexibility does not permit avoiding construction on paleontological, archaeological or other types of cultural sites, adequate preservation measures shall be required. Mitigation shall be designed to accord with guidelines of the State Office of Historic Preservation and the State of California Native American Heritage Commission.

A. The DEIR does not specifically address that the proposed mitigation does not specifically address that it is meeting the guidelines of the State Office of Historic Preservation and the State of California Native American Heritage Commission.

B. The DEIR does not address whether or not all preservation measures have been considered in this case. Is it less impactful to leave the existing footings in place to preserve the archaeological sites rather than destroying these sites during the deconstruction phase?

3. Protection of land

The BSLUP Section 3.11.2.1 states that: All available measures, including purchase of archaeological easements, dedication to the County, tax relief, purchase of development rights, etc., shall be explored to avoid development on significant historic, paleontological, archaeological, and other classes of cultural sites.

A. The DEIR does not address that any measures to preserve the archaeological sites have been taken into consideration. Two sites have been identified to be eligible for the National Registry of Historic Places under Criterion D and the California Registry of Historical Resources under Criterion 4. Consideration to register these sites have not been address or proposed in the DEIR and a potential mitigation measure, nor has evidence been provided to show that this is infeasible.

Again, the County appreciates the opportunity to comment and we look forward to working with you through the entitlement process.

Response to Comment 5

Thank you for taking the time to provide feedback on this project. Responses below are coordinated with the labeled sections in the comment. Caltrans looks forward to future coordination with Monterey County.

Visual/Aesthetic Resource Comments:

The design of Limekiln Bridge will continue to develop during the next phase of the project. The local community, partner agencies, and advisory groups will have an opportunity to review these details as the design progresses as well as during the Coastal Development Permit process. The Big Sur Coast Land Use Plan, Coastal Implementation Plan, Coastal Commission regulations, and current design standards will all be considered for the final design.

Biological Environment/Biological Resources Comments:

1. The language in the document uses best available science and agency approved protocols. Caltrans conducted appropriately timed botanical surveys that were floristic in nature and did not identify any sensitive plant species. Pre-construction surveys are standard practice prior to ground disturbing activities. No impacts to sensitive plant species are anticipated; therefore, additional surveys would not be considered deferred mitigation as no mitigation is required.

2. Caltrans will work in accordance with Big Sur Coast Land Use Plan 3.3.3A.10.

3. Potential impacts caused by the creek diversion to Central California Coast steelhead and its habitat are described in Section 2.4.4 of the document. Impacts to Limekiln Creek are described in Section 2.4.2. These resources are described in more detail in the project's Natural Environment Study (July 2023 and updated May 2024), available upon request. All activities will comply with Big Sur Coast Land Use Plan and Coastal Implementation Plan policies. These are referenced in Section 2.2.1.

A creek diversion will be required for Alternative 6 during the dry season (June 1 to October 31) for one year to remove the existing pier that is currently below the ordinary high-water mark of the creek. The diversion is required to reduce impacts to aquatic species from working directly in the water. Any creek diversion installed will impact fish passage to some extent, regardless of design. To reduce impacts to fish passage, downstream fish passage will be maintained via a culvert/pipe. Confining the stream diversion to the dry season, when water levels are lowest and steelhead are not typically traveling upstream, will reduce potential disruptions to steelhead migration and spawning.

4. The 0.295-acre area of temporary impacts to Sitka willow thicket are inclusive of all proposed project activities, including construction of the work trestle, tree and vegetation removal, compaction and foot traffic. No grading is proposed within the riparian/Sitka willow thicket areas. The current level of project design does not identify the exact location of the work trestle and associated impacts, therefore, the exact number and species of tree/plants that may be impacted are not known at this time. The species composition of this vegetation community within the project site is described in Section 2.4.1. Caltrans will identify exact tree and species impacts during the next project phase. A detailed Mitigation and Monitoring Plan will be submitted to regulatory agencies.

   As described in Section 3.2.4, a work trestle will be used to limit impacts caused by foot traffic and equipment access to riparian areas and creek habitat to the minimum extent feasible. A creek diversion will be limited to the dry season (June 1-Oct 31) to further reduce impacts to plants and animals associated with altering natural surface flows. For this project, the Mitigation and Monitoring Plan will serve as the Forest Management Plan and will contain the necessary information that is outlined in the Coastal Implementation Plan. The Mitigation and Monitoring Plan will be prepared by a qualified biologist, or qualified professional forester, as required by regulatory agencies.

5. Performance standards for restoration will be outlined in the project's Mitigation and Monitoring Plan, which will be submitted to appropriate regulatory agencies for approval. Mitigation ratios are typically defined during permitting that occurs during the next project phase; however, Section 3.2.4 describes anticipated impact acreages and mitigation/restoration ratios which would offset impacts to sensitive resources. Impact quantities will continue to be refined as project design progresses and will be limited to the extent necessary to complete project activities.

6. Section 2.2.1 was edited to address Big Sur Coast Land Use Plan environmentally sensitive species. In coordination with Coastal Commission, the host plant of the Smith's Blue Butterfly has been

added as an Environmentally Sensitive Habitat Area, consistent with the Land Use Plan.

Additionally, the Big Sur Coast Land Use Plan Section 3.3.2 and 3.3.3 address applicable general policies 1, 2, 4, and 9 in both the Coastal Zone and Biological Resource sections of the Environmental Document. The project is also consistent with Coastal Implementation Plan 20.145.040 which is discussed in more detail in Section 2.2.1.

Aquatic Resources "Avoidance, Minimization, and/or Mitigation Measures"

1. Section 3.2.4 describes anticipated mitigation/restoration ratios which would offset impacts to sensitive resources. It is estimated that buckwheat will be replaced at a three-to-one ratio, riparian habitat at a four-to-one ratio, and temporary impacts at a one-to-one ratio. These ratios might change slightly dependent on agency coordination and permit requirements.

2, 3. Measures JUR-3 and JUR-5 have been updated.

4. Measures JUR-4, JUR-6, JUR-7, JUR-8, and JUR-9 are standard avoidance and minimization measures for Caltrans projects with potential impacts to aquatic resources. With the current level of design, and prior to receiving aquatic resource permits from regulatory agencies, no additional project-specific details/measures are available. The measures provided ensure the project will avoid and minimize effects to jurisdictional resources. Please reference the Caltrans Construction Site Best Management Practices (Caltrans 2017) and National Marine Fisheries Service guidelines (NMFS 2001) for additional details.

Crotch's bumblebee "Avoidance, Minimization, and/or Mitigation Measures"

1-5. Measures CBB-1, CBB-2, CBB-3, CBB-4, and CBB-5 have been updated.

South-Central California Coast steelhead critical habitat "Avoidance, Minimization, and/or Mitigation Measures"

1. Section 7 consultation for South Central California Coast steelhead will be conducted during the next project phase when geotechnical information, pile type, pile size and more detailed bridge construction information is available. During that time, appropriate measures will be determined in coordination with regulatory agencies to avoid and/or minimize adverse hydroacoustic effects. The measures within the document for steelhead and other federally listed species were developed in coordination with and agreed upon by National Marine Fisheries Service and U.S. Fish and Wildlife Service. Measure SCCC-4 has been updated.

Smith's blue butterfly, seacliff buckwheat, and seaside buckwheat "Avoidance, Minimization, and/or Mitigation Measures"

1. Measure SBB-1 is a condition of the Caltrans' Programmatic Biological Opinion for Highway 1 Management Activities that Affect Smith's Blue Butterfly, Monterey and San Luis Obispo Counties, California (1-8-07-F-68) and ensures permit compliance.

2. These measures are referenced from the avoidance and minimization measures outlined in the Caltrans Programmatic Biological Opinion for Smith's Blue Butterfly (1-8-07-F-68) and/or were created based on technical assistance with the U.S. Fish and Wildlife Service.

Bird "Avoidance, Minimization, and/or Mitigation Measures"

1. Caltrans cannot dictate the means and methods of the contractor; therefore, the contractor will submit a bird exclusion plan to Caltrans for review and approval. Caltrans will ensure the contractor-supplied plan is in compliance with state and federal bird-protection laws.

   Language has been added to NB-4 to address comment.

Western pond turtles, coast range newts and other semi-aquatic species "Avoidance, Minimization, and/or Mitigation Measures"

1. Measures SAS-1 and SAS-2 have been updated.

Cultural Resources (Archaeological) Comments

A. Since the deposit is beneath the bridge, and was previously impacted during construction, it is not possible to avoid this site. Construction activities related to bridge removal and building a temporary and permanent bridge will impact the site location.

B. Caltrans has prepared a Finding of Adverse Effect document for the State Historic Preservation Office concurrence. Once they concur, we will enter into a Memorandum of Agreement with the State Historic Preservation Office which will include mitigation measures to resolve adverse effects to the historic property.

Environmental Justice Comments

1. Caltrans public outreach efforts included Monterey County, not just the immediate project vicinity. Caltrans uses targeted social media, translation services for all materials as requested, and interactions with local nonprofits.

2. The proposed replacement bridge has a planned 80-year life and has been designed to accommodate sea level rise and weather conditions. The purpose of this project is to maintain public access along State

Route 1. The purpose of the temporary bridge is to maintain public access to the Big Sur coast during project construction.

Historic Resource Comments

1. Chapter 4 has been updated.

2. Caltrans will write an executive summary of previous historic resources analysis. The summary will reference the Memorandum of Agreement and Historic Property Treatment Plan; however, there is confidential site information that cannot be shared with the public.

   The Limekiln Creek Bridge is a concrete girder bridge which was built 20 years after the period of significance for the Carmel-San Simeon Highway Historic District. The bridge does not display the same unique aesthetic qualities or engineering feats of the seven historic concrete arch bridges on State Route 1. Additionally, the Limekiln Creek Bridge was extensively seismically retrofitted in 1997. This included footing modifications at Piers 2, 5, 6, and 7, construction of strut walls at Piers 4, 5, 6 and 7, column castings at Piers 6 and 7, and expansion bridge retrofit of the bridge deck. These upgrades changed the bridge's appearance and diminished its integrity of design, materials, workmanship, feeling and association.

   Section 2.2.4 has been updated regarding the Carmel-San Simeon Highway Historic District, parapet wall (DM-343), and associated impacts.

3. Alternative 6 has been selected and will therefore avoid impacts to the Rockland Landing.

4. The Historic Resources Review Board will have an opportunity to provide feedback on the aesthetic design of the proposed bridge.

Land Use/Planning Comments

1. Applicable policies to the Big Sur Coast Land Use Plan and Coastal Implementation Plan are discussed in Section 2.2.1. Section 2.1.3 was updated to refer the reader to that section for a more detailed discussion.

2. A. Paleontological and archaeological sciences are two distinct disciplines that study past life. Paleontology focuses on non-human fossil remains and traces and archaeology focuses on past humans and human cultures. There is little temporal overlap of archaeological and paleontological resources in California. The research questions, evaluation of potential effects, field methods, and analytical techniques commonly used in each discipline are unique.

The decoupling of paleontological resources from tribal cultural resources in the CEQA checklist was a requirement of Assembly Bill 52, in acknowledgement of the distinction between the disciplines.

B. Protective measures for paleontological resources are not proposed because fossils are unlikely to be present within the project area, as documented in the project's Paleontological Identification Report (June 2023) and described in more detail below.

C. Separate technical reports for archaeological resources and paleontological resources were prepared for the proposed project. An Archaeological Survey Report was completed in February 2021, a Historic Property Survey Report in May 2021, a Historic Resources Evaluation Report in March 2021, and a Paleontological Identification Report was completed in June 2023. Potential effects from the proposed project were evaluated separately and distinctly for each discipline, following Caltrans and industry standards.

D. The conclusions of the Archaeological Survey Report are not applicable to paleontological resources. The MNT site within the project limits is less than 1,000 years old and is not a paleontological resource.

Archaeological resource evaluations typically require field reconnaissance (pedestrian archaeology survey, followed by Extended Phase I and/or Phase II testing) to define the area of an archaeological resource since the resource is independent from the rock unit on which it sits. Paleontological resources are defined based on geologic mapping because individual geologic units vary in their potential to contain fossils based on their age and inferred depositional setting. A unit that has been assigned a high paleontological potential rating could produce a fossil from anywhere that it occurs, rather than in a discrete site or bed that can be mapped during a field survey. Paleontological field surveys are useful and necessary tools for projects that occur in geologic units of high paleontological potential or for geologic units where the paleontological potential is not well understood, and more information is necessary.

For the Limekiln project, the Paleontological Identification Report (June 2023) concludes that the project would disturb bedrock of the Jurassic to Cretaceous-aged Franciscan Complex which is assigned a low paleontological potential, and sediments that had previously been disturbed by bridge and highway construction and are assigned no paleontological potential. Neither unit is likely to contain scientifically significant fossils, so a field reconnaissance and a preconstruction survey were not recommended or required. Further evaluation and reporting and protective measures during construction are generally not required for projects in no and low potential units.

E. Paleontological resources are unlikely to be present within the project limits as documented in the Paleontological Identification Report (June 2023), which supports the argument for the “No Impact” determination for paleontological resources in the environmental document prepared for the project. In the unlikely event that fossils are unearthed during construction, Caltrans Standard Specification 14-7.03 provides procedures for an unanticipated discovery that include stop work orders, evaluation of the find by a professional paleontologist, and curation of scientifically significant fossils into an accredited repository.

Noise Comments

As stated in the Environmental Document, the project will have a less than significant impact on sensitive receptors near the project. Caltrans is not required to adhere to local noise policies within State Right of Way; however, the project does not conflict the policies mentioned in the original comment.

Tribal Cultural Resources Comments

1. Caltrans has coordinated with the associated Native American tribes which is documented in Chapter 4.

2. Proposed mitigation measures are approved by the State Historic Preservation Officer with the Memorandum of Agreement which meet both the guidelines of the State Historic Preservation Office and the Native American Heritage Commission.

Even if the existing footings were preserved, there would still be impacts due to the construction of the new bridge and temporary bridge. The location of the site is in the impact zone, even if the footings remained.

3. With the selection of Alternative 6, impacts to one of the archaeological sites will be avoided. The other site will be impacted by construction, regardless of alternative.

Comment 6 State Parks

Brent C. Marshall, California State Parks, February 5, 2024

Thank you for the opportunity to provide additional comments on the Limekiln Creek Bridge Project. These comments follow those that were submitted on behalf of California State Parks on February 3, 2022, by Matthew Allen, and November 18th, 2019, by Stephen Bachman. California State Parks (CSP) would like to express our appreciation for the close coordination and ongoing communication between our agency and California Department of Transportation – District 5 (Caltrans) over many months on this important project for the Big Sur Coast.

CSP is in alignment and agreement with the Alternative 6 in the Draft Environmental Impact Report/Environmental Assessment released in December, 2023.

As documented in the previous record and during expansive meetings and correspondence, CSP has expressly requested that Caltrans evaluate an alternative that does not irreparably alter Limekiln State Park by significantly impacting cultural resources in proximity to the southern bridge abutment, does not significantly alter the visitor experience and scenic and aesthetic character of the park, and does not permanently damage and transfer lands out of parks jurisdiction. We are appreciative of Caltrans commitment to evaluating and presenting Alternative 6 in this current Draft EIR, which substantially reduces permanent impacts to cultural resources and addresses CSP position that impacts from other alternatives presented would not align with the Mission of the public lands within which this bridge falls entirely.

Southern Bridge Abutment

The area directly adjacent to the southern bridge abutment contains significant cultural resources, including elements from an historic district related to the operations of the limekilns, the namesake of the park. This historic district has been determined eligible for listing in the National Register of Historic Places, and the proposed impacts from bridge alignment other than Alternative 6 would constitute a significant and irreversible impact to the historic resources. In addition, a prehistoric shell midden would be impacted, resulting in significant loss of cultural resources and tribal heritage, and a significant impact to this resource. PRC 5019.53 provides that the purpose of state parks shall be to preserve outstanding natural, scenic, and cultural values, indigenous aquatic and terrestrial fauna and flora, and the most significant examples of ecological regions of California. Improvements that do not directly enhance these values should not be undertaken within State Parks. Because this bridge falls entirely within Limekiln State Park, it is imperative that the bridge replacement project minimizes any impacts to the cultural resources. Alternative 6 does this while Alternative 4b would not.

Permanent Impact to Public Park Lands

Alternative 6 holds protected public lands within Limekiln SP under CSP jurisdiction and management with only a minimal 0.002-acre acquisition required. Alternative 4B would require a permanent impact of park lands and transfer of nearly 1.5 acres from CSP to Caltrans. The DEIR does not address this substantial difference between alternatives adequately-alternative 4B would result in a permanent impact and transfer of 63,598 square feet greater area of public parkland than Alternative 6. Alternative 4b would be an unacceptable permanent impact to protected public parklands given that Alternative 6 is a feasible solution.

Visitor Experience and Public Access

The beach at Limekiln State Park provides a unique visitor experience of outstanding scenic and natural character. Limekiln State Park provides one of a very limited number of public sites along the entire Big Sur Coast that allows visitors to access the beach and have direct physical contact with and experience the ocean. Camping availability in this location makes the park even more valuable and unique for Californians and visitors. To that end, PRC 5019.53 provides that the scenic and natural values be preserved, and any improvements undertaken be in a manner consistent with preservation of these values. Improvements that do not directly enhance the public's enjoyment of the natural, scenic, cultural, or ecological values of the resource, shall not be undertaken within state parks.

Alternative 6 would begin at the existing southern abutment and follow the existing bridge alignment as closely as feasible. This would not be a substantial change to existing conditions regarding visitor experience or scenic quality and viewshed character. Alternative 4b would move the bridge approximately 65 feet west over the beach and towards the ocean. This would be a substantial change and impact to the visitor experience, recreational use, viewshed, and character of Limekiln State Park and beyond.

CSP believes that Alternative 6 provides a feasible alternative to protect recreational use, viewshed, and scenic character of this park, including keeping the new bridge beginning at the existing southern abutment, and as close as possible to the current alignment. CSP believes Alternative 4b is not a feasible alternative per CCR Section 15126.6 (f) (1-2), and PRC 21002.

Thank you for the opportunity to provide comments on this important project. We look forward to continuing to work with Caltrans as this project progresses.

Response to Comment 6

Thank you for taking the time to provide feedback. As a result of public comments and environmental impacts, Alternative 6 has been selected as the preferred alternative. Caltrans looks forward to working with State Parks to complete this project.

Comment 7 Albion Bridge Stewards

Albion Bridge Stewards, February 6, 2024

Thank you for this opportunity to comment - during the comment period that runs through today - on the CEQA Draft Environmental Report (DEIR) and NEPA Environmental Assessment (EA), dated December, 2023. The California Department of Transportation (Department or CDOT) has prepared the combined DEIR/EA to "replace" the Limekiln Bridge (Number 44-0058) and for other development within environmentally sensitive Limekiln State Park and in the highly scenic, iconic Big Sur coastal zone. Both are protected areas of state, national, and international significance.

As further discussed below, our review finds (a) the proposed development to have (1) likely significant direct and cumulative adverse effects on the environment and public recreational access to and along the coast, and (2) in key part rely on failed shoreline development that lacks requisite entitlements and therefore is in violation of applicable law, and (b) the DEIR/EA to be substantively incomplete and inadequate, and therefore inconsistent with both the California Environmental Quality Act (CEQA), the National Environmental Policy Act (NEPA), and with other laws. We therefore respectfully request the Department to:

- identify the environmentally preferred (least damaging, transparently mitigated and reported) feasible development project alternative, based on fully disclosed relevant baseline and current (rather than superannuated) data;

- objectively analyze it; and,

- prepare a combined Draft EIR/Draft EIS on the proposed finite development project in the event that CDOT proposes replacement rather than repair and maintenance of the existing (E) Limekiln Bridge, and circulate it (or any other applicable required environmental document(s) for public review and comment) before the Department takes any action in this matter pursuant to either the state or federal environmental laws.

1. Legal Basis. The DEIR/EA provides no clear legal basis for the development project (whatever it may be). On the one hand, the DEIR/EA asserts that "the proposed project" - which is not revealed in the draft environmental document - "is included in the 2022 State Highway Operation and Protection Program (SHOPP) Bridge Preservation Program". However, a search of California Transportation Commission records of programmed SHOPP projects does not identify CDOT Project # 05140000004 to have been so programmed. Curiously, the DEIR/EA agrees: "The project is not individually listed but is included with the Transportation Agency for Monterey County's 2022 Regional Transportation Project" and "the project is listed in the 2023 Federal Transportation Improvement Program". Neither serves as a valid authorization for CDOT to expend state or federal funds on Project # 05140000004, whatever it may be. The jumble appears to be a Department subterfuge, apparently to avoid commitment (or authorization) for it to perform a specified development for which it will be responsible.

2. Location. The DEIR/EA contains no textual or mapped description in one place of the full physical scope of the development project, whatever it may be.

3. Project Necessity. The DEIR/EA, without incorporation of (or citation to) specific bridge inspection data, documentation, analyses, Bridge

Reports (BR)/Bridge Inspection Reports (BIR), or (E) Bridge 44-0058 as-built steel-concrete and maintenance records, generally represents that the Limekiln Creek Bridge "is needed due to chloride intrusion in (sic) the concrete", "which was confirmed with concrete core testing and inspections by Caltrans' Structure Maintenance and Investigations Team in 2012". (Emphasis added; the "confirmation" suggests that it was a post hoc rationalization to perhaps cover for unperformed maintenance and repairs of bridge concrete deck, superstructure, and substructure components.) Notwithstanding that the State Division of Highways in or about 1957 already disclaimed "salt air" to be the cause of deterioration in concrete, the DEIR/EA (erroneously) sweepingly avers, without analysis or reference to substantial evidence, that "chloride intrusion from pervasive salt-laden fog" has produced "irreversible damage to the superstructure and substructure". (Emphasis added; the sea salt aerosols [SSA] associated with coastal fog contain sodium chloride, NaCl [and other chemical ions, e.g., K +, Mg 2+, Ca 2+, SO 42, as well as organic matter], rather than "chloride". The DEIR/EA offers no quantified basis for its "pervasive" occurrence reference; summer-time fog along the California coast has declined by 33% over the last century [Johnstone and Dawson, Procedings National Academy of Sciences, 107.10, 2010, 4533-4538; see, also, USGS, https://www.usgs.gov/centers/western-geographic-science-center/ science/pacific-coastal-fog-project, 2017.]

The DEIR/EA further asserts, without substantial evidence based on bridge component-specific temporal or spatial analysis (or citation thereto), that the "chlorine intrusion" has "caused concrete cracking and reinforced steel and cable corrosion". (Emphasis added; notably, the assertion omits identification of any causal chain, e.g., whether "chlorine" served as the agent to fracture the exterior surface of concrete components and thereby gained entry into interior concrete mass or migrate to contact reinforcing steel or cables.)

The DEIR/EA additionally represents - without geospatial, temporal, or nearshore wave climate/ water level/wave runup specification(s) - that "there have also been recurring slope stability problems at the north abutment caused by powerful waves". Elsewhere, the DEIR/EA generically adds "erosion from storm events" to the causes of slope instability "at" the north abutment, and informs that "the slope above and below the existing north abutment is an active landslide." The DEIR/EA contains some 40 references to the "northern abutment", but omits describing the base elevation of it or the height of wave action against it or referencing any scour-critical BIR findings and analysis. It appears that the base of the north abutment may be at an insufficient depth, a condition that can be addressed by supplemental downward extension of it or through an associated deeper abutment structure.

The DEIR/EA also states that “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.” The DEIR/EA neither contains nor references any professional coastal engineering analysis, shoreline protective works as-built plans, or maintenance records for the “slope armoring”, which by the photographs that the department has produced of it has failed for having been inadequately designed, built, and/or maintained and repaired. The referenced CDP expired in or about 2020; its continued presence constitutes a prima facia violation of the Big Sur LCP, the Coastal Act, and the federally approved California Coastal Management Program (CCMP), each of which require a valid issued CDP, as applicable on respective County LCP or Coastal Act jurisdictional grounds, for the structure(s) to be in place, or to be removed.

The DEIR/EA summarizes that “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”, but fails to either produce a copy of any analysis on which that meeting’s determination was based or explain why, over 11 years later, the Department has not performed regular maintenance and repair, or in situ replacement, of specifically identified deteriorated bridge components (including, but not limited to, the shoreline protective works associated with the northern abutment and adjoining slope).

The DEIR/EA’s representations regarding the need for “the” proposed project (that the DEIR/EA does not set forth) are therefore unsupported by current substantial evidence or reference thereto.

4. The DEIR/EA lacks a settled project description. An accurate, clear, full, internally consistent, and settled (finite, rather than conditional) description of the proposed development project constitutes one of the necessary bases for environmental review pursuant to CEQA and NEPA. A complete description of baseline conditions that are relevant to the proposed development project (when identified) is also necessary for such review.

   In the DEIR/EA, however, the Department has presented two alternative “projects”, styled Alternative 4b (A-4b) and Alternative 6 (A-6) , with the proposed project to be determined only at the Final EIR stage, when the public will be unable to comment on it. Moreover, the DEIR/EA couches A-4b and A-6 by a string of past tense conditional [“would” (for will), in 1,143 identified instances] references that omit the relevant criteria, defy specification, and preclude rigorous analysis in the DEIR/EA or reliance at the point of implementation, which fundamentally renders either of these two “project descriptions”

uncertain and incapable of verifiable analysis, contrary to the threshold requirement in CEQA and NEPA for a finite (settled) project description.

The DEIR/EA also sets forth no coherent textual or graphic project description (e.g., in plan, elevation, and section views, by rectified photographic imagery, or by relevant locationcontrolled simulation). Instead, the DEIR/EA contains, in 1,036 references, a potpourri of project components that may be summarized as follows:

4.1. CDOT proposes to "replace" the (E) 578-foot long Limekiln Bridge with "approximately" 900 foot-long A-4B or A-6, both with wider travel lanes and shoulders than the (E) bridge (that would foreseeably result in increased motor vehicle speeds, based on our observations of where the Department has performed similar widening of Highway 1 in coastal Mendocino County), whereas the DEIR/EA indicate that (a) in A-4B, the (N) bridge location extends to 65 feet westerly of the (E) bridge over the Limekiln State Park beach and adjacent slopes; (b) in A-6, the (N) bridge also curves westerly of the (E) bridge almost immediately after the (E) south abutment and to Layout station 28+02.00; (c) both A-4B and A-6 implicate two upcoast viaducts, totaling 545 feet in length, (d) a 160-foot long soldier pile wall along the landward side of the former, (e) unspecified partial removal of the unpermitted failed/failing shoreline protective works that have variously mobilized to and remained on the beach of the State Park, and (f) associated cut and fill grading, for which the DEIR/EA presents or analyzes no grading plan, no drainage/erosion control plan, and no landform/vegetation restoration plan, notwithstanding the characterized instability and prospective mass grading of the development project area.

4.2. A-6 would also involve, during its projected "approximately 4.5 year" construction period, a one-lane temporary bridge, built on pile-driven H-frames to the east of the (E) bridge, and located in and above the Limekiln State Park vertical beach accessway and anadromous Limekiln Creek. The temporary bridge is "anticipated to be a three-span, 400-foot-long, 20-footwide structure, allowing for one-way reversing traffic", but the DEIR/EA omits production of plans, elevations, and sections of it, and thus precludes substantive CEQA/NEPA environmental review of them. Temporary bridge abutments, again without shown plans, sections, or elevations, "would" facilitate detours around Limekiln State Park access roads (plural), directly next to the highway, again without opportunity for public analysis of their direct and cumulative adverse effects on environmental resources or lateral coastal access.

4.3. Both A-4B and A-6 require staged/phased construction over an estimated 4-4.5 year project period, with one-way traffic controls, temporary traffic signalization, and at least two staging areas (in the

turnout near PM 21.6 and in lower Limekiln State Park camping area, the latter with three enlarged or new transit corridors, that connect to Highway 1 and one that connects via the Limekiln Creek corridor to the beach, with supplemental crane lifting of mechanized equipment and potentially construction materials/waste to/off the beach plane). Highway 1 constitutes the only available north-south route through the subject area, including for emergency responders, Big Sur residents, and visitors. However, the DEIR/EA omits both production and analysis of peak and average day/weekend/holiday traffic counts for this road segment, and the site-specific Traffic Management Plan that is necessary to harmonize construction implementation with protected public priority uses of the highway. A current CDOT bridge project in coastal Mendocino County indicates Highway 1 traffic delays of up to half an hour, with resultant significant reductions in lateral coastal mobility.

4.4. The DEIR/EA further omits production and analysis of a comprehensive grading plan that minimizes alteration of natural landforms and hydromodifications in the project area, consistent with applicable mandatory standards, as applicable, in the Big Sur LCP, Coastal Act, and CCMP.

4.5. The DEIR/EA also indicates that both A-4B and A-6 require construction and operation of a concrete batch plant, without identifying its (a) proposed location, (b) material sources, haul routes, and storage areas, (c) source(s) of process water, (d) quantities of concrete to be produced, (e) provisions for recycling of waste concrete, or (f) mitigation measures to contain and dispose batch plant dust and other particulate emissions, polluted water emissions, and other by-products in a manner that avoids any significant impacts to Limekiln Creek and its aquatic resources, environmentally sensitive habitat areas, and riparian habitats.

4.6. The DEIR/EA omits a to-scale visual impact analysis from the perspective of persons in standard motorized vehicles, bicyclists, and pedestrians of (a) the (E) bridge and (N) A-4B and A-6 bridge structures as seen from the Highway 1 corridor, Limekiln State Park, including its lower campground, vertical beach accessway, and upland trails, (b) the detour bridge during construction of A-6, (c) the proposed retained or reconstructed shoreline protective works, and (d) likely worst case shading of Limekiln Creek Beach, the Creek and its riparian corridor, the beach vertical accessway, and campground and campground support facilities in the lower State Park.

4.7. A-4B and A-6 propose diversion of Limekiln Creek, designated critical habitat for the South- Central California Coast steelhead, for one and up to three construction seasons, respectively, without documentation and analysis of whether proposed piped and/or by undergrounded pipe discharge of the Creek will provide a sustainable

migration corridor for the anadromous fish. The preliminary Federal Endangered Species Act Section 7 effect determination regarding "the project", whatever it may be, indicates that it is likely to adversely affect black abalone and its critical habitat, South-Central California Coast steelhead and its critical habitat, Smith's blue butterfly/habitat, and the California red-legged frog/habit. The mitigation measures paraded at DEIR/EA electronic pages 154-162 are (a) variously ambiguous, (b) lack quantified baseline and post-project completion performance standards, (c) rely on placement of exclusionary fencing and advisory information to protect ESHA and wet ESHA, without continuous on-site monitoring/ reporting with enforcement authority to achieve compliance, and therefore incapable of objective implementation.

4.8. A-4B and A-6 construction impacts include tree and vegetation removal, including of Sitka willows and coastal redwoods, grading, and compaction by construction equipment and foot traffic in the Limekiln Creek corridor. The DEIR/EA omits delineation of the stream's bed and banks and of current (early February, 2024) biological conditions in these ESHA's and riparian (wet) ESHA.

4.9. The DEIR/EA references, but omits production or analysis of, an "aquatic species exclusion/relocation plan" for implemented before a diversion of Limekiln Creek is installed, which renders the environmental document incomplete and inadequate, and denies the public necessary information about A-4B and A-6 aquatic species manipulation that on its face is inconsistent with the mandatory performance standards provided in PRC §§ 30230 and 30231, and their cognates in the Big Sur LCP. Together, these omissions from the DEIR/EA constitute material CDOT failures to disclose information about A-4B or A-6 development components with significant likely (potential) adverse effects on the environment, with resultant limitations on public understanding of the development during a time when public access to the site remains precluded by the nearby failure of Highway 1 and the associated extended closure of Limekiln State Park.

5. Significant Environmental Effects. A-4B and A-6 have the following likely (potential) significant effects (unmitigated through impact avoidance or incorporated measures that reduce significant effects below their respective thresholds) on the environment and coastal public access.

5.1. A-4B and A-6 are not merely replacing an existing structure. The proposed concrete batch plant in narrow Limekiln Creek Valley, with prevailing winds from seaward, will likely direct and concentrate substantial quantities of dust and other aerial pollutants associated with concrete manufacturing on and in upslope terrestrial, floral, and aquatic habitats, and areas of post-State Park recreational uses,

without batch plant enclosures that would contain such pollutant emissions.

5.2. The diversion of Limekiln Creek during multi-year (anadromous fish spawning seasons) A-4B and A-6 construction will impede, and likely block, steelhead migration along the lower creek, with a resultant take of this federally listed endangered species. The DEIR/EA contains no proposed mitigation measures that would reduce those impacts to below any allowable levels; notably, the DEIR/EA omits a current characterization of what constitute “a natural condition” of the stream.

5.3. A-6 involves excavation grading of the knob at the southwesterly side of that development project area, without identified (site-specified) measures to prevent discharge of earthen materials and polluted overland flow downslope to the protected black abalone critical habitat in the rocky shoreline and adjacent kelp forest on the downcoast/nearshore marine side of Limekiln Creek beach, with potentially significant adverse effects to water quality in that habitat through discharge of sediment and fines, and the abalone that inhabit it.

5.4. The A-4B and A-6 development sites are located, in parts, within the Rockland Landing and Rockland Lime and Lumber Company Historical District, and within the Carmel-San Simeon Historical Highway District. The DEIR/EA speculation that the A-6 development is “anticipated” to directly impact no historic features is unsupported by a detailed archaeological site analysis, development excavation grading and (N) A-4B and A-6 construction would alter the integrity of the Rockland Landing site by encroaching on the area of this historic doghole port. (Compare, USCGS, T-2090, 1890.)This would have an impact on the resource as a whole and on the Rockland Lime and Lumber Company Historic Landscape District. Similarly, the A-4B and A-6 bridge development, by location outside the (E) bridge envelope and by utilization of balustrades that differ from those on the (E) bridge, will have the same adverse effect on historical resources. The mitigation measures proposed at DEIR/EA electronic pages 167-168 are primarily paper work and unnecessarily limited in area, and do not serve to reduce likely A-4B and A-6 development impacts on these historic resources below the threshold of significant disruption. Similarly, the proposed utilization in A-4B and A-6 of the Limekiln Creek corridor for mechanized equipment, material transport, and worker access, and for bridge construction and deconstruction purposes, will likely directly adversely affect the midden resources MNT-1892. The DEIR/EA contains no measures for strict avoidance of this culturally significant area, and indeed acknowledges the A-4B and A-6 development project (bridge demolition and realignment, with grading) impacts on MNT-1892 an MNT-2452H as “significant”, but - without reasoned analysis of substantial evidence in the record of the

DEIR/EA and its disclosed technical studies - as “unavoidable” impacts.

5.5. The DEIR/EA omits the “Project Geotechnical Design report, dated November 19, 2007”, and the “Structure Preliminary Geotechnical Report dated August 13, 2014”. Any in any event, both are substantially outdated and do not reflect current geotechnical conditions in the A-4B and A-6 development project area. The DEIR/EA also obliquely states that “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”, but omits presentation of any geological map or subsurface geotechnical investigation that analyzes current slope (in)stability and subsurface/ surface hydrological conditions in the area. A-4B and A-6 both propose to substantially grade existing natural landforms, may - given the State’s performance over the past 80+ years in the Highway 1 corridor in the Big Sur - likely create or contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs, and thus implicate potentially significant adverse effects on landform stability over the (unspecified) economic life of either A-4B or A-6. The DEIR/EA “expectation” of “less than significant” “soil” erosion in the exposed Franciscan melange as a result of A-4B and A-6 construction, or subsequently, is unsupported by site-specific geotechnical investigation in the environmental document, or by production of outdated reports. The DEIR/EA directly acknowledges that informational void: “Further geotechnical investigation would be conducted prior to project construction to better identify the soil characteristics within the project area.” Reliance on speculative future mitigations to obtain CEQA/NEPA environmental clearance is void ab initio.

5.6. Although concrete manufacturing is a known substantial producer of Greenhouse Gases (that drive contemporary climate change), the DEIR/EA does not analyze either the A-4B and A-6 development project generation of Greenhouse Gases through the on-site concrete batch plant, or the cumulative effect of all CDOT and other development project development in the Big Sur, Monterey County, or California.

5.7. Although CDOT has apparently extracted core samples from concrete in the Limekiln Bridge, the DEIR/EA only speculates about the possible hazardous materials content of the concrete, disposal of which may cumulatively - given Caltrans current, past, and programmed future development projects that involve demolition of

concrete structures - have a significant effect on soils, water quality, and air quality.

5.8. The A-4B and A-6 development projects are located outside the envelope of the (E) bridge, and substantially expand its length and considerably expand its width. A-4B and A-6 are specifically not consistent with the Big Sur LCP, Coastal Act, and CCMP, including, but not limited to, because the two successor bridge concepts (a) constitute new development that is not subordinate to its setting in Limekiln State Park, (b) do not protect ESHA against significant disruption of habitat values, (c) do not constitute uses that are dependent on those resources, and (d) where located adjacent to ESHA, the beach, and Limekiln State Park recreation areas, are not sited and designed to prevent impacts that would significantly degrade them, and are incompatible with the continuance of those habitat areas and recreation areas, as discussed infra. A-4B and A-6 thus have significant unavoided/unmitigated direct and cumulative effects on ESHA and recreational uses in Limekiln State Park. It may also be noted that Public Resources Code § 30603.1, on which CDOT relies to circumvent the requirements of certified Local Coastal Programs by seeking consolidated Coastal Commission review of development projects that may (arguendo) straddle the Mean High Tide Line, is inapplicable here and in all other similar jurisdictional instances because said statutory section has not been incorporated into the federally certified CCMP. The DEIR/EA also contains no substantial evidence that the Monterey County Board of Supervisors has authorized a § 30603.1 consolidation, if it somehow magically were to otherwise be available to the Department for juggling the California coastal program.

5.9. The DEIR/EA asserts, without analysis of substantial evidence in the document or by citation to extrinsic documents, that the A-4B and A-6 development projects “would not increase vehicle miles traveled.” The DEIR/EA errs, because (a) during Highway 1 closures and partial/ intermittent closures associated with A-4B and A-6 in and adjacent to the subject area, the northbound public from Los Angeles has been required to travel (by motor vehicle) an additional circa 150 miles between San Luis Obispo and mid-Big Sur, via US Highway 101, State Route 156, and State Route 1, and (b) our experience is that after Highway 1 travel lane and shoulder widening in coastal Mendocino County, VMT increase(s) as motorists from the region and beyond extend their driving range for recreational, personal, and business trips.

6. Cumulative Effects. The DEIR/EA omits description and analysis of currently programmed, past, and future CDOT bridge and other development projects (a) in the area of Limekiln State Park, (b) along Highway 1 in the Big Sur

7. Alternatives. The DEIR/EA omits description and analysis of the repair, maintenance, and (as applicable) in situ replacement or augmentation (e.g., by enhanced slope stabilization) of (E) bridge components, which likely constitutes the environmentally preferred (least environmentally damaging) feasible alternative to removal of the (E) bridge and replacement by either A-4B or A-6. The professional literature by the Transportation Research Board of the National Research Council and others on concrete-steel bridge repair is substantial; however, AI analysis of the DEIR/EA indicates that it omits consideration of it in relation to the Limekiln Bridge. The failure to specifically and fully consider this reasonable alternative to the ≥$100 million Limekiln Bridge replacement project renders the DEIR/EA incomplete and inadequate pursuant to CEQA and NEPA.

   Alternatives also exist for removal (or sustainable repair/maintenance, if allowed) of the shoreline protective works on the upcoast side of Limekiln Creek Beach, including, but not limited to, utilization of lifting equipment (crane, etc.), worker access by crane or stairs/path segments, use of maximized use of hand tools, and use of construction materials that can be lifted by crane or pumped through pipes or hoses rather than large bolders.

8. Request. We respectfully request that the Department lay the DEIR/EA aside, perform current technical studies regarding implicated development project area conditions and cumulative impacts, prepare the requisite complete Draft EIR/EIS (or other environmental document, as applicable, for the Limekiln Bridge repair, maintenance, and limited augmentation development project), and circulate that respective document for public review and comment. Thank you.

Response to Comment 6

Thank you for your interest in this project and taking the time to provide feedback. Responses below are associated with labeled sections in the original comment.

1. Legal Basis.

The project was programmed and listed in the 2022 State Highway Operation and Protection Program. The project was adopted at the March 16 and 17, 2022 California Transportation Commission meeting.

2. Location

Please refer to Figures 1 and 2 in Section 1.1 and Figures 3, 4, 7 and 8 in Section 1.5. The location is also described in the Summary in S-2, S-2.2, S-2.4, Section 1.1, and Section 1.4.

3. Project Necessity

Limekiln Bridge is inspected every two years. Inspection reports have documented a long history of concrete cracking and spalling on the deck, superstructure, and substructure. Salt laden fog and mist from storm waves crashing on the shore are contributing factors to the deterioration of the bridge.

For example, the ocean facing side of the bridge precast girders (horizontal beams that run between piers) exhibited exposed prestressing steel (cables that run through girders) resulting in a 40% loss of thickness. The old earthquake cable restrainers (keep the girders attached to piers during an earthquake) have varying amounts of corrosion. Core samples taken from the bridge deck and superstructure in 2011 found chloride levels ranging from 2.55 pounds per cubic yard to 13.6 pounds per cubic yard. Active corrosion of steel can occur when the chloride levels in concrete exceed 3 pounds per cubic yard. Here are excerpts from the October 24, 2012 Structure Maintenance and Investigations Peer Review Fact Sheet describing alternatives considered:

> 1) Do Nothing. This alternative was not considered because of the need to address the deteriorating condition of the bridge to ensure the safety of the traveling public and guarantee the reliability of the structure.
>
> 2) Repair the Bridge. This alternative would involve District 5 modifying the upcoming Maintenance contract (05-1A890) to include installing a cathodic (technique used to protect structures from corrosion) protection system.
>
> 3) Rehabilitate the Bridge. Replace the precast girders with exposed strands and section loss, clean and patch other exposed areas. This alternative is problematic because the original concrete cover depth over the prestressing strands is very shallow making patching ineffective. Replacement of some of the ocean side exterior girders would involve removal of the existing rails, portions of the deck and earthquake restrainers. Additionally, the salt laden concrete on the remainder of the bridge would continue to corrode in the moist fog environment on the central coast.
>
> 3) Replace the Bridge. This alternative would involve District 5 removing this bridge from Maintenance contract (05-1A890) and developing a project for the State Highway Operation and Protection Program (SHOPP) to replace the Limekiln Creek Bridge with a new structure.

Members of Albion Bridge Stewards are welcome to visit District 5 for a briefing on Limekiln Bridge's inspection history and conclusions.

Caltrans has bridge history dating back to the 1955 Project Report for the existing bridge. The bridge was constructed in 1957 and rock slope protection

was present at the toe of the slope by 1958. According to Caltrans Maintenance, rockfall typically needs to be cleared once per week which suggests considerable instability in this area. Caltrans has continuously coordinated with Coastal Commission to determine the best solution to the permit requirement to remove existing slope armor.

4. The DEIR/EA lacks a settled project description

Under NEPA, the No-Build Alternative is used as the baseline for comparing environmental impacts. Under CEQA, the baseline for environmental impact analysis consists of the existing conditions at the time environmental studies began.

The Draft Environmental Document used conditional language such as "would" because it is conditional at the time. The Final Environmental Document uses "will." The Draft Environmental Document is used to inform the public of proposed project actions and alternatives. Based on purpose, need, comments from the public, and environmental impacts, Alternative 6 was selected as discussed in Section 1.7.

Plans are shown for both alternatives in Section 1.5. Additional images have been added to Appendix G.

4.1. The travel lanes are remaining the same width at 12 feet but the shoulders will increase from two feet to four feet on each side. The speed limit will remain at 55 miles per hour, it is noted that increased shoulder width can lead to increased motor vehicle speeds. Bicyclists are common on State Route 1. Four-foot shoulder width enhances bicycle safety.

Beach revetment removal will start at the southeast end and work northwest. As removal moves northwest, slopes will be significantly steeper than one-to-one. This will lead to short-term safety and slope stability risks in construction and potential long-term destabilization of the mapped landslides above the road. Caltrans cannot responsibly create those hazards when they are not needed to complete the bridge replacement. Proposed removal is highlighted in yellow in Figure 32 in Appendix G.

Move removal may be possible including removing man-made features to three feet below the grade and/or aesthetic treatment of remaining wall. All rock slope protection can be removed and gabion baskets (wirework container filled with rock, concrete, or fill material) in front of the revetment also can be removed (if any remain at the time of construction).

The project will be designed to balance cuts and fills of material, as much as feasible, to eliminate or reduce the amount of excess material. All project fill will be compacted and treated with erosion

control per design standards. Any excess or unusable unconsolidated material will be permanently moved off-site.

4.2. Additional plans and graphics have been added to Appendix G. Temporary bridge impacts were accounted for in the environmental analysis. The bridge is temporary in nature for the construction of the replacement bridge and would not cause additional cumulative impacts. The park will be closed temporarily. This will be coordinated with State Parks in the interest of public safety.

4.3. Traffic delays during construction are anticipated to be less than 30 minutes with current traffic management plans. There will be a public prior awareness campaign to announce any significant delays prior to construction.

4.4. As mentioned in comment response 4.1, the project will be designed to balance cuts and fills of material, as much as feasible. There will be no long-term storage or stockpiling of material onsite. Caltrans must approve of the Contractor's proposed offsite disposal location. Caltrans will ensure that material is disposed in an area with no potential for sediment transport into sensitive aquatic resources. A qualified biologist will survey and approve the disposal site prior to material disposal.

Measure BA-11 has been added to the document to accommodate this and is reflected in Section 2.4.4, 3.2.4, and Appendix C.

4.5. Staging areas are identified on plans just north of Pitkins Curve Bridge. The plan sheet including the staging area was not shown in the plans provided in the Draft Environmental Document because they do not contain any project work. The staging area locations are now included in Appendix G. This site was included in environmental studies and evaluation. This staging area was also used for construction of Pitkins Curve Bridge and Rainrocks Rockshed. Material sources and haul routes are to be determined by the contractor; however, it will likely be from the south on State Route 1. The staging area near the batch plant will also constitute as a storage area. The bridge and two viaduct designs will be finalized in the next project phase with further input from the public and agencies. Concrete for these structures (including foundations, piers, abutments, superstructures, and barriers) is anticipated to be 20,000 cubic yards.

Best Management Practices will include dust management, stormwater and non-stormwater pollution prevention practices, avoidance of environmental sensitive areas and riparian areas, habitat protection, and will follow all water quality control requirements in and near the creek and the project location. It is

standard practice that the contractor will need an industrial stormwater permit for the concrete batch.

Water will not be drawn from Limekiln Creek. Instead, it is the contractor's responsibility to locate and provide process water from appropriate sources. Caltrans is committed to limited impacts to Limekiln Creek and its associated aquatic resources, environmentally sensitive habitats, and riparian zones through the implementation of avoidance, minimization and mitigation measures presented in this document. These measures are designed to ensure the protection and preservation of the area's ecological integrity throughout the construction process.

4.6. The chosen Observer Viewpoints are consistent with the Federal Highway Administration guidance. These locations were selected to best disclose the typical visual character of the project, show unique project components, affected resources, and represent affected viewer groups. The number of potential viewpoints associated with this approximately 0.4-mile project is infinite and it would not be possible or valuable to attempt to depict every possible viewing scenario. Further renderings are anticipated in the next project phase as the design progresses. Before the Coastal Development Permit is finalized, there will be opportunities for public input such as an Aesthetic Design Advisory Meeting.

4.7. After the Draft Environmental Document circulated, Caltrans confirmed that the temporary bridge pier can avoid the creek. Alternative 6 will not require additional impacts to Limekiln Creek compared to Alternative 4B. A creek diversion will be required during the dry season (June 1 to October 31) for one year. This will create a dry work area to remove the existing pier that is currently below the ordinary high-water mark of the creek. The diversion is required to reduce impacts to aquatic species from working directly in the water. Any creek diversion installed will impact fish passage to some extent, regardless of design. To reduce impacts to fish passage, downstream fish passage will be maintained with a culvert or pipe as approved by regulatory agencies. Section 2.4.4 identifies current measures for fish; however, it is anticipated that additional measures will be identified during Section 7 consultation and as design develops. The measures within the environmental document for steelhead and other federally listed species were developed in coordination with and agreed upon by National Marine Fisheries Service and U.S. Fish and Wildlife Service during project technical assistance.

Pages 154 through162 of the Draft Environmental Document do not contain mitigation measures; therefore, Caltrans assumes that you are referencing measures outlined on pages 138 through 146 of the Draft Environmental Document. Performance standards for

restoration will be outlined in the project's Mitigation and Monitoring Plan, which will be submitted to appropriate regulatory agencies for approval. Mitigation ratios are typically defined during permitting that occurs during the next project phase; however, Section 3.2.4, describes anticipated mitigation/restoration ratios which would offset impacts to sensitive resources. Impact quantities will continue to be refined as project design progresses and will be limited to the extent necessary to complete project activities.

Additionally, biological monitoring methods are described for various resources including MM-1 (marine mammals), BA-6 (black abalone), SBB-8 & 14 (Smith's blue butterfly), and CRLF-5 (California red-legged frog). As is standard for Caltrans projects, the Resident Engineer will enforce all avoidance and minimization measures and permit conditions, including those related to the Environmentally Sensitive Habitat Area. Reporting and additional monitoring requirements will be outlined in project permits which will be acquired during the next project phase.

4.8. The exact species and quantity of tree and vegetation removal will continue to be refined as the project design progresses. Species anticipated to be impacted are discussed in section 2.4. No grading is currently proposed in the Limekiln Creek riparian areas (including Sitka willow habitat) or creek. Jurisdictional areas are mapped in Section 2.4.2 Figure 30.

4.9. As describe in SCCC-2, an aquatic species exclusion/relocation plan will be submitted to the National Marine Fisheries Service for approval prior to construction. Additionally, CRLF-3 describes approval of California red-legged frog relocation sites. Agencies, including National Marine Fisheries Service, will provide additional recommendations and/or permit requirements as related to species relocation during Section 7 consultation, which will occur during the next project phase. Regulatory agencies will have the opportunity to review aquatic species exclusion and relocation plans prior to in-water work. Exact methodology for exclusion and relocation of aquatic organisms will vary depending on site conditions at the time of work and on the contractor's methodology for installing a creek diversion and will therefore need to be determined immediately prior to construction. Additional language to SCCC-2 has been included to address this comment.

5. Significant Environmental Effects

5.1. The batch plant is not located in the mouth of Limekiln Creek; it will be located just north of Pitkins curve in a flat area previously used for staging. In addition to Caltrans standard specification, the contractor will be required to provide a materials storage/dust control plan that will further minimize the amount of dust emissions.

The project level Stormwater Pollution Prevention Plan will address water 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, etc. By incorporating appropriate engineering design and robust storm water Best Management Practices during construction, minimal short-term air quality impacts are anticipated.

5.2. Since the Draft Environmental Document was circulated, Caltrans has determined that no temporary bridge piers will be required within Limekiln Creek. Alternative 6 will only require one creek diversion during the dry season (June 1 to October 31) to remove the existing bridge pier from the creek. Confining the stream diversion to the dry season, when water levels are lowest and steelhead are not typically traveling upstream, will reduce potential disruptions to steelhead migration and spawning. Proposed mitigation measures for South-Central Coast California steelhead and its habitat are described in Section 2.4.4. Caltrans addressed comments related to fish passage in comment 4.7. Caltrans will conduct Section 7 consultation with National Marine Fisheries Service, which may result in additional avoidance and minimization measures. The measures within the environmental document for steelhead and other federally listed species were developed in coordination with and agreed upon by National Marine Fisheries Service and U.S. Fish and Wildlife Service.

Work areas within jurisdictional limits will be restored to pre-existing condition. This will be further detailed in the project's Mitigation and Monitoring Plan, submitted to regulatory agencies for approval.

5.3. Alternative 6 does not require excavation and grading of the knob.

5.4. Alternative 6 will not impact the Rockland Landing. The construction footprint avoids it altogether. The document cannot disclose the exact location of archaeological deposits to protect the confidentiality of the resource. However, impacts are unavoidable with any construction of the bridge.

5.5. The geotechnical investigation is pending. The placement of the bridge needs to be finalized to collect accurate data. An updated report regarding conditions and recommendations will be provided once the investigation has been performed.

5.6. Construction emissions of GHG's were analyzed using the CAL-CET modeling tool, which includes emissions from concrete production. The emissions associated with concrete production are primarily determined by the production process itself and are not significantly altered by the location of the batch plant. However,

what Caltrans can actively manage and reduce are the emissions stemming from vehicle trips.

Currently, the nearest permitted batch plant facility, Granite Rock facility in Seaside, is approximately 58 miles north of the project site. While some concrete could be sourced from this plant, relying on this facility would require numerous heavy-duty truck trips throughout the county to transport the concrete to the project site. While the on-site batch plant would still require heavy-duty trucks, the delivery of concrete components could be done with larger loads to limit the vehicle miles traveled and as a result minimize greenhouse gas emissions of the project.

Standard batched concrete has a finite lifespan of 90 minutes in the drum before it must be rejected. Transporting concrete from the facility in Seaside would already consume close to an hour, leaving a limited window for any delays in transport, staging, or potential queues, which could result in the rejection of entire loads of concrete.

Analyzing cumulative impact of all projects in California is outside of the scope of this project. The purpose of this project is to ensure the reliability of State Route 1.

5.7. Hazardous materials could be found in bridge components that are distinct from concrete, such as manufactured asbestos products in bearings, rail shims, piping, and joint material. Collection of samples for hazardous waste analysis requires a contaminant specific approach, so core samples collected for chloride intrusion testing could not be reused for this purpose. A site-specific survey and assessment for Asbestos Containing Material in the existing bridge will be completed during the project design phase prior to construction. Any hazardous materials discovered because of the survey will be appropriately handled, treated, and disposed of following appropriate Caltrans Standard Special Provisions that will be determined with the assistance of the Project Hazardous Waste Specialist during the project's design phase. Negative effects to soils, water quality, and air quality because of project activities are not anticipated with implementation of these Standard Special Provisions.

5.8. As mentioned in comment response 3, bridge replacement is the best available solution. Alternative 6's alignment was designed to stay as close as feasibly possible to the existing bridge alignment. The bridge will replace an existing facility and maintain access to State Route 1 which is still consistent with the Big Sur Land Use Plan and Coastal Commission as referenced in Section 2.2.1. Avoidance and minimization measures referenced for Environmentally Sensitive Habitat Areas will protect significant

disruption of habitat values. Notably, the work trestle has been incorporated into the project which will reduce impacts from foot traffic and equipment that is required for bridge demolition and new bridge construction. Additionally, the trestle will allow riparian habitat to be trimmed, rather than grubbed, allowing for quicker re-establishment. The project has been designed such that there are no permanent impacts within sensitive habitats or recreational areas. There will be a slight net increase in riparian and creek habitat due to removal of the existing bridge pier and native habitat reestablishment.

This process will occur in the next phase of the project. Caltrans has coordinated with Coastal Commission throughout the development of the project and will coordinate with both Monterey County and Coastal Commission to receive a consolidated Coastal Development Permit. Coastal Commission has also expressed support of consolidation.

5.9. State Route 1 will not close and will remain open during construction. There will be single lane closures, but this would not require the public to travel an additional 150 miles.

6. Cumulative Effects. Cumulative impacts are addressed in Sections 2.2.3, 2.2.4, 2.4.1, 2.4.2, 2.4.3, 2.4.4, and 3.2.21. Within these sections existing and planned projects are addressed.

7. Comment response 3 addresses the need for bridge replacement and why bridge repair is not feasible. Section 1.5.1 addresses the No-Build alternative.

   Alternative 6 has been selected but removal of the shoreline protection/revetment was the same for both alternatives. The extent of removal is dependent on worker and public safety. The slope that the crib walls on the beach support is one and a half-to-one (horizontal to vertical) at the southeast end and steeper than one to one at the north-west end. The crib wall dimensions are 25 feet high and 15 feet wide. The width is buried under the slope and supporting it. The slope height to the highway is between 80 to 100 feet. The slope above the highway continues more than 700 vertical feet. Removal will start at the southeast end and work northwest.

   As removal moves northwest, slopes will be significantly steeper than one-to-one. This will lead to short-term safety and slope stability risks in construction and potential long-term destabilization of the mapped landslides above the road. Caltrans cannot responsibly create those hazards when they are not needed to complete the bridge replacement. Proposed removal is highlighted in yellow in Figure 32 in Appendix G.

Move removal may be possible including removing man-made features to three feet below the grade and/or aesthetic treatment of remaining wall. All rock slope protection can be removed and gabion baskets (wirework container filled with rock, concrete, or fill material) in front of the revetment also can be removed (if any remain at the time of construction).

Armoring will be removed to extent that is safely possible including removal below the finished grade. A more detailed discussion of the current revetment state and proposed plan is discussed in Section 1.5.

8. Request. The technical studies used to inform the Draft Environmental Document/Environmental Assessment reflect the project area conditions and associated cumulative impacts. The project is replacing an existing facility and would not significantly affect the quality of the human environment to warrant an Environmental Impact Statement under NEPA.

Appendix G Additional Figures and Plans

This section has been added since the release of the Draft Environmental Document and includes pictures and graphics that have been added for visual clarity.

Figure 31 below shows the location of Viaduct 1 and 2 in an aerial image.

Figure 31 Aerial Viaduct Image

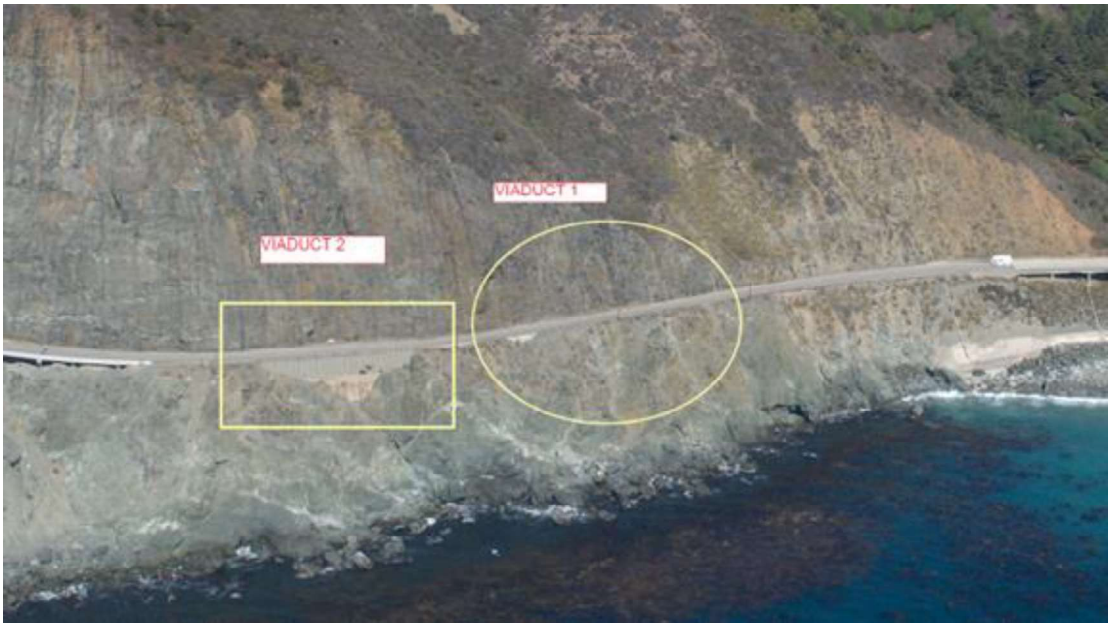


Figure 32 below shows the plan sheet for a half-width viaduct. The following acronyms are used:

- ES: edge of shoulder
- ETW: edge of travel way
- HMA: hot mix asphalt
- CIP: cast in place
- PG: profile grade
- CL2 AB: class two aggregate base
- OG: original ground

Figure 32 Half-Width Viaduct Plan

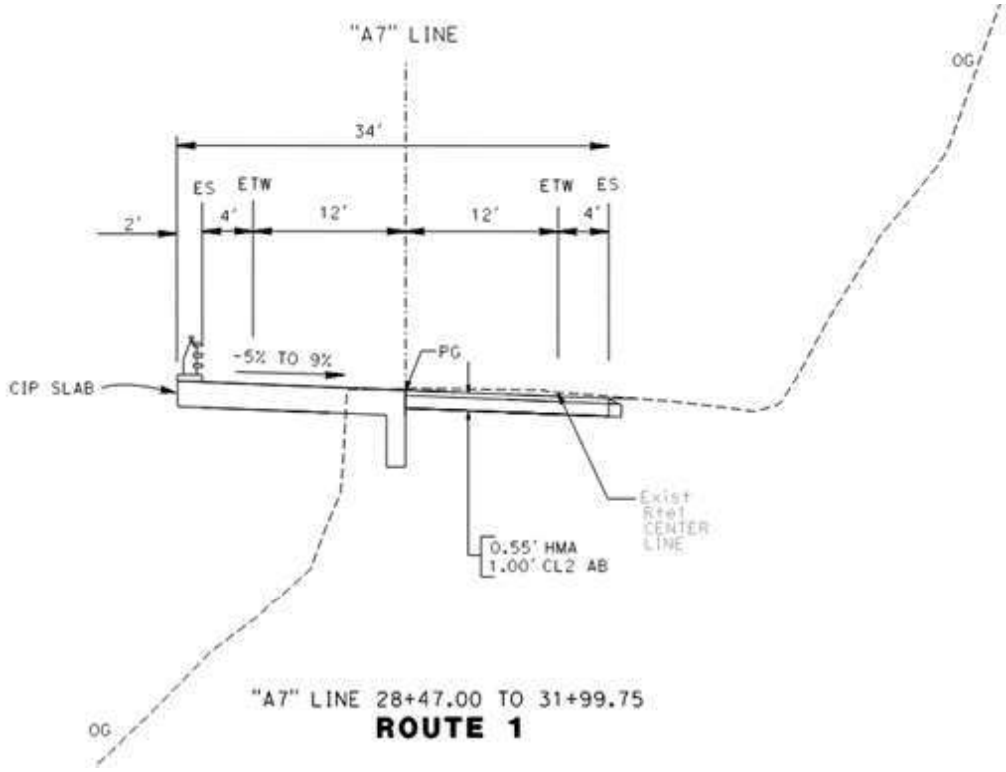


Figure 33 below shows the plan sheet for the full-width viaduct. The following acronyms are used:

- ES: edge of shoulder
- ETW: edge of travel way
- PG: axis of rotation
- FG: finish grade
- OG: original ground

Figure 33 Full-Width Viaduct Plan

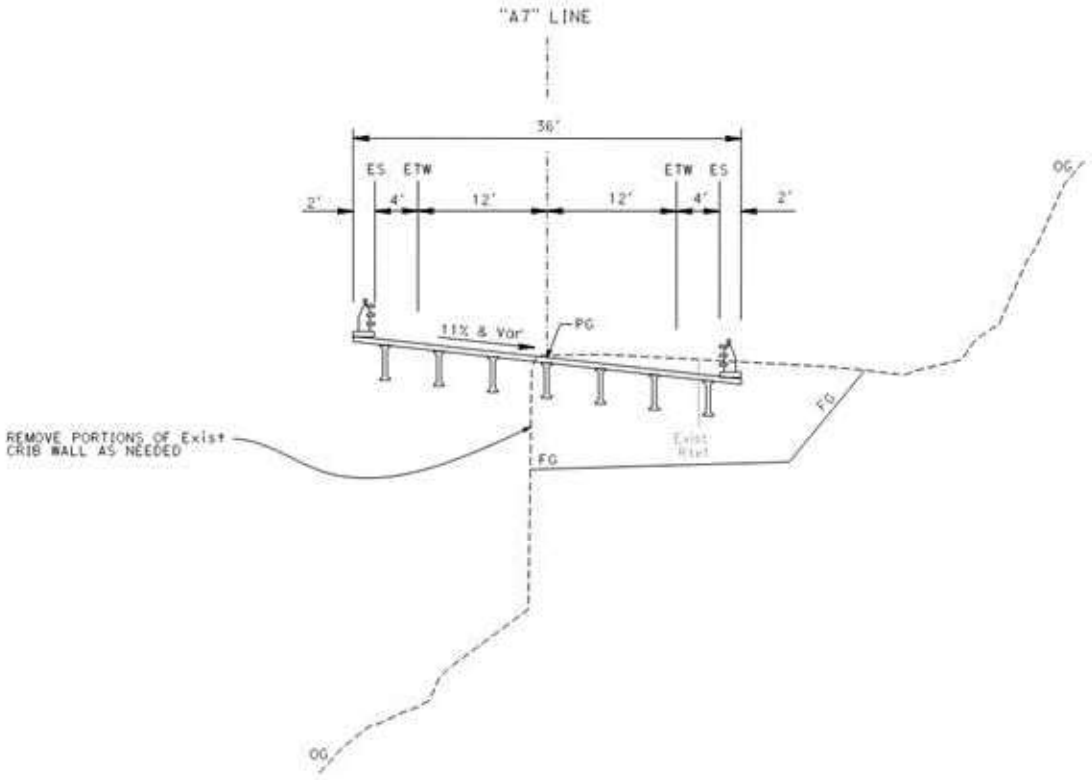


Figure 34 below shows the existing revetment. The section that is highlighted in yellow is what will be removed.

Figure 34 Revetment Removal



Figures 35-36 below show the full plans for Alternative 6 which includes the concrete batch staging area on page 3. The following acronyms are used:

- ES: edge of shoulder
- ETW: edge of travel way
- R/W: right of way

Figure 35 Alternative 6 Full Layout Sheet 1

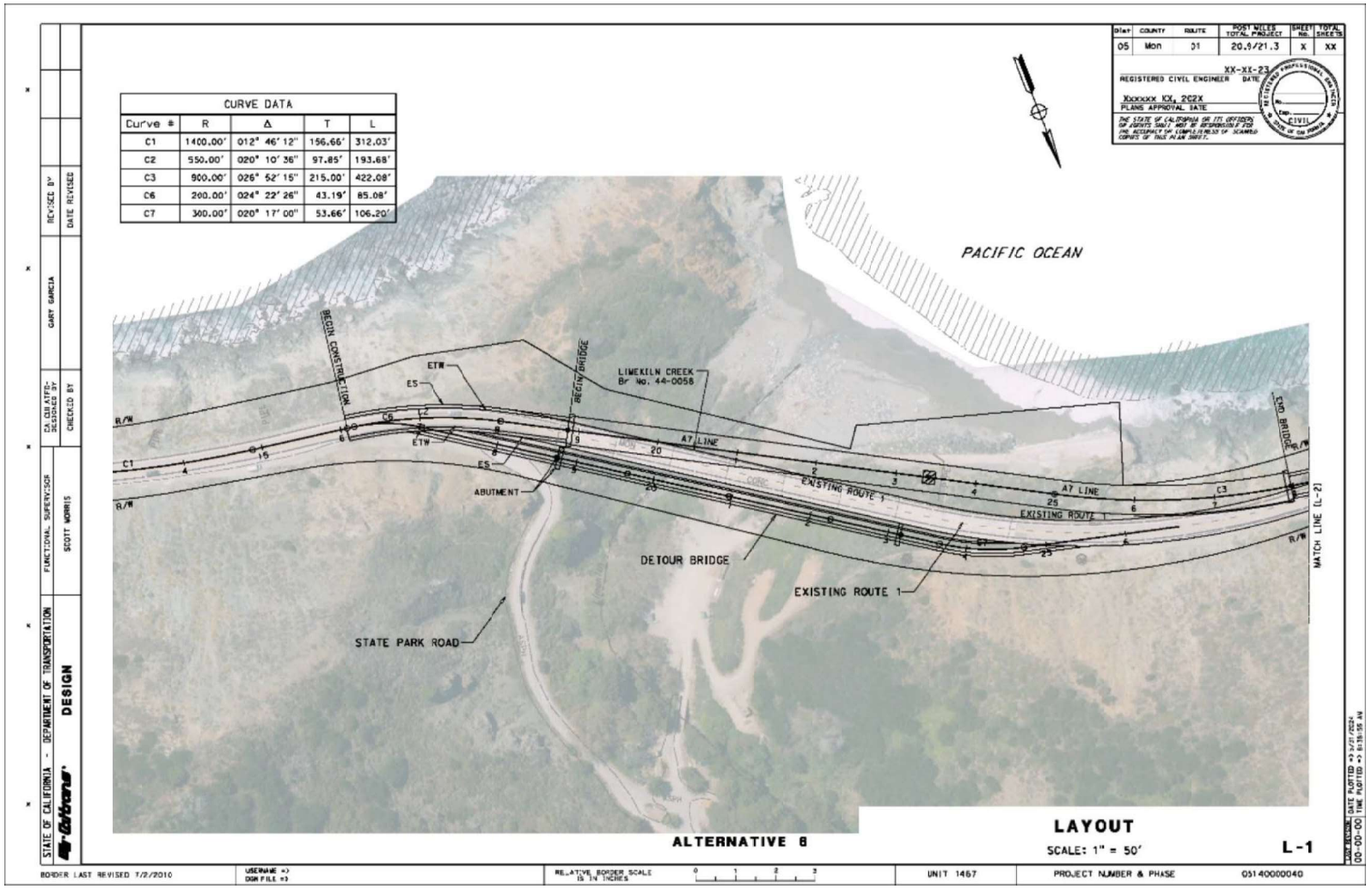


Figure 36 Alternative 6 Full Layout Sheet 2

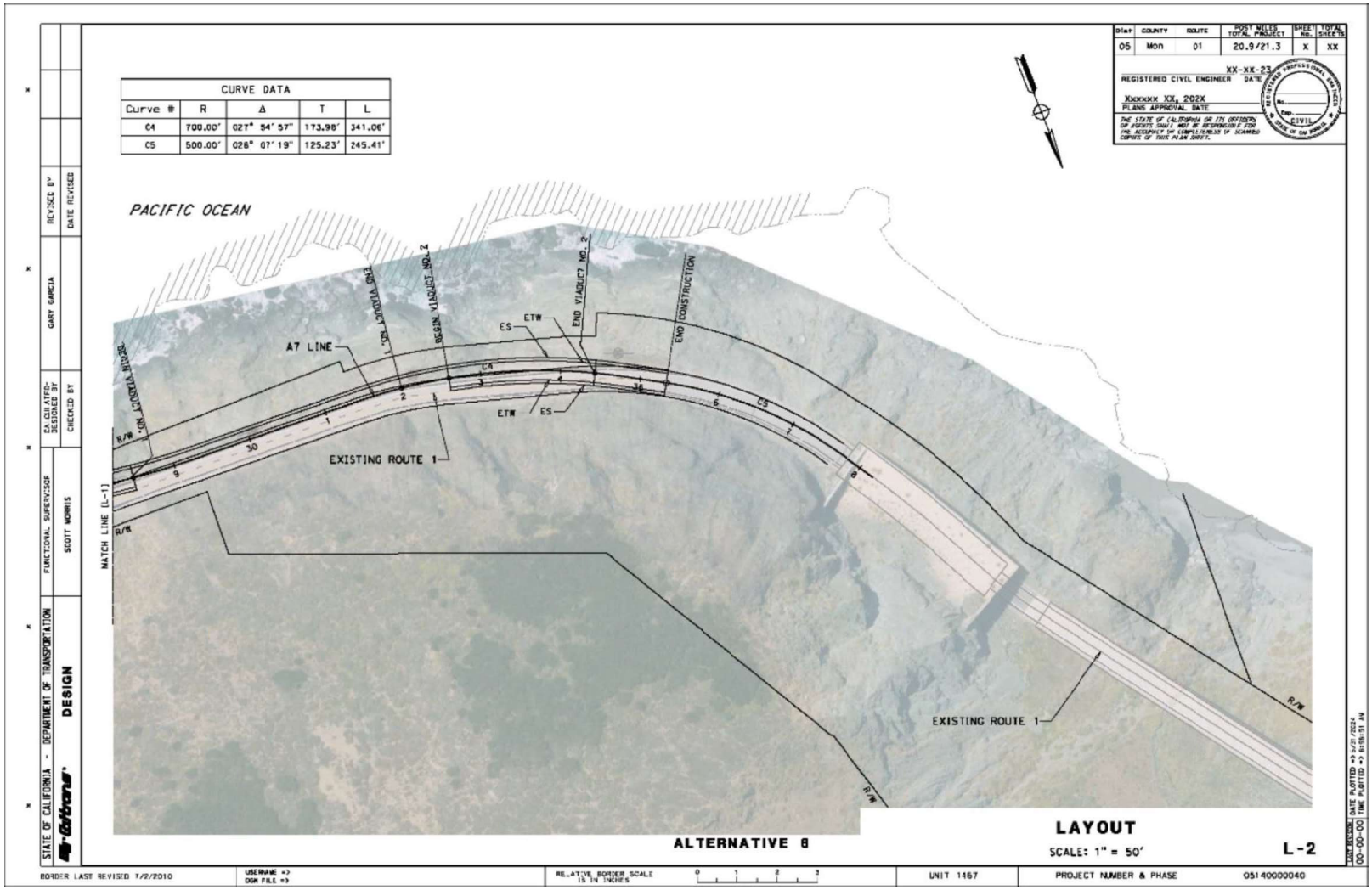


Figure 37 Alternative 6 Full Layout Sheet 3

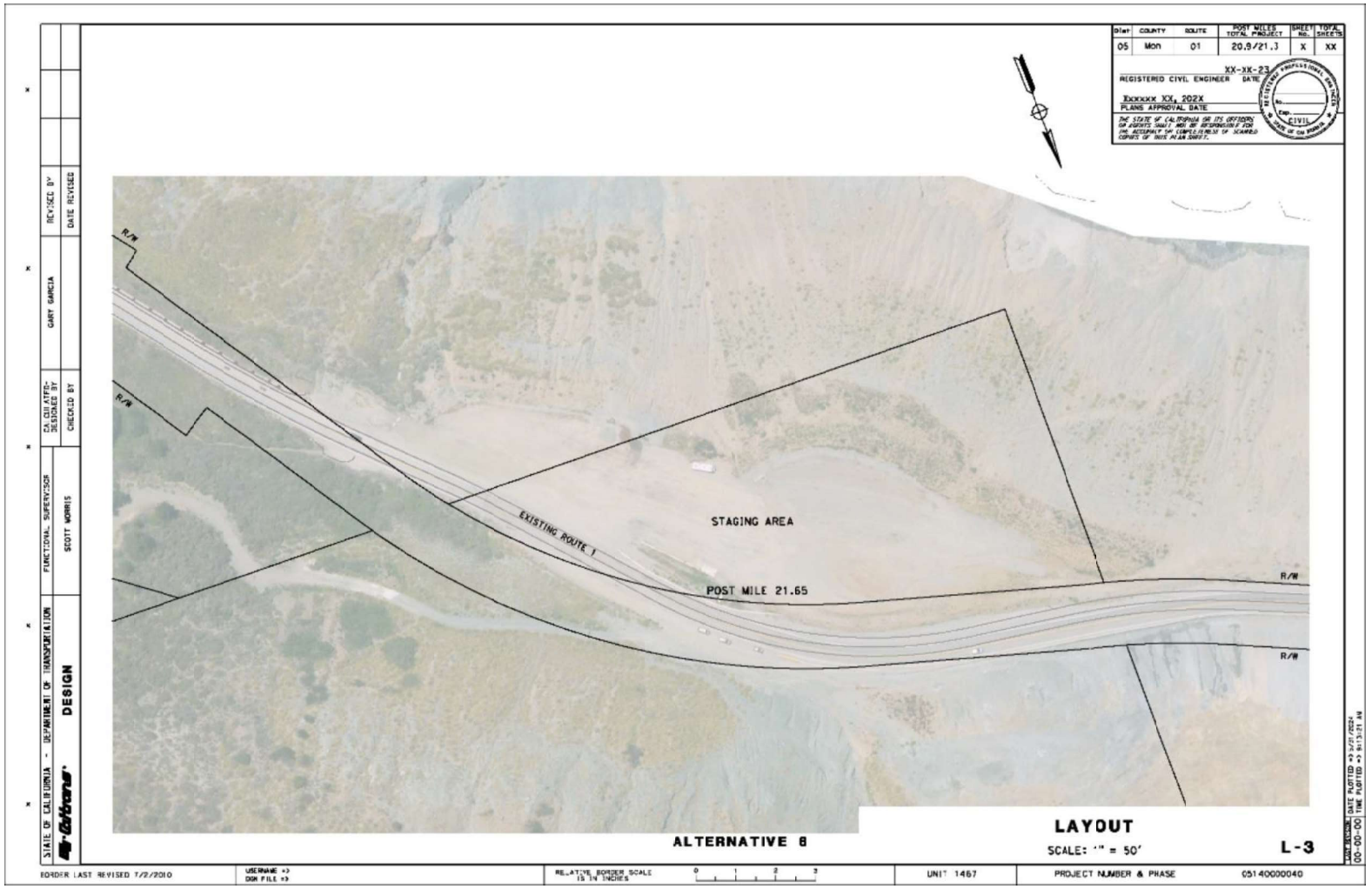
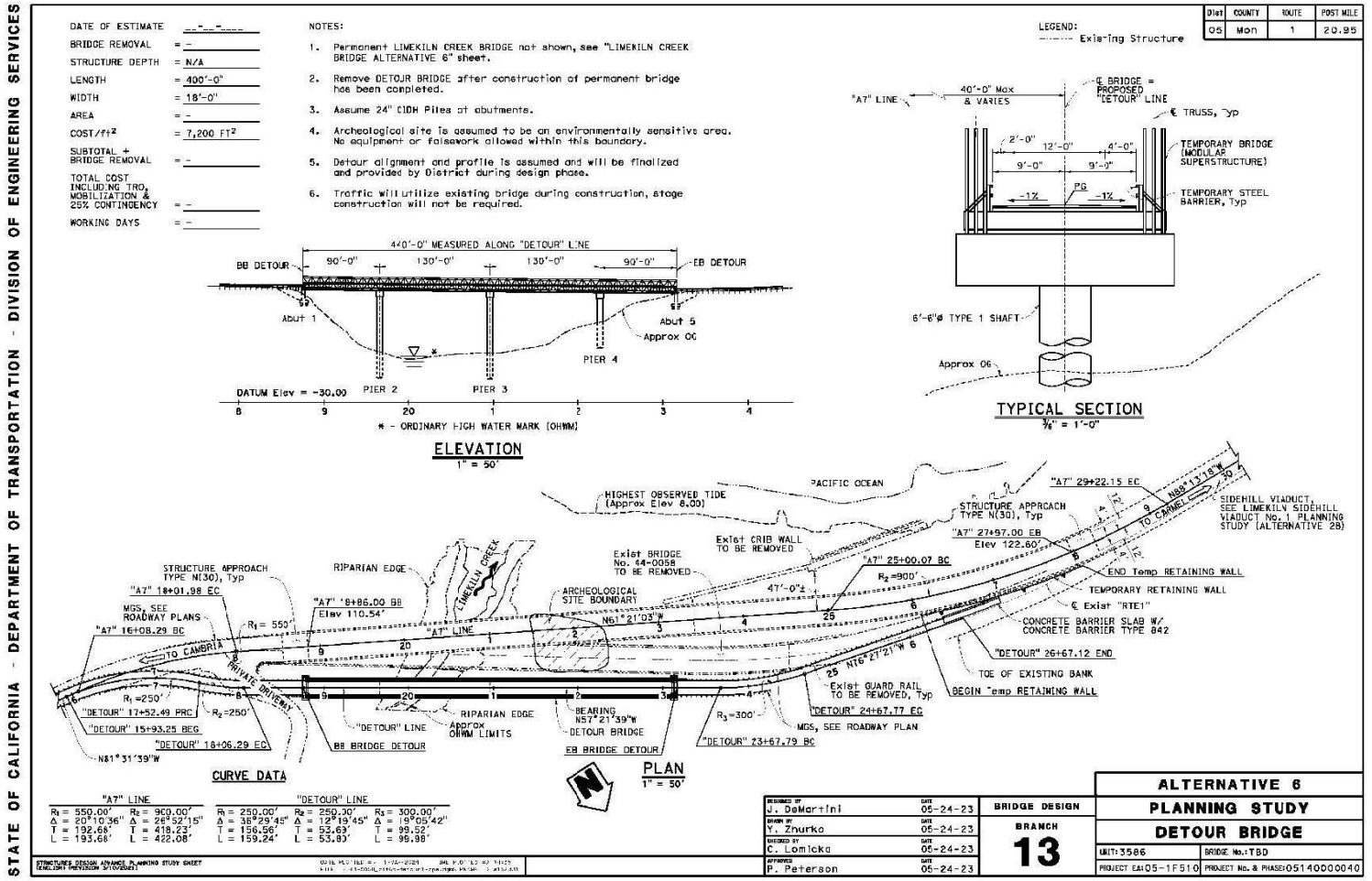


Figure 38 Temporary Bridge Plans



List of Technical Studies Bound Separately

Air Quality, Greenhouse Gas, and Noise Assessment Memorandum, August 4, 2023

Archaeological 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)

Finding of Adverse Effect (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 (updated May 2024)

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

ATTACHMENT D

Preferred Alt Layout and Typical Sections

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon	01	20.9/21.3	X	XX

XX-XX-23
REGISTERED CIVIL ENGINEER DATE

Xxxxxx XX, 202X
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

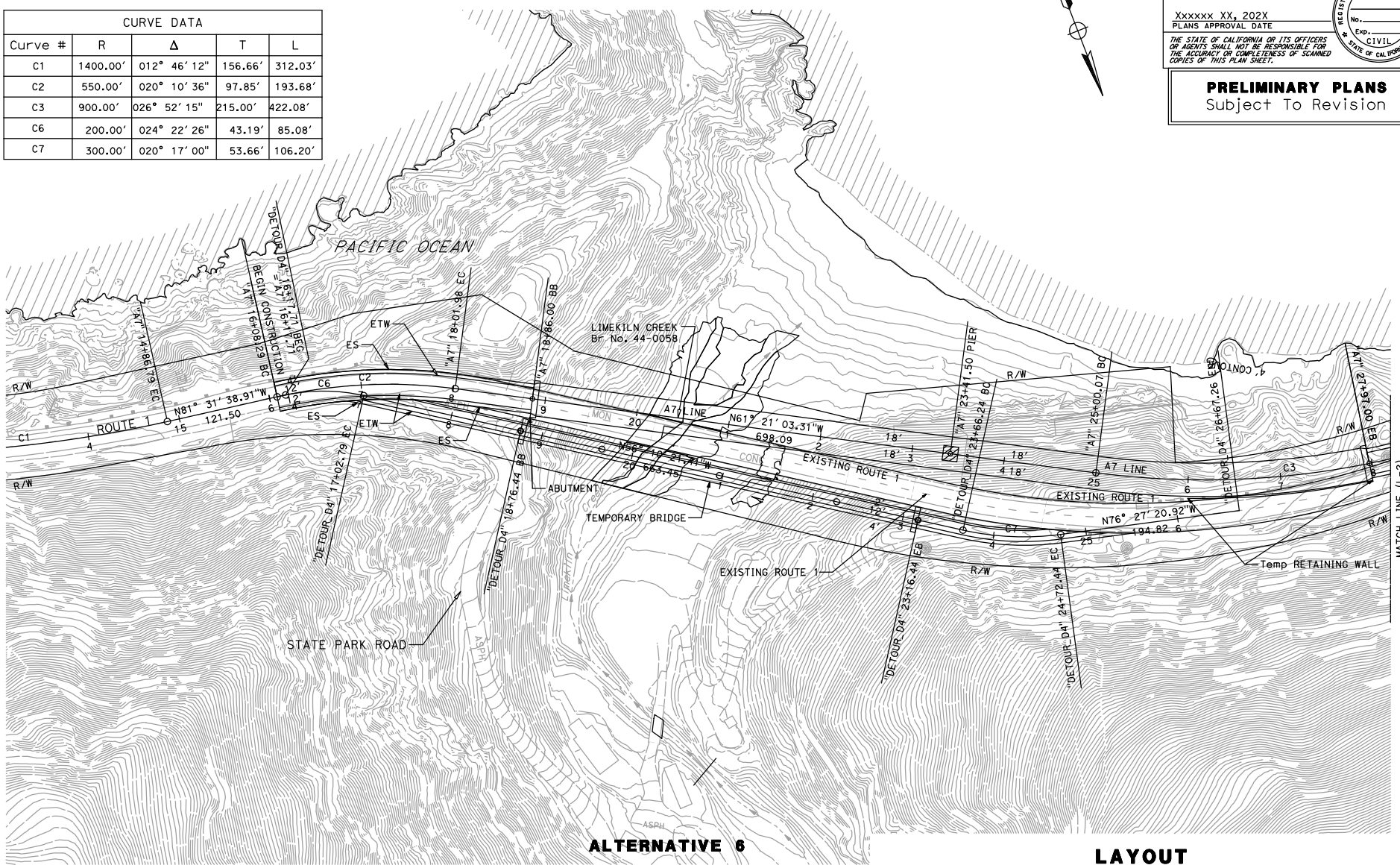
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

PRELIMINARY PLANS
Subject To Revision

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

CURVE DATA				
Curve #	R	Δ	T	L
C1	1400.00′	012° 46′ 12"	156.66′	312.03′
C2	550.00′	020° 10′ 36"	97.85′	193.68′
C3	900.00′	026° 52′ 15"	215.00′	422.08′
C6	200.00′	024° 22′ 26"	43.19′	85.08′
C7	300.00′	020° 17′ 00"	53.66′	106.20′



ALTERNATIVE 6

LAYOUT

SCALE: 1" = 50′

L-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISED BY
DESIGN	SCOTT MORRIS	GARY GARCIA	DATE REVISED
		CHECKED BY	

LAST REVISION 00-00-00
DATE PLOTTED => 6/3/2024
TIME PLOTTED => 2:55:53 PM

BORDER LAST REVISED 7/2/2010 | USERNAME => DGN FILE => | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1467 | PROJECT NUMBER & PHASE 05140000040

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

CURVE DATA				
Curve #	R	Δ	T	L
C4	700.00′	027° 54′ 57"	173.98′	341.06′
C5	500.00′	028° 07′ 19"	125.23′	245.41′

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon	01	20.9/21.3	X	XX

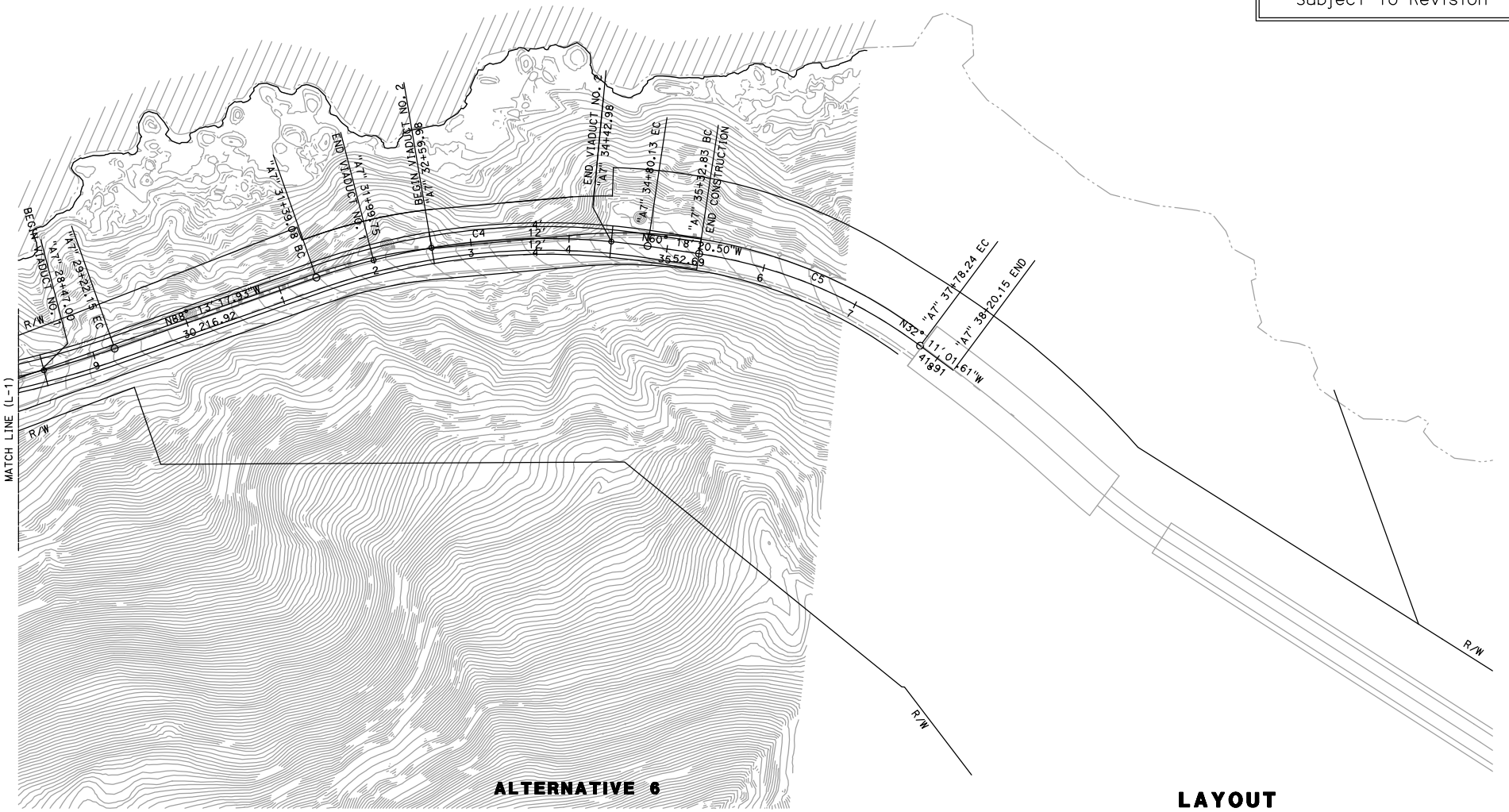
XX-XX-23
REGISTERED CIVIL ENGINEER DATE

Xxxxxx XX, 202X
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
No.
Exp.
CIVIL
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

PRELIMINARY PLANS
Subject To Revision



ALTERNATIVE 6

LAYOUT

SCALE: 1" = 50′

L-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN
FUNCTIONAL SUPERVISOR: SCOTT MORRIS
CALCULATED-DESIGNED BY
CHECKED BY
GARY GARCIA
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 6/3/2024
TIME PLOTTED => 2:56:15 PM

BORDER LAST REVISED 7/2/2010 | USERNAME => DGN FILE => | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1467 | PROJECT NUMBER & PHASE 05140000040

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon	01	20.9/21.3	X	XX

XX-XX-23
REGISTERED CIVIL ENGINEER DATE

Xxxxxx XX, 202X
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

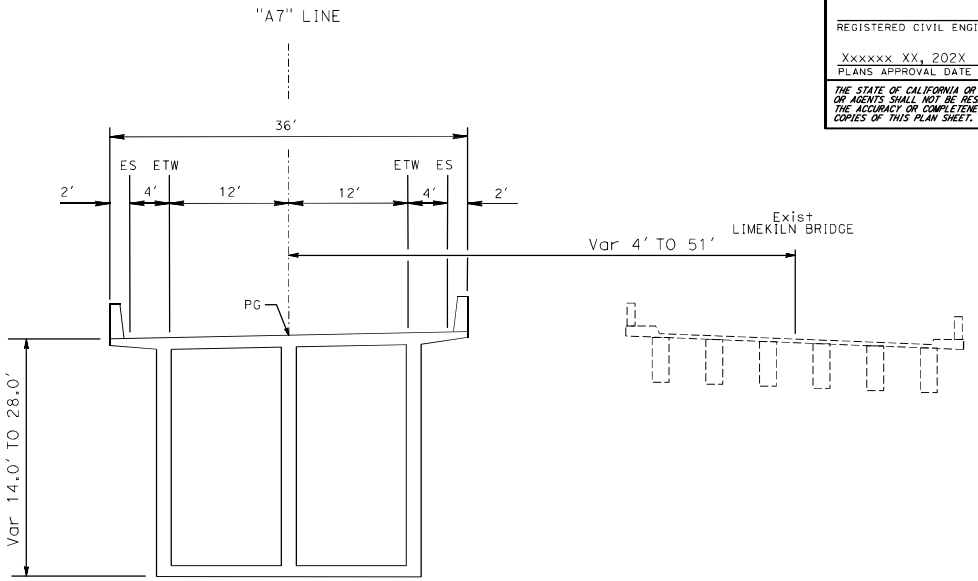
NOTES:

1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. SUPERELEVATIONS ARE SHOWN ON THE SUPER ELEVATION DIAGRAMS.

DESIGN DESIGNATION

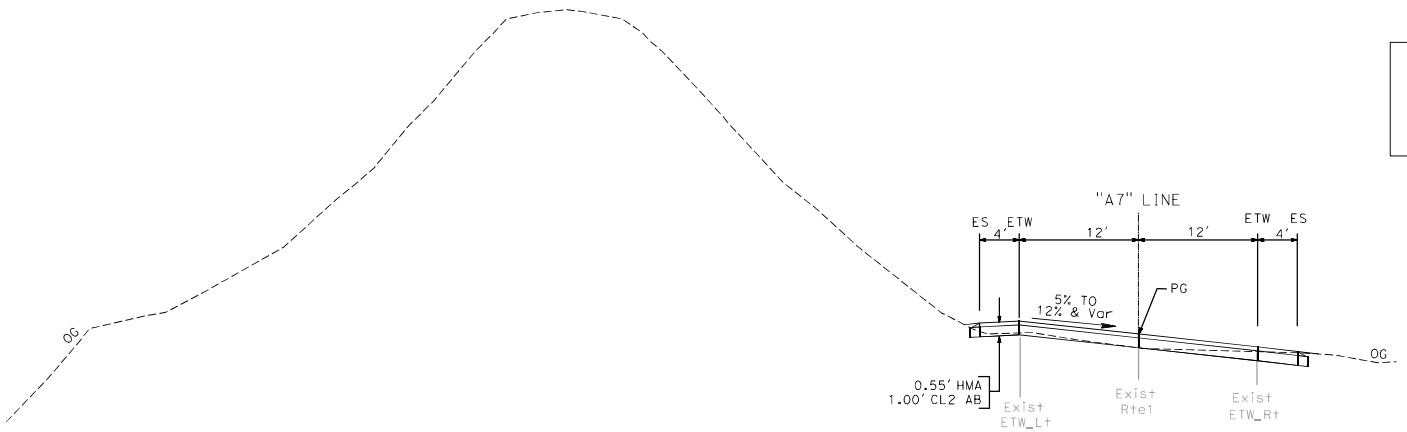
ADT (2030)	1,718	D	57.6%
ADT (2050)	2,479	T	2%-3%
DHV	382	V	45 mph
ESAL	80,317	TI_{20}	7.0

PAVEMENT CLIMATE REGION: CENTRAL COAST



"A7" LINE 18+86.00 TO 24+64.00

ROUTE 1



"A7" LINE 16+08.29 TO 18+86.00
"A7" LINE 27+97.00 TO 28+47.00
"A7" LINE 31+99.75 TO 32+59.98
"A7" LINE 34+42.98 TO 35+32.83

ROUTE 1

PRELIMINARY

NOT FOR CONSTRUCTION

ALTERNATIVE 6

TYPICAL CROSS SECTIONS

NO SCALE

X-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISED BY	DATE REVISED
DESIGN	SCOTT MORRIS	CHECKED BY	SCOTT A. MORRIS	

LAST REVISION 00-00-00 | DATE PLOTTED => 3/29/2024 | TIME PLOTTED => 4:09:31 PM

BORDER LAST REVISED 7/2/2010 | USERNAME => | DGN FILE => | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1467 | PROJECT NUMBER & PHASE 05140000040

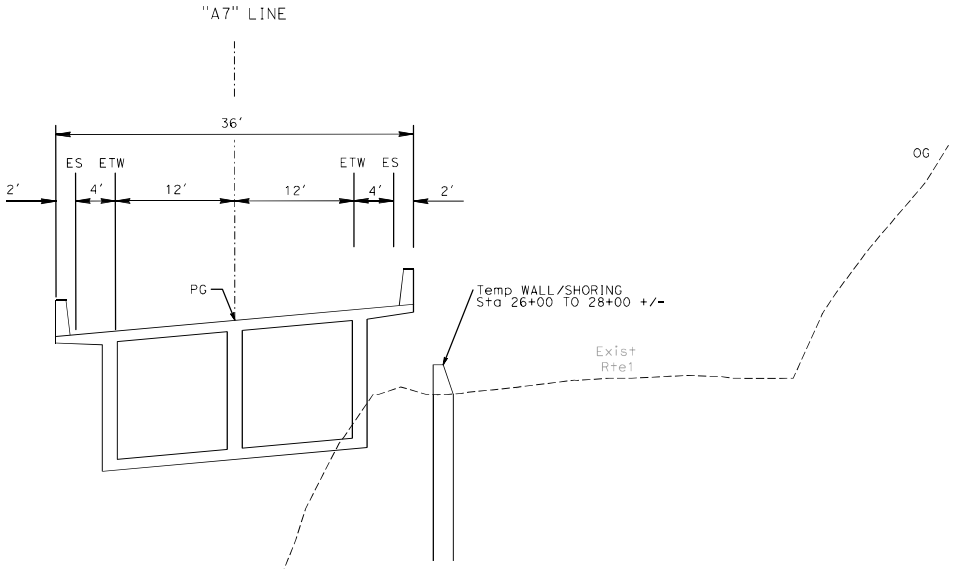
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon	01	20.9/21.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



"A7" LINE 24+64.00 TO 27+97

ROUTE 1

PRELIMINARY

NOT FOR CONSTRUCTION

ALTERNATIVE 6

TYPICAL CROSS SECTIONS

NO SCALE

X-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISED BY	
Caltrans DESIGN	SCOTT A. MORRIS	CHECKED BY	DATE REVISED	
	SCOTT A. MORRIS	SCOTT A. MORRIS		

LAST REVISION 00-00-00 | DATE PLOTTED => 5/29/2024 TIME PLOTTED => 4:17:33 PM

BORDER LAST REVISED 7/2/2010 | USERNAME => | DGN FILE => ...\Typical Cross Sections_Alternative 6.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1451 | PROJECT NUMBER & PHASE 05140000040

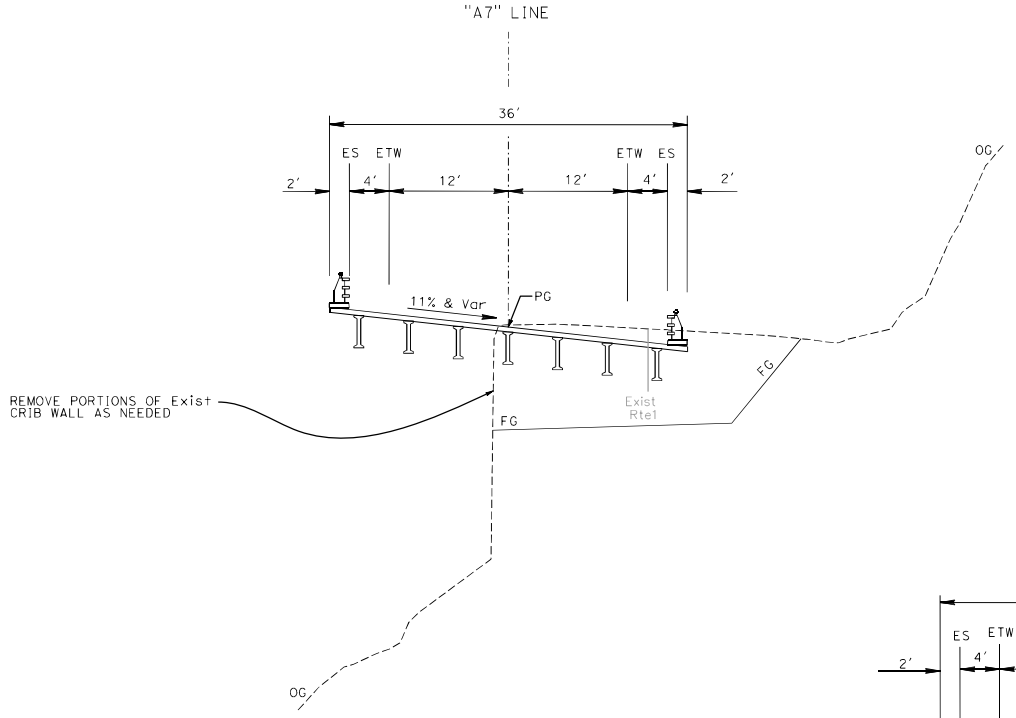
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon	01	20.9/21.3	X	XX

XX-XX-23
REGISTERED CIVIL ENGINEER DATE

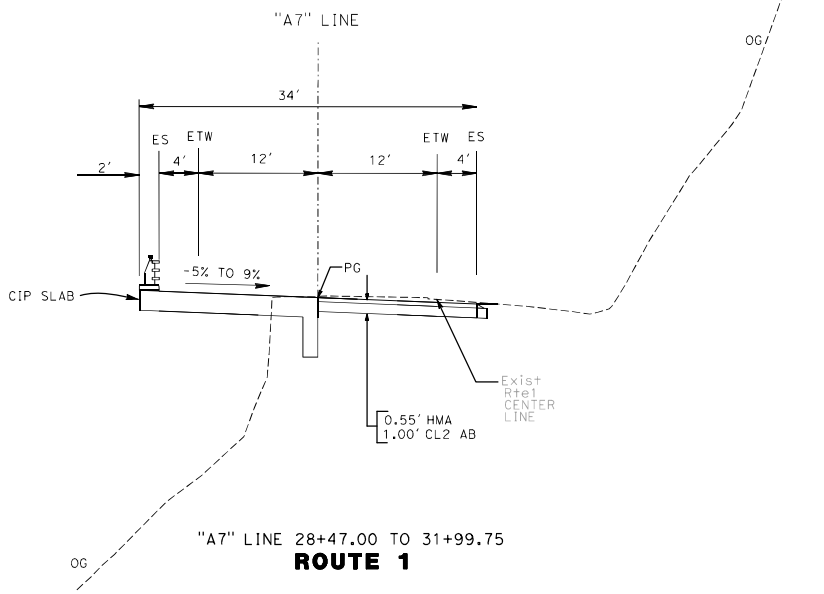
Xxxxxx XX, 202X
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
No.
Exp.
CIVIL
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



"A7" LINE 32+59.98 TO 34+42.98
ROUTE 1



"A7" LINE 28+47.00 TO 31+99.75
ROUTE 1

PRELIMINARY
NOT FOR CONSTRUCTION

ALTERNATIVE 6

TYPICAL CROSS SECTIONS

NO SCALE

X-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN
FUNCTIONAL SUPERVISOR: SCOTT MORRIS
CALCULATED-DESIGNED BY: SCOTT A. MORRIS
CHECKED BY
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 3/29/2024
TIME PLOTTED => 4:19:59 PM

BORDER LAST REVISED 7/2/2010
USERNAME =>
DGN FILE =>
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1467
PROJECT NUMBER & PHASE 05140000040

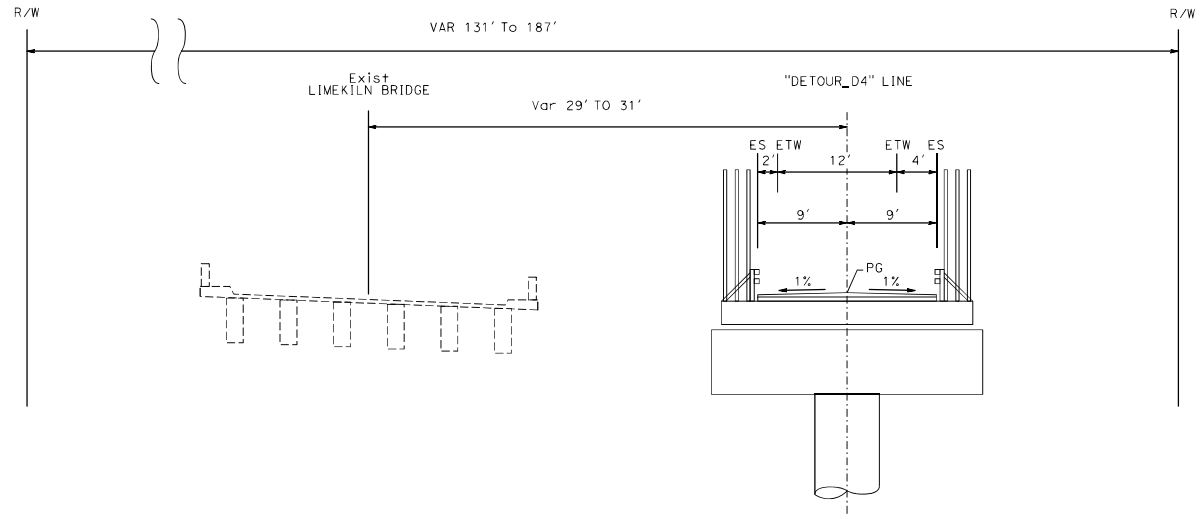
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon	01	20.9/21.3	X	XX

XX-XX-23
REGISTERED CIVIL ENGINEER DATE

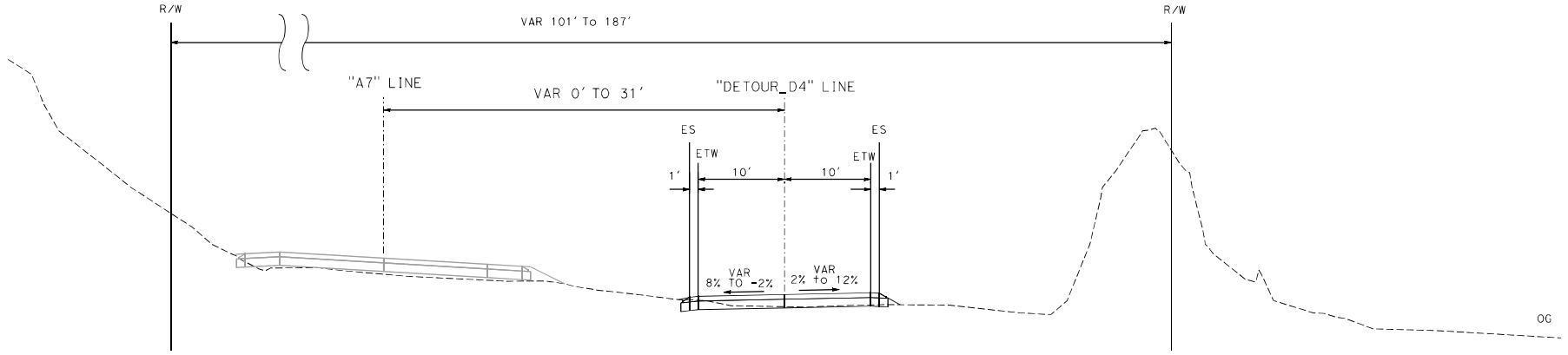
Xxxxxx XX, 202X
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
No.
Exp.
CIVIL
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



"DETOUR_D4" LINE STA 18+76.44 TO STA 23+16.44



"DETOUR_D4" LINE STA 16+17.71 TO STA 18+76.44
"DETOUR_D4" LINE STA 23+16.44 TO STA 26+67.26

TYPICAL CROSS SECTION

NO SCALE

X-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISED BY	DATE REVISED
Caltrans DESIGN	SCOTT MORRIS	ARTURO MORENO	CHECKED BY	

LAST REVISION 00-00-00 | DATE PLOTTED => 6/10/2024 | TIME PLOTTED => 10:17:39 AM

BORDER LAST REVISED 7/2/2010 | USERNAME => | DGN FILE => | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1467 | PROJECT NUMBER & PHASE 05140000040

ATTACHMENT E

Preferred Alt Advance Planning Study

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF ENGINEERING SERVICES

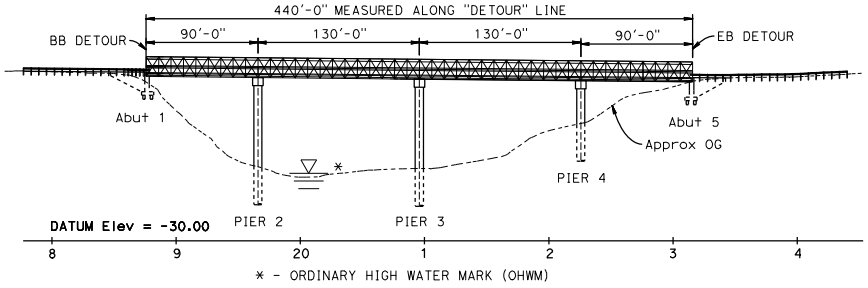
Dist	COUNTY	ROUTE	POST MILE
05	Mon	1	20.95

DATE OF ESTIMATE	__-___-____
BRIDGE REMOVAL	= -
STRUCTURE DEPTH	= N/A
LENGTH	= 400'-0"
WIDTH	= 18'-0"
AREA	= -
COST/ft²	= 7,200 FT²
SUBTOTAL + BRIDGE REMOVAL	= -
TOTAL COST INCLUDING TRO, MOBILIZATION & 25% CONTINGENCY	= -
WORKING DAYS	= -

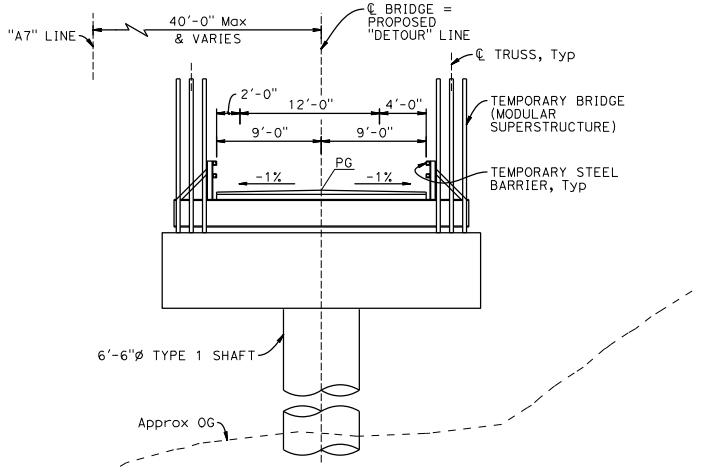
NOTES:

1. Permanent LIMEKILN CREEK BRIDGE not shown, see "LIMEKILN CREEK BRIDGE ALTERNATIVE 6" sheet.
2. Remove DETOUR BRIDGE after construction of permanent bridge has been completed.
3. Assume 24" CIDH Piles at abutments.
4. Detour alignment and profile is assumed and will be finalized and provided by District during design phase.
5. Traffic will utilize existing bridge during construction, stage construction will not be required.

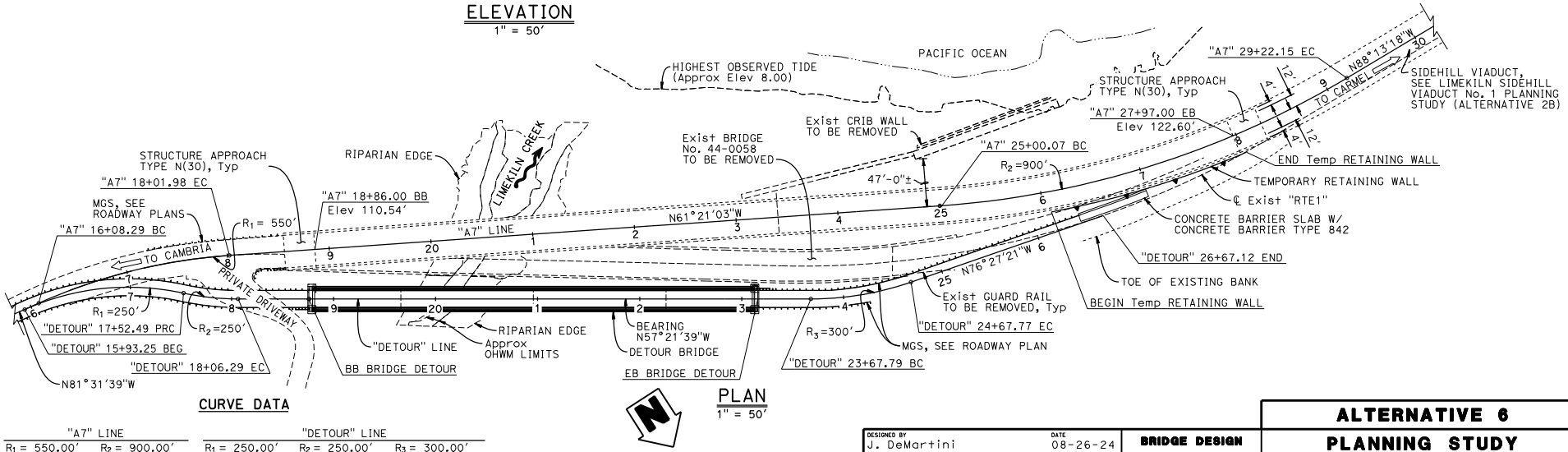
LEGEND:
----- Existing Structure



ELEVATION
1" = 50'



TYPICAL SECTION
3/16" = 1'-0"



PLAN
1" = 50'

CURVE DATA

"A7" LINE	
R_1 = 550.00'	R_2 = 900.00'
Δ = 20°10'36"	Δ = 26°52'15"
T = 192.68'	T = 418.23'
L = 193.68'	L = 422.08'

"DETOUR" LINE		
R_1 = 250.00'	R_2 = 250.00'	R_3 = 300.00'
Δ = 36°29'45"	Δ = 12°19'45"	Δ = 19°05'42"
T = 156.56'	T = 53.69'	T = 99.52'
L = 159.24'	L = 53.80'	L = 99.98'

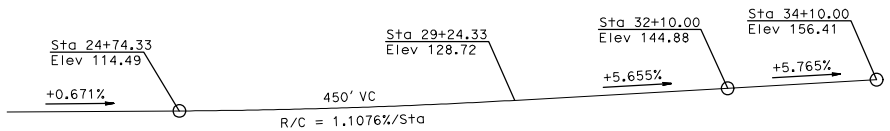
DESIGNED BY J. DeMartini	DATE 08-26-24	BRIDGE DESIGN BRANCH 13	ALTERNATIVE 6
DRAWN BY Y. Zhurko	DATE 08-26-24		PLANNING STUDY
CHECKED BY C. Lomicka	DATE 08-26-24		DETOUR BRIDGE
APPROVED P. Peterson	DATE 08-26-24		UNIT: 3586 / BRIDGE No.: TBD
			PROJECT EA: 05-1F510 / PROJECT No. & PHASE: 05140000040

STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET (ENGLISH) (REVISION 3/10/2021)

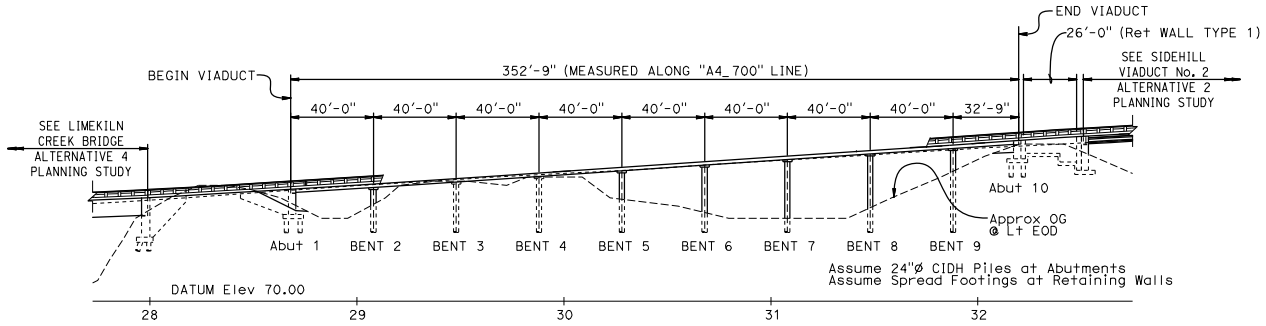
DATE PLOTTED => 27-AUG-2024 TIME PLOTTED => 08:57
FILE => 44-0058_alt6b-detour1-ape.dgn USERNAME => e152331

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF ENGINEERING SERVICES

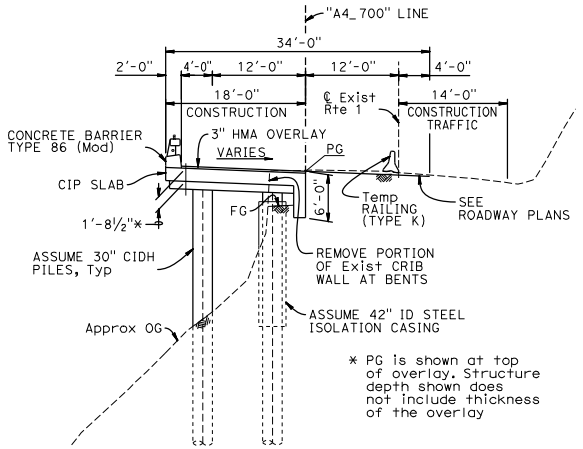
Dist	COUNTY	ROUTE	POST MILE
05	Mon	1	21.09



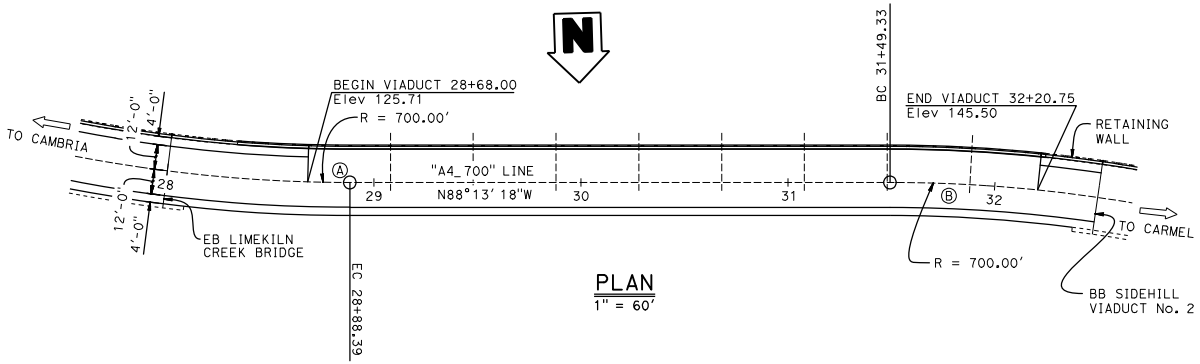
PROFILE GRADE
NO SCALE



DEVELOPED MIRRORED ELEVATION
1" = 60'



TYPICAL SECTION
⅛" = 1'-0"



PLAN
1" = 60'

CURVE DATA				
MARK	R	Δ	T	L
Ⓐ	700.00'	32°11'31"	201.99'	393.30'
Ⓑ	700.00'	27°54'57"	173.98'	341.06'

NOTE: Deck Drains not shown. Superelevation reversal on Viaduct will require several drains to minimize sheet flow across the deck.

DATE OF ESTIMATE	
BRIDGE REMOVAL	= N/A
STRUCTURE DEPTH	= 1'-8½"
LENGTH	= 352'-9"
WIDTH	= 18'-0"
AREA	= 6,350 sqft
COST/ft² INCLUDING TRO, MOBILIZATION & 25% CONTINGENCY	=
TOTAL COST	=

DESIGNED BY	K. Harper/C. Lomicka	DATE	02-13-23
DRAWN BY	G. D. / B. H. / Y. Zhurko	DATE	02-13-23
CHECKED BY	J. DeMartini	DATE	03-21-23
APPROVED	P. Peterson	DATE	03-21-23

STRUCTURE DESIGN
DESIGN BRANCH
13

ALTERNATIVE 2B
PLANNING STUDY
LIMEKILN SIDEHILL VIADUCT No. 1

UNIT: 3586	BRIDGE No.:
PROJECT EA: 05-1F510	PROJECT No. & PHASE: 05140000040

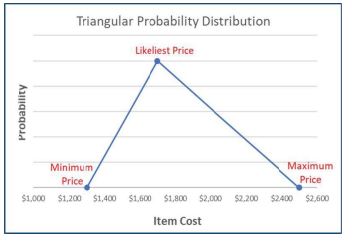
PROBABILISTIC STRUCTURE COST ESTIMATE

INPUT

	GENERAL PLAN ESTIMATE	x	ADVANCE PLANNING ESTIMATE

BD-0109 (REV 09/20/2022)

		IN EST:	
		OUT EST:	5/16/2023
BRIDGE NAME:	Limekiln Sidehill Viaduct No. 1 (Alt 2B)		
BRIDGE NUMBER:	N/A	**DISTRICT:**	05
TYPE:		**CO:**	MON
EA:	05-1F510	**RTE:**	1
PROJECT ID:	0514000004	**PM:**	
ACCELERATED BRIDGE PROJECT	NO		
		DEPTH	1.7
DESIGN BRANCH:		**LENGTH**	353
NO. OF STRUCTURES IN PROJECT :		**WIDTH**	18
		AREA	3602
PRICES BY :	Paul Mak		
PRICES CHECKED BY :	Paul Altamura	**EST. NO.**	
QUANTITIES BY:	Gage Steele	**COST INDEX:**	1432



The Assumption Curves, unless noted otherwise, are modeled with a triangular distribution with the "Minimum, Likeliest and Maximum values."

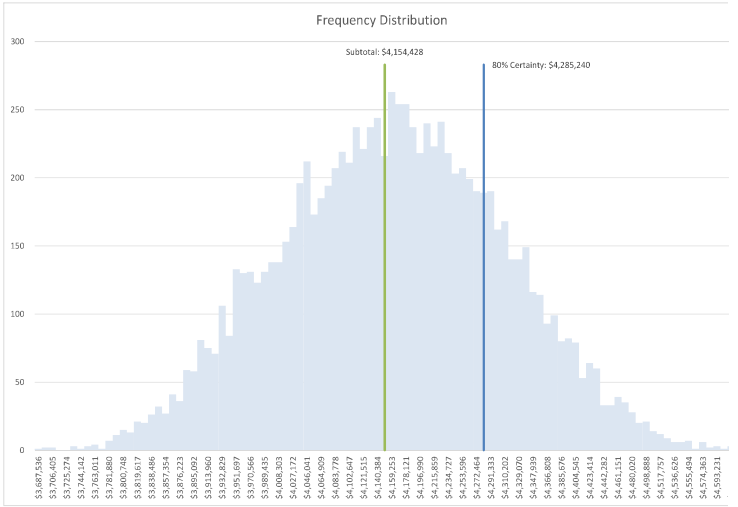
	CONTRACT ITEMS	TYPE	UNIT	QUANTITY	ITEM PRICE RANGE MINIMUM	LIKELIEST	MAXIMUM	AMOUNT
1								
2	STRUCTURE EXCAVATION		CY	492	$300.00	$350.00	$400.00	$172,200
3	STRUCTURE BACKFILL		CY	280	$250.00	$300.00	$350.00	$84,000
4	STRIPPING EXCAVATION		CY	142	$200.00	$250.00	$300.00	$35,500
5	STRUCTURAL CONCRETE, BRIDGE		CY	597	$1,900.00	$2,400.00	$2,900.00	$1,432,800
6	STURCTURAL CONCRETE, BRIDGE FOOTING		CY	30	$800.00	$1,000.00	$1,200.00	$30,000
7	BAR REINFORCING STEEL		LBS	204410	$1.70	$2.15	$2.60	$439,482
8	CAST-IN-DRILLED-HOLE CONCRETE PILING	30" DIA	LF	960	$550.00	$700.00	$850.00	$672,000
9	CAST-IN-DRILLED-HOLE CONCRETE PILING	24" DIA	LF	640	$320.00	$400.00	$480.00	$256,000
10	JOINT SEAL ASSEMBLY (MR=2)		LF	34	$700.00	$900.00	$1,100.00	$30,600
11	CONCRETE BARRIER	TYPE 86 MOD	LF	418	$300.00	$375.00	$450.00	$156,750
12	ISOLATION CASING	42"	Lbs	12844	$7.00	$9.00	$11.00	$115,596
13	HMA OVERLAY	3"	TON	102	$350.00	$450.00	$550.00	$45,900
14	REMOVE CONCRETE CRIB WALL		SQYD	441	$300.00	$400.00	$500.00	$176,400
15	TACK COAT		TON	0.3	$2,500.00	$3,000.00	$3,500.00	$900
16	TUBULAR BICYCLE RAILING		LF	418	$300.00	$350.00	$400.00	$146,300
17	TRESTLE 120ft x 30ft		SQFT	3600	$80.00	$100.00	$120.00	$360,000
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
							SUBTOTAL	$4,154,428

	TYPE	UNIT	QUANTITY	MINIMUM	LIKELIEST	MAXIMUM	
BRIDGE REMOVAL							

Comments

OUTPUT

This probabilistic estimate forecasts a range of likely final costs and their associated probabilities of occurring, or confidence levels. Item cost uncertainty is captured by estimating a range of prices: minimum, likely and maximum. The estimate model assumes a triangular distribution for each item, independent from the other items. A Monte Carlo simulation with 10,000 trials is used to develop a reasonable range of possible cost combinations.



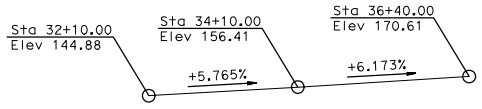
Time Related Overhead, Mobilization and Contingency NOT INCLUDED

Percentiles:	Forecast values	
0%	$3,687,536	BASED ON THE ASSUMPTIONS USED
10%	$3,956,595	TO CREATE THE MODEL, DES
20%	$4,024,449	STRUCTURE OFFICE ENGINEER
30%	$4,074,318	RECOMMENDS THAT THE
40%	$4,116,819	PROGRAMMING LEVEL BUDGET FOR
50%	$4,157,039	THIS PROJECT BE DESIGNATED AT THE
60%	$4,196,203	80% FORECAST VALUE.
70%	$4,237,392	
80%	**$4,285,240**	
90%	$4,348,334	
100%	$4,630,969	

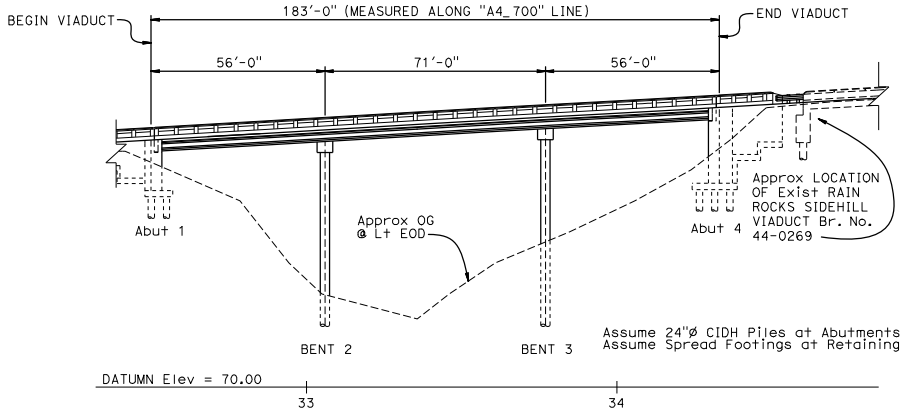
BRIDGE COST PER SQUARE FOOT	$1,191	DOES NOT INCLUDE time related overhead (TRO), mobilization and contingency
BRIDGE REMOVAL		
ESTIMATED COST Subtotal + Bridge	$4,285,000	
TOTAL	$6,547,000	INCLUDES mobilization: 10%, structure TRO: 10% and contingency: 25%

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF ENGINEERING SERVICES

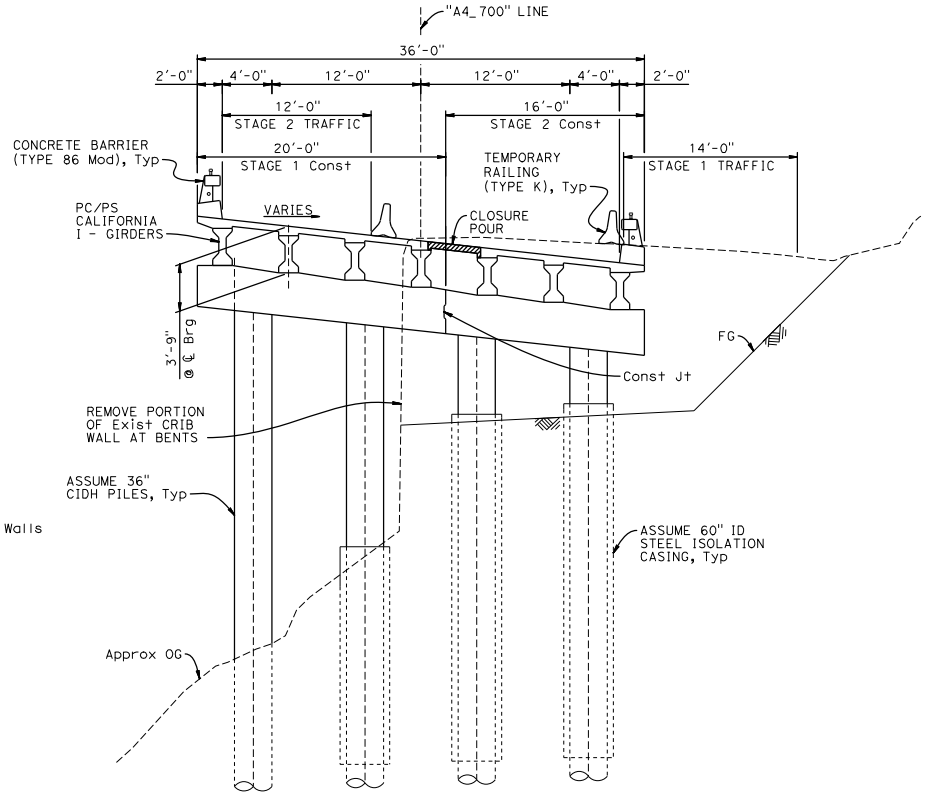
Dist	COUNTY	ROUTE	POST MILE
05	Mon	1	21.20



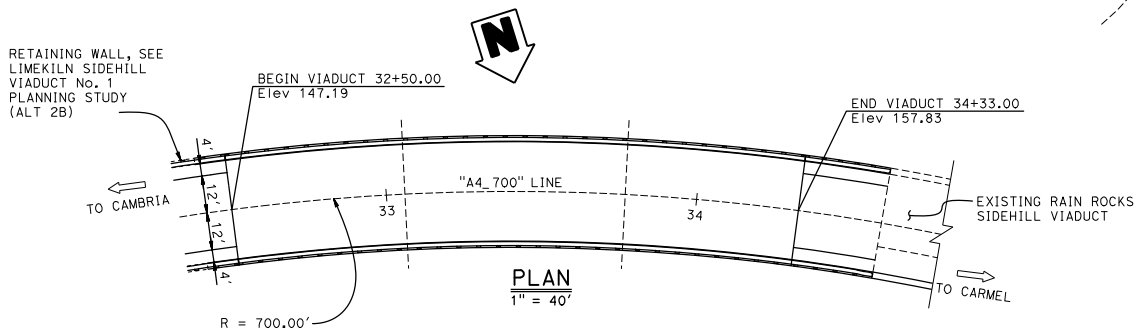
PROFILE GRADE
NO SCALE



DEVELOPED MIRRORED ELEVATION
1" = 40'



TYPICAL SECTION
1" = 5'



PLAN
1" = 40'

CURVE DATA
R = 700.00'
Δ = 27°54'57"
T = 173.98'
L = 341.06'

LEGEND:
---- Existing structure

DATE OF ESTIMATE	
BRIDGE REMOVAL	= N/A
STRUCTURE DEPTH	= 3'-9"
LENGTH	= 183'-0"
WIDTH	= 36'-0"
AREA	= 6,588 sqft
COST/ft² INCLUDING TRO, MOBILIZATION & 25% CONTINGENCY	=
TOTAL COST	=

DESIGNED BY	K. Harper / C. Lomicka	DATE	02-13-23
DRAWN BY	G. D. / B. H. / Y. Zhurko	DATE	02-13-23
CHECKED BY	J. DeMartini	DATE	03-21-23
APPROVED	P. Peterson	DATE	03-21-23

STRUCTURE DESIGN
DESIGN BRANCH
13

ALTERNATIVE 2
PLANNING STUDY
LIMEKILN SIDEHILL VIADUCT No. 2

UNIT: 3586	BRIDGE No.:
PROJECT EA: 05-1F510	PROJECT No. & PHASE: 05140000040

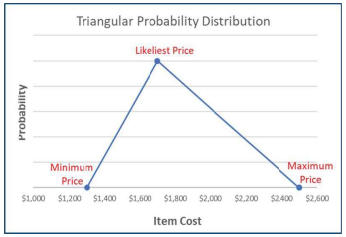
PROBABILISTIC STRUCTURE COST ESTIMATE

INPUT

	GENERAL PLAN ESTIMATE	x	ADVANCE PLANNING ESTIMATE

BD-0109 (REV 09/20/2022)

		IN EST:	
		OUT EST:	5/16/2023
BRIDGE NAME:	LIMEKILN SIDEHILL VIADUCT No. 2 (Alt 2)		
BRIDGE NUMBER:	N/A	**DISTRICT:**	05
TYPE:		**CO:**	MON
EA:	05-1F510	**RTE:**	1
PROJECT ID:	0514000004	**PM:**	21.2
ACCELERATED BRIDGE PROJECT	NO		
		DEPTH	3.8
DESIGN BRANCH:		**LENGTH**	183
NO. OF STRUCTURES IN PROJECT :		**WIDTH**	36
		AREA	6588
PRICES BY :	Paul Mak		
PRICES CHECKED BY :	Paul Altamura	**EST. NO.**	
QUANTITIES BY:	Gage Steele	**COST INDEX:**	1432



The Assumption Curves, unless noted otherwise, are modeled with a triangular distribution with the "Minimum, Likeliest and Maximum values."

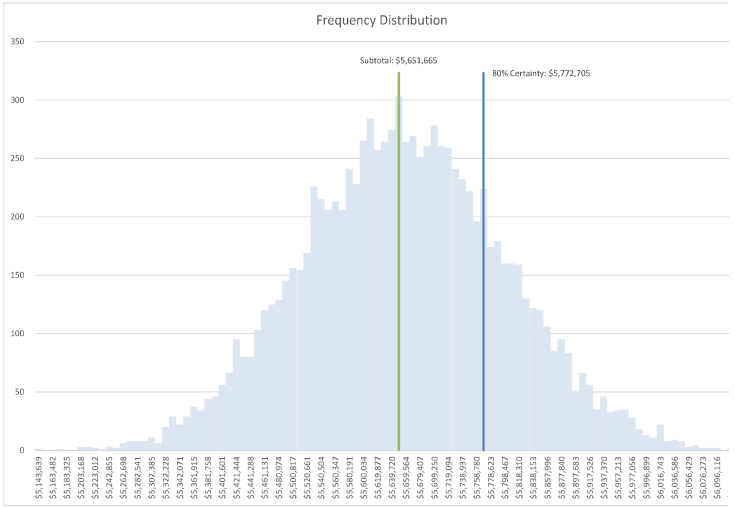
	CONTRACT ITEMS	TYPE	UNIT	QUANTITY	ITEM PRICE RANGE MINIMUM	LIKELIEST	MAXIMUM	AMOUNT
1	STRUCTURE EXCAVATION (BRIDGE)		CY	1045	$300.00	$350.00	$400.00	$365,750
2	STRUCTURE BACKFILL (BRIDGE)		CY	570	$250.00	$300.00	$350.00	$171,000
3	24" DIA CIDH CONCRETE PILING		LF	1400	$320.00	$400.00	$480.00	$560,000
4	36" DIA CIDH CONCRETE PILING		LF	480	$800.00	$1,000.00	$1,200.00	$480,000
5	STRUCTURAL CONCRETE, BRIDGE		CY	470	$1,900.00	$2,400.00	$2,900.00	$1,128,000
6	STRUCTURAL CONCRETE, FOOTING		CY	70	$800.00	$1,000.00	$1,200.00	$70,000
7	BAR REINFORCEMENT		LB	166100	$1.70	$2.15	$2.60	$357,115
8	CONCRETE BARRIER, CALIFORNIA (TYPE 86 MOD)		LF	366	$300.00	$375.00	$450.00	$137,250
9	JOINT SEAL (MR=2")		LF	73	$100.00	$150.00	$200.00	$10,950
10	ISOLATION CASING		LB	14250	$7.00	$9.00	$11.00	$128,250
11	ERECT PRECAST GIRDERS, (70'-80')		EA	7	$14,000.00	$17,000.00	$20,000.00	$119,000
12	ERECT PRECAST GIRDERS, (50'-60')		EA	14	$14,000.00	$17,000.00	$20,000.00	$238,000
13	FURNISH PRECAST GIRDERS, (70'-80')		EA	7	$40,000.00	$50,000.00	$60,000.00	$350,000
14	FURNISH PRECAST GIRDERS, (50'-60')		EA	14	$30,000.00	$35,000.00	$40,000.00	$490,000
15	REMOVE CONCRETE CRIB WALL		SQYD	305	$300.00	$400.00	$500.00	$122,000
16	STRIPPING EXCAVATION		CY	2865	$200.00	$250.00	$300.00	$716,250
17	TUBULAR BICYCLE RAILING		LF	366	$300.00	$350.00	$400.00	$128,100
18	TRESTLE		SQFT	800	$80.00	$100.00	$120.00	$80,000
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
							SUBTOTAL	$5,651,665

	TYPE	UNIT	QUANTITY	MINIMUM	LIKELIEST	MAXIMUM	
BRIDGE REMOVAL							

Comments

OUTPUT

This probabilistic estimate forecasts a range of likely final costs and their associated probabilities of occurring, or confidence levels. Item cost uncertainty is captured by estimating a range of prices: minimum, likely and maximum. The estimate model assumes a triangular distribution for each item, independent from the other items. A Monte Carlo simulation with 10,000 trials is used to develop a reasonable range of possible cost combinations.



Time Related Overhead, Mobilization and Contingency NOT INCLUDED

Percentiles:	Forecast values	
0%	$5,143,639	BASED ON THE ASSUMPTIONS USED
10%	$5,467,625	TO CREATE THE MODEL, DES
20%	$5,529,717	STRUCTURE OFFICE ENGINEER
30%	$5,575,807	RECOMMENDS THAT THE
40%	$5,615,102	PROGRAMMING LEVEL BUDGET FOR
50%	$5,650,211	THIS PROJECT BE DESIGNATED AT THE
60%	$5,688,330	80% FORECAST VALUE.
70%	$5,725,580	
80%	**$5,772,705**	
90%	$5,834,932	
100%	$6,135,802	

BRIDGE COST PER SQUARE FOOT	$876	DOES NOT INCLUDE time related overhead (TRO), mobilization and contingency
BRIDGE REMOVAL		
ESTIMATED COST Subtotal + Bridge	$5,773,000	
TOTAL	$8,819,000	INCLUDES mobilization: 10%, structure TRO: 10% and contingency: 25%

ATTACHMENT F

Preferred Alt Project Report Cost Estimate

PROJECT

PROJECT REPORT COST ESTIMATE

EA: 05-1F5100 *EA: 05-1F5100 PID: 514000004*

PID: 514000004 **District-County-Route:** 05-MON-1

PM: 20.9/21.3

Type of Estimate : Project Report

Program Code : SHOPP / 201.110

Project Limits : Near Lucia from 0.1 mile south to 0.2 mile north of Limekiln Creek Bridge

Project Description: Replace existing Limekiln Creek Bridge

Scope : Construct a two-span CIP haunched box girder bridge with a temporary one-lane bridge and two viaducts at the north end. Scope also includes construction of a temporary soldier pile wall at the north and removal of existing crib wall, retaining wall, and revetment. The new south abutment will be at the same location as existing with a slightly larger footprint.

Alternative : **No. 6**

SUMMARY OF PROJECT COST ESTIMATE

	Current Year Cost	Escalated Cost
TOTAL ROADWAY COST	$ 18,272,700	$ 21,993,753
TOTAL STRUCTURES COST	$ 66,772,350	$ 80,369,872
SUBTOTAL CONSTRUCTION COST	$ 85,045,050	$ 102,363,625
TOTAL RIGHT OF WAY COST	$ 4,298,593	$ 4,739,198
TOTAL CAPITAL OUTLAY COSTS	$ 89,344,000	$ 107,103,000
PA/ED SUPPORT	N/A	$ 100,000
PS&E SUPPORT	N/A	$ 9,600,000
RIGHT OF WAY SUPPORT	N/A	$ 600,000
CONSTRUCTION SUPPORT	N/A	$ 18,500,000
TOTAL SUPPORT COST	$ 24,035,000	$ 28,800,000
TOTAL PROJECT COST	$ 114,000,000	$ 136,000,000

Programmed Amount

	Month	Year
Date of Estimate (Month/Year)	7	2024
Estimated Construction Start (Month/Year)	7	2027
Number of Working Days =	1,125	
Estimated Mid-Point of Construction (Month/Year)	3	2029
Estimated Construction End (Month/Year)	12	2031
Number of Plant Establishment Days	1 Year	

Estimated Project Schedule

PID Approval	6/18/2015
PA/ED Approval	8/01/2024 T
PS&E	6/01/2026 T
RTL	12/01/2026 T
Begin Construction	7/7/2027

Reviewed by District O.E. or Cost Estimate Certifier

Office Engineer / Cost Estimate Certifier	Date	Phone
	xx/xx/xxxx	(xxx) xxx-xxxx

Approved by Project Manager

Project Manager	Date	Phone
	xx/xx/xxxx	(xxx) xxx-xxxx

I. ROADWAY ITEMS SUMMARY

	Section		Cost
1	**Earthwork**	$	382,500
2	**Pavement Structural Section**	$	273,200
3	**Drainage**	$	200,000
4	**Specialty Items**	$	1,008,300
5	**Environmental**	$	2,801,200
6	**Traffic Items**	$	1,187,700
7	**Detours**	$	321,000
8	**Minor Items**	$	617,400
9	**Roadway Mobilization**	$	679,200
10	**Supplemental Work**	$	477,700
11	**State Furnished**	$	427,100
12	**Time-Related Overhead**	$	6,861,800
13	**Roadway Contingency**	$	2,285,600
14	**Split-Off Mitigation Planting (Support)**	$	750,000
	TOTAL ROADWAY ITEMS	**$**	**18,272,700**

Estimate Prepared By : Arturo Moreno and Gary Garcia — 805-556-5351

Name and Title — Date — Phone

Estimate Reviewed By : Scott A. Morris — 7/25/2024 — 805-556-5543

Name and Title — Date — Phone

By signing this estimate you are attesting that you have discussed your project with all functional units and have incorporated all their comments or have discussed with them why they will not be incorporated.

SECTION 1: EARTHWORK

Item code		Unit	Quantity		Unit Price ($)			Cost
170103	Clearing & Grubbing		1	x	111,000.00	=	$	111,000
190101	Roadway Excavation	CY	2,262	x	120.00	=	$	271,440

TOTAL EARTHWORK SECTION ITEMS	$	382,500

SECTION 2: PAVEMENT STRUCTURAL SECTION

Item code		Unit	Quantity		Unit Price ($)			Cost
260203	Class 2 Aggregate Base	CY	800	x	110.00	=	$	88,000
390132	Hot Mix Asphalt (Type A)	TON	920	x	200.00	=	$	184,000
397005	Tack Coat	TON	0.40	x	2,900.00	=	$	1,160

TOTAL PAVEMENT STRUCTURAL SECTION ITEMS	$	273,200

SECTION 3: DRAINAGE

Item code		Unit	Quantity		Unit Price ($)		Cost
	TOTAL DRAINAGE ITEMS					**$**	**200,000**

SECTION 4: SPECIALTY ITEMS

Item code		Unit	Quantity		Unit Price ($)		Cost	
011793	Remove Rock Slope Protection	CY	587		500.00	$	293,500	
070030	Lead Compliance Plan	LS	1	x	5,000.00	= $	5,000	
080060	Level 2 Critical Path Method Schedule	LS	1	x	13,000.00	= $	13,000	
141120	Treated Wood Waste	LB	21,049	x	0.60	= $	12,629	
153213	Remove Concrete (Structure)	CY	2,300		250.00	$	575,000	Beach crib wall and sea wall removal
782120	Relocate Mailbox	EA	1		400.00	$	400	
801360	12' Metal Gate	EA	4		5,000.00	$	20,000	
803060	Remove Gate	EA	4		1,250.00	$	5,000	
820130	Object Marker	EA	20		120.00	$	2,400	
820220	Remove Marker	EA	20		80.00	$	1,600	
832007	Midwest Guardrail System (Wood Post)	LF	316		75.00	$	23,700	
839543	Transition Railing (Type WB-31)	EA	5	x	6,000.00	= $	30,000	
839588	Buried Post End Anchor (Type B-F)	EA	1		2,000.00	$	2,000	
839580	End Anchor Assembly (Type SFT-M)	EA	2	x		= $	-	
839752	Remove Guardrail	LF	1,274	x	11.00	= $	14,014	
994650	Building Work	LS	0		25,000.00	$	-	
XXXXXX	Remove and Replace Metal Post and Photovoltaic Fixture	LS	1		10,000.00	$	10,000	
	TOTAL SPECIALTY ITEMS					**$**	**1,008,300**	

SECTION 5: ENVIRONMENTAL

5A - ENVIRONMENTAL MITIGATION

Item code		Unit	Quantity		Unit Price ($)			Cost		
XXXXXX	Environmental Mitigation	LS	1	x	530,000.00	=	$	530,000		
									$	530,000

5B - LANDSCAPE AND IRRIGATION

Item code		Unit	Quantity		Unit Price ($)			Cost		
204099	Plant Establishment Work	LS	1	x	60,000.00	=	$	60,000		
2040XX	Replacement Planting	LS	1	x	100,000.00	=	$	100,000		
780447	Stain Galvanized Surfaces (for Tubular Pedestrian Bridge Rail)	LF	2,764	x	65.00	=	$	179,660		
83XXXX	MGS Stain	LF	316	x	15.00	=	$	4,740		
									$	344,400

5C - EROSION CONTROL

Item code		Unit	Quantity		Unit Price ($)			Cost		
XXXXX	Erosion Control	EA	1	x	150,000	=	$	150,000		
XXXXX	Split-Off Mitigation Planting (Capital)	LS	1		750,000		$	750,000		
									$	900,000

5D - NPDES

Item code		Unit	Quantity		Unit Price ($)			Cost		
130100	Job Site Management	LS	1	x	1,000,000.00	=	$	1,000,000		
130200	Prepare Water Pollution Control Plan	LS	0	x	0.00	=	$	-		
130300	Prepare Storm Water Pollution Prevention Plan	LS	1	x	6,000.00	=	$	6,000		
130310	Rain Event Action Plan (REAP)	EA	8	x	500.00	=	$	4,000		
130320	Storm Water Sampling and Analysis Day	EA	16	x	525.00	=	$	8,400		
130330	Storm Water Annual Report	EA	3	x	2,000.00	=	$	6,000		
130900	Temporary Concrete Washout	LS	1	x		=	$	-		
130710	Temporary Construction Entrance	EA	2	x		=	$	-		
XXXXXX	Construction General Permit fees	LS	1	x	2,388.00	=	$	2,388		
								Subtotal NPDES	$	1,026,800

								TOTAL ENVIRONMENTAL	**$**	**2,801,200**

Supplemental Work for NPDES

066595	Water Pollution Control Maintenance Sharing*	LS		x		=	$	-		
066596	Additional Water Pollution Control**	LS		x		=	$	-		
130320	Storm Water Sampling and Analysis Day***	EA		x		=	$	-		
									$	-

*Applies to all SWPPPs and those WPCPs with sediment control or soil stabilization BMPs.

**Applies to both SWPPPs and WPCP projects.

*** Applies only to project with SWPPPs.

SECTION 6: TRAFFIC ITEMS

6A - Traffic Electrical

Item code		Unit	Quantity		Unit Price ($)			Cost
	See Section 6D for Temporary Signal System							

Subtotal Traffic Electrical $ -

6B - Traffic Signing and Striping

Item code		Unit	Quantity		Unit Price ($)			Cost
120090	Construction Area Signs	LS	1	x	16,500.00	=	$	16,500
120159	Temporary Pavement Stripe (Paint)	LF	0	x	5.00	=	$	-
120165	Channelizer (Surface Mounted)	LS	1	x	3,724.00	=	$	3,724
129152	Temporary Speed Feedback Sign System	LS	1		49,600.00	=	$	49,600
820270	Remove Roadside Sign (Wood Post)	EA	4		210.00	=	$	840
820280	Remove Roadside Sign (Metal Post)	EA	2		290.00	=	$	580
820430	Salvage Roadside Sign (Wood Post)	EA	3		500.00	=	$	1,500
820460	Salvage Roadside Sign (Metal Post)	EA	2		250.00	=	$	500
820540	Reset Roadside Sign (Wood Post)	EA	3		600.00	=	$	1,800
820550	Reset Roadside Sign (Metal Post)	EA	2		600.00	=	$	1,200
820590	Relocate Roadside Sign-One Post	EA	4		400.00	=	$	1,600
820600	Relocate Roadside Sign-Two Posts	EA	4		1,000.00	=	$	4,000
820840	Roadside Sign- One Post	EA	8		430.00	=	$	3,440
820850	Roadside Sign- Two Posts	EA	2		610.00	=	$	1,220
846007	6" Thermoplastic Traffic Stripe (Enhanced Wet Night Visibility)	LS	1	x	35,715.00	=	$	35,715

Total of 3 stages accoans

Subtotal Traffic Signing and Striping $ 122,300

6C - Traffic Management Plan

Item code		Unit	Quantity		Unit Price ($)			Cost
128652	Portable Changeable Message Signs	LS	1	x	$ 36,000	=	$	36,000

Subtotal Traffic Management Plan $ 36,000

6D - Stage Construction and Traffic Handling

Item code		Unit	Quantity		Unit Price ($)			Cost
120100	Traffic Control System	LS	1	x	300,000.00	=	$	300,000
120320	Temporary Barrier System	LF	1,320	x	45.00	=	$	59,400
129108	Temporary Crash Cushion TL-3	EA	10	x	6,000.00	=	$	60,000
872002	Temporary Signal System	LS	1	x	610,000.00	=	$	610,000

Subtotal Stage Construction and Traffic Handling $ 1,029,400

TOTAL TRAFFIC ITEMS **$ 1,187,700**

SECTION 7: DETOUR

Includes constructing, maintaining, and removal

Item code		Unit	Quantity		Unit Price ($)			Cost
190136	Roadway Excavation (Detour)	CY	700	x	115.00	=	$	80,500
190138	Roadway Excavation (Detour Removal)	CY	734	x	90.00	=	$	66,060
260203	Class 2 Aggregate Base	CY	474	x	110.00	=	$	52,140
390132	Hot Mix Asphalt (Type A)	TON	547	x	200.00	=	$	109,400
397005	Tack Coat	TON	0.24	x	2,900.00	=	$	696
840655	Paint Traffic Stripe (1-coat)	LF	2,640	x	4.60	=	$	12,144

TOTAL DETOUR	**$**	**321,000**
Total Sections 1 through 7	$	6,173,900

SECTION 8: MINOR ITEMS

8A - Americans with Disabilities Act Items				
ADA Items	0.0%	$	-	
8B - Bike Path Items				
Bike Path Items	0.0%	$	-	
8C - Other Minor Items				
Other Minor Items	10.0%	$	617,400	

TOTAL MINOR ITEMS	**$**	**617,400**

SECTIONS 9: ROADWAY MOBILIZATION

Item code								
999990	Total Section 1-8	$	6,791,300	x	10%	=	$	679,130

TOTAL ROADWAY MOBILIZATION	**$**	**679,200**

SECTION 10: SUPPLEMENTAL WORK

Item code		Unit	Quantity		Unit Price ($)			Cost
066015	Federal Trainee Program	LS		x		=	$	-
066094	Value Analysis	LS	1	x	10,000.00	=	$	10,000
066204	Remove Rock and Debris	LS		x		=	$	-
066222	Locate Existing Crossover	LS		x		=	$	-
066610	Partnering	LS	1	x	90,000.00	=	$	90,000
066670	Payment Adjustments For Price Index Fluctuations	LS		x		=	$	-
090205	Dispute Resolution Board On-Site Meeting	LS	15	x	6,000.00		$	90,000
90210.00	Hourly Off-Site Dispute Resolution Board Re	HR	80		200.00		$	16,000

Cost of ***NPDES*** *Supplemental Work specified in Section 5D*					=	$	-
Total Section 1-8	$	6,791,300		4%	=	$	271,700

TOTAL SUPPLEMENTAL WORK	**$**	**477,700**

SECTION 11: STATE FURNISHED MATERIALS AND EXPENSES

Item code		Unit	Quantity		Unit Price ($)		Cost
066062	COZEEP Contract	LS	1	x	17,600.00	=	$17,600
066063	Traffic Management Plan - Public Information	LS	1	x	3,000.00	=	$3,000
066105	Resident Engineers Office	LS	1	x	291,200.00	=	$291,200
066838	Reflective Numbers and Edge Sealer	LS		x		=	$0
066841	Traffic Controller Assembly	LS		x		=	$0
066840	Traffic Signal Controller Assembly	LS		x		=	$0
066916	Annual Construction General Permit Fee	LS		x		=	$0
870600	Traffic Monitoring Station System	LS		x		=	$0

Total Section 1-8	$	6,791,300	2%	=	$	135,826

TOTAL STATE FURNISHED	**$427,100**

SECTION 12: TIME-RELATED OVERHEAD

Total of Roadway and Structures Contract Items excluding Mobilization $68,617,550 (used to calculate TRO)

Total Construction Cost (excluding TRO and Contingency) $75,147,650 (used to check if project is greater than $5 million excluding contingency)

Estimated Time-Related Overhead (TRO) Percentage (0% to 10%) = **10%**

Item code		Unit	Quantity		Unit Price ($)		Cost
090100	Time-Related Overhead	WD	875	X	$7,842	=	$6,861,800

TOTAL TIME-RELATED OVERHEAD	**$6,861,800**

SECTION 13: ROADWAY CONTINGENCY

Total Section 1-12	$	15,237,100	x	**15%**	=	$2,285,565	

TOTAL CONTINGENCY	**$2,285,600**

II. STRUCTURE ITEMS

	Bridge 1		Bridge 2		Bridge 3
DATE OF ESTIMATE	06/15/23		05/16/23		05/16/23
Bridge Name	Limekiln Creek Bridge		Limekiln Sidehill Viaduct No. 1		Limekiln Sidehill Viaduct No. 2
Bridge Number	TBD		TBD		TBD
Structure Type	CIP/PS Box Girder		CIP Slab		PC/PS CA I-Girders
Width (Feet) [out to out]	36 LF		18 LF		36 LF
Total Bridge Length (Feet)	930 LF		353 LF		183 LF
Total Area (Square Feet)	33,480 SQFT		6,354 SQFT		6,588 SQFT
Structure Depth (Feet)	14-28 LF		1.70 LF		3.80 LF
Footing Type (pile or spread)	CIDH Piles		CIDH Piles		CIDH Piles
Cost Per Square Foot	$962		$674		$876
COST OF EACH STRUCTURE	**$32,196,400**		**$4,285,000**		**$5,773,000**

	Temp Bridge (Modular) (removal estimate included)		Exist. Bridge Removal		
DATE OF ESTIMATE	06/15/23		06/15/23		00/00/00
Bridge Name	N/A		Limekiln Creek Bridge		xxxxxxxxxxxxxxxxxx
Bridge Number	N/A		44-0058		57-XXX
Structure Type	Modular		Prestressed and RC Beams		xxxxxxxxxxxxxxxxxx
Width (Feet) [out to out]	25.33 LF		32 LF		0 LF
Total Bridge Length (Feet)	400 LF		578 LF		0 LF
Total Area (Square Feet)	10,133 SQFT		18,496 SQFT		0 SQFT
Structure Depth (Feet)	Through Truss		Varies LF		0 LF
Footing Type (pile or spread)	Drilled shaft		Spread Footing and H-Piles		xxxxxxxxxxxxxxxxxx
Cost Per Square Foot	$565		$56		$0
	This option chosen in lieu of conc girders in consideration of reduction in GHG/ sustainability				
COST OF EACH	**$6,162,000**		**$1,044,600**		**$0**

TOTAL COST OF BRIDGES		**$49,461,000**
TOTAL COST OF BUILDINGS		**$0**
STRUCTURES MOBILIZATION	10%	**$4,946,100**

Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)
Total recommended percentages include any quantified risk based contingency from the risk register.

STRUCTURES CONTINGENCY	25%	**$12,365,250**
TOTAL COST OF STRUCTURES		**$66,772,350**

Estimate Prepared By: _____ _____

XXXXXXXXXXXXXXXX ------ Division of Structures — Date

EA: 05-1F5100 PID: 514000004

III. RIGHT OF WAY

Fill in all of the available information from the Right of Way Data Sheet.

A)	A1)	Acquisition, including Excess Land Purchases, Damages & Goodwill, Fees	$	3,104,625
	A2)	SB-1210	$	0
B)		Acquisition of Offsite Mitigation	$	36,828
C)	C1)	Utility Relocation (State Share)	$	1,125,000
	C2)	Potholing (Design Phase)	$	0
D)		Railroad Acquisition	$	0
E)		Clearance / Demolition	$	0
F)		Relocation Assistance (RAP and/or Last Resort Housing Costs)	$	0
G)		Title and Escrow	$	32,140
H)		Environmental Review	$	0
I)		Condemnation Settlements 0%	$	0
J)		Design Appreciation Factor 0%	$	0
K)		Utility Relocation (Construction Cost)	$	0

L)	**TOTAL RIGHT OF WAY ESTIMATE**	**$4,298,593**
M)	**TOTAL R/W ESTIMATE: Escalated**	**$4,739,198**
N)	**RIGHT OF WAY SUPPORT**	**$0**

Support Cost Estimate Prepared By _____ Project Coordinator[1] Phone

Utility Estimate Prepared By _____ Utility Coordinator[2] Phone

R/W Acquisition Estimate Prepared By _____ Right of Way Estimator[3] Phone

Note: Items G & H applied to items A + B

[1] When estimate has Support Costs only [2] When estimate has Utility Relocation [3] When R/W Acquisition is required

ATTACHMENT G

Preferred Alt R/W Data Sheet

STATE OF CALIFORNIA CALIFORNIA STATE TRANSPORTATION AGENCY

Memorandum

To: Luis Duazo

Attn: Scott Morris
Gary Garcia

From: Department of Transportation
Division of Right of Way Central Coast

Subject: RIGHT OF WAY DATASHEET

Date: May 29, 2024

File: CD 05 EA 1F510 Alt 6

Co MON RTE 1 PM 20.9/21.3

DESCRIPTION:
Replace Bridge in Monterey County near Lucia from 0.1 miles south to 0.2 miles north of Limekiln Creek Bridge (BR 44-0058).

We have completed an estimate of the right of way costs for the above-referenced project based on the Right of Way Datasheet Request Form dated April 29, 2024.

The following assumptions and limiting conditions were identified:

Parcels

Temporary Construction Easements (TCEs) based on 4.04 years (48.5 months) as represented by M410 of 7/1/26 and M600 of 7/15/30. TCEs are valued at a 10% return on the fee value for the specified duration. Easement Costs include $2,500 for Incentive Program. It is assumed State Park Campground will be unable to operate during construction, thus generating relatively large damages. Campsite fees are $35 per night, $10 for day use and/or extra car, plus sundry on-site purchases. Damages based on revenue from 2018/19 = $610,050/year (Parks Contract year Sept 2018-Aug 2019/the only year data was available). It is assumed that the campground income will not be affected past the 48.5-month closure. Also assumed that campground structures and grading will not be affected.

Utility

The Project Engineer states on the Right of Way Data Sheet Request Form that a Utility Permit Search has been completed, utility involvement and/or relocation is required, no potholing is required, and verification are necessary. Avoid and protect in place all existing, unaffected, buried, and aerial utility facilities in the project area. Comply with USA alert requirements, including at construction sign locations.

Right of Way lead time will be a minimum of eighteen 18 months after we receive Certified Appraisal Maps and/or **final** Utility Conflict Plans, obtain necessary environmental clearance, and approve applicable freeway agreements.

Recommended for approval by:

Martin Miller

MARTIN MILLER
Senior Right of Way Agent
(805) 779-0804

General Description of R/W and Excess Lands Required (zoning, use, major improvements, critical or sensitive parcels, etc.):

The subject property, Limekiln State Park, is located in the Big Sur area and zoned for public use. No improvements appear affected, area has numerous permitting agencies overseeing development. TCE is from 5/1/26 to 10/25/30 (say 4.5 years); TCE's are valued at 10% over the duration. The project will likely require the closure of the Limekiln campground for approximately 4.04 years.

General Description of Utility Involvement:

Highway 1 is a designated conventional highway within the project limits. This project proposes to replace the Limekiln Creek Bridge in Monterey County near Lucia from 0.1 miles south of Limekiln Creek Bridge to 0.2 miles north of Limekiln Creek Bridge. Official liability determinations have not yet been completed, and any speculative liability involvement should be conservatively estimated at 100% STATE cost until accurate utility involvement and claims of liability can be determined.

General Description of Railroad Involvement:

No railroad facilities or rights of way will be affected.

05-1F510 **CO/RTE/PM-PM: MON /1/PM 20.9/21.3** **Requested: April 29, 2024**

ALT: 6 **Revised Date:**

Right Of Way Cost Estimate	Current Year 2024	Contingency Rate 25%	Escalation Rate 5%	Escalated Year 2026
Acquisition:	$3,104,625	25%	5%	**$3,422,849**
Mitigation:	$36,828	25%	5%	**$40,602**
State Share of Utilities:	$1,125,000	25%	5%	**$1,240,313**
Expert Witness:	$0	25%	5%	**$0**
Relocation Assistance:	$0	25%	5%	**$0**
Demolition and Clearance:	$0	25%	5%	**$0**
Title and Escrow:	$32,140	25%	5%	**$35,434**
Ad Signs:	$0	25%	5%	**$0**
Total Current Value:	$4,298,593			**$4,739,198**

If RW Cost Est fields are blank, Costs = $0

NOTE: above estimate includes railroad engineering in the amount of: $0.00

Estimated Construction Contract Work (CCW): 0 R/W LEAD TIME/Mo. 18

Estimated Pothole Date:

Cost Break Down	
Pot Hole	0
# Pot Holes	0
Mitigation	
Land	0
Bank	11,485
Permit Fees	17,977

Parcel Area

Total R/W Required:	2.055
Total Excess Area	0

Parcel Data		
# of Parcel Type X:	0	
# of Parcel Type A: less than $10,000 non-complex	0	
# of Parcel Type B: more than $10,000 non-complex	0	
# of Parcel Type C: complex, special valuation	1	
# of Parcel Type D: most complex/time-consuming	0	# of Duals Needed: 0
Totals:	1	**Totals:**

# of Excess Parcels 0

Misc. R/W Work

# of RAP Displacements:	0
# of Clearance/Demos:	0
# of Const Permits:	0
# of Condemnations:	0

RR Involvement

Railroad Facilities or Right of Way Affected?	No
Const/Maint Agreement:	No
Service Contract Count:	0
Right of Entry:	No
Clauses:	No
Estimated Lead-time:	0 mos.

Utilities

0 Companies to be potholed
2 Companies for Verification
1 Companies for Utility Relocations
JUA/CCUAs are not needed.

Is there a significant effect on assessed valuation? No

Were any previously unidentified sites with hazardous waste or material found? No

Are RAP displacements required? No

# of single family: 0 # of multi-family: 0 # of business/nonprofit: 0 # of farms: 0

Sufficient replacement housing will be available without last-resort housing: NA

Are material borrow or disposal sites required? No

Are there potential relinquishments or abandonments? No

Are there any existing or potential airspace sites? No

Are environmental mitigation parcels required? No

Data for evaluation provided by:

Estimator:	David Adams	May 29, 2024
Railroad Liaison Agent:	Patrick Mason	May 7, 2024
Utility Relocation Coordinator:	Brandon Wood	April 30, 2024

I have personally reviewed this Right of Way Sheet and all supporting information. I find this Data Sheet complete and current, subject to the limiting conditions set forth.

Date: May 30, 2024
ENTERED PMCS April 29, 2024
By: Ginger Allison

Marshall Garcia
Deputy District Director
Right of Way

ATTACHMENT H

Storm Water Data Report

Dist-County-Route: 05-MON-001
Post Mile Limits: 20.9/21.3
Type of Work: Bridge Replacement
Project ID (EA): 05-1400-0004-0 (05-1F5100)
Program Identification: 201.110
Phase: ☐ PID ☒ PA/ED ☐ PS&E

Regional Water Quality Control Board(s): Central Coast, Region 3

Total DSA: 3.46 acres

PCTA: To be completed at PS&E

NIS: 0.48 acres (21,000 SQ FT)

Alternative Compliance (acres) N/A

ATA 2 (50% Rule)? Yes ☐ No ☒

Estimated Const. Start Date: 11/02/2026

Estimated Const. Completion Date: 10/25/2030

Risk Level: RL 1 ☐ RL 2 ☐ RL 3 ☒ WPCP ☐ Other: ____

Is MWELO applicable? Yes ☐ No ☒

Does Project require a Rapid Stability Assessment? Yes ☐ No ☒

Is the Project within a TMDL area where Caltrans is a named stakeholder? Yes ☐ No ☒

TMDL Compliance Units (acres) N/A

Notification of ADL reuse (if yes, provide date): Yes ☐ Date:_____ No ☒

This Report has been prepared under the direction of the following Licensed Person. The Licensed Person attests to the technical information contained herein and the date upon which recommendations, conclusions, and decisions are based. Professional Engineer or Landscape Architect stamp required at PS&E.

Scott Morris 07/25/2024

Scott Morris, Registered Project Engineer — Date

I have reviewed the stormwater quality design issues and find this report to be complete, current and accurate:

07/25/2024

Luis Duazo, Project Manager — *Date*

Enrique Castillo Ramirez 07/25/2024

Enrique Castillo-Ramirez, Designated Maintenance Representative — *Date*

07/25/2024

Corby Kilmer, Designated Landscape Architect Representative — *Date*

(Stamp Required for PS&E only)

07/25/2024

Autumn Wycoff for (Jul 25, 2024 13:43 PDT)

Karl Mikel, SW Coordinator or Designee — *Date*

STORM WATER DATA INFORMATION

1. Project Description

- This project proposes to replace Limekiln Creek Bridge and is located in Monterey County on Route 1, PM 20.95 to PM 21.07, near Lucia and lies exclusively within the Limekiln State Park property (APN: 422-021-002-000).
- This project proposes to replace the existing Limekiln Creek Bridge located in Monterey County on State Route (SR) 1 near Lucia (see Vicinity Map). The project lies within the Limekiln State Park property. Alternative 6 has been selected as the preferred alternative with the following characteristics:
  - The bridge and highway alignment would follow the existing as closely as feasible. It would require construction of a temporary bridge to the east of the existing for carrying traffic during construction. Temporary construction easements would be required from State Parks for construction, as well as a small permanent take.
  - Viaducts would support the highway north of the main spans by crossing over the existing distressed retaining walls which occur between the Limekiln Creek Bridge and the adjacent Rain Rocks Sidehill Viaduct. Additionally, the seawall and revetment on the beach would be removed to the extent it can safely be done and the beach returned to natural condition.
- DSA calculations include all cut/fill areas and locations where vegetation will be removed for clearing and grubbing. Specific areas for contractor staging and laydown yards are not included at this time.

Table E-1. Summary of Project Areas

	CT ROW (acres) Alternative 6
Total Project Area	9.714
Disturbed Soil Area	3.46
Pre project Impervious Area	1.240
Post project Impervious Area	1.720
Increase in Impervious (NNI) Area	0.480
Amount of Replaced Impervious (RIS) surfaces	Value needed in PS&E
Total New Impervious Surfaces (NNI + RIS)	0.480

- This project is covered under the Caltrans NPDES Permit (Order 2022-0033 DWQ, NPDES NO.CAS000003), effective January 1, 2023

2. Site Data and Storm Water Quality Design Issues

- This project's receiving water bodies are Limekiln Creek and the Pacific Ocean. Limekiln Creek is 2020/2022 303(d) listed for pH and the Pacific Ocean, Point Pinos to Point Piedras Blancas is 2020/2022 303(d) listed for dieldrin and mercury.

- The 2019 Central Coast Regional Water Quality Control Board Basin Plan lists the beneficial uses for Limekiln Creek, to include Cold, Spawn, and Migratory, which will categorize the receiving water risk for this project as high.
- The project is located in the Santa Lucia Hydrologic Unit, an undefined Hydrologic Area, and an undefined Hydrologic Sub-Area (HSA). The HSA number is 308.00.
- The following permits, reviews, and approvals would be required for project construction:

Agency	Permit/Approval	Status
Central Coast Regional Water Quality Control Board	Section 401 Certification for impacts to waters of the United States	To be obtained before construction
United States Army Corps of Engineers	Section 404 Permit for impacts to wetlands and waters of the United States	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 South Central Coast Steelhead Trout	To be obtained before construction
United States Fish and Wildlife Service	Biological Opinion for Smith's Blue Butterfly and California red legged frog	To be obtained before construction
Coastal Commission Monterey County	Coastal Development Permit	To be obtained before construction
California State Parks	Section 4(f) agreement	To be obtained prior to approval of the Final Environmental Document

- There are no Drinking Water Reservoirs and/or Recharge Facilities within project limits.
- There are no R/W costs for BMPs.
- There are not any existing Treatment BMPs (TBMPs) located within the project area.
- There are not permanent Maintenance facilities (stockpile/decanting) within or near project limits.
- This project is not located in a moderate or high Significant Trash Generating Area (STGA).
- This project is not located within a designated MS4 area.

Geotechnical and Topographic Data

- 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 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. Fransciscan Formation rocks including greywacke, schist, and weathered serpentinized 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.
- There are two active and potentially active faults near the project site, the San Gregario Fault Zone and the Probabilistic USGS.

Hydraulic Data

- Groundwater was measured at approximately elevation 18 feet in October of 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 will be determined in the geotechnical drilling subsurface investigation.

Climate

- This project is located in California Climate Zone 3 The climate of Zone 3 varies greatly with elevation and the amount of coastal influence. Areas with more coastal influence experience moderate temperatures year round with precipitation in the winter and fog likely from June through mid-August. Inland from the beaches and sea cliffs, local geography may reduce the fog cover, lessen the winds, and boost summer heat. Winters are moderately cold with most of the annual rain falling between October and March. Winter sunshine nevertheless is plentiful. Summers are warm and dry, but the nights are cool. Rain is rare during the summer months.

3. Temporary Construction Site BMPs to be used on Project

- This project proposes to create 3.46 ac of DSA. Therefore, this project will require a Storm Water Pollution Prevention Plan (SWPPP) and coverage under the Construction General Permit.
- A preliminary project risk level assessment has determined this project to be a risk level 3. See the attached risk level assessment for more information.
    - The R-Factor is- 224.50
    - The K-Factor is- 0.32
    - The LS Factor is- 17.24
    - The sediment risk is High (1238.52 ton/acre)
- The Latitude/Longitude for this project is 36.009716/-121.520617

- The cost of construction site BMPs is estimated at 1.2% of the total construction cost.
- 4 acres will be used in the calculation to determine Construction General Permit (CGP) NOI/NOT fees.

  3 Number of FYs of construction schedule

  1 Additional years for vegetation period or other NOT requirements

  4 Total years

  $ 597 Storm Water Construction Annual Fees for 4 ac

  $2,388 Total NOI/NOT Stormwater CGP fees

- During construction, effective combinations of temporary and permanent erosion and sediment controls will be used. Storm water management for the site will be coordinated through the contractor with Caltrans construction personnel to effectively manage erosion from the DSA's by implementing a Storm Water Pollution Prevention Plan (SWPPP). Selected BMP's that will be included but not limited to the SWPPP for the project are defined as follows:

Temporary Soil Stabilization

- Minimize active DSA's during the rainy season utilizing scheduling techniques.
- Preserve existing vegetation to the maximum extent feasible.
- Implement temporary protective cover/erosion control on all non-active DSA's and soil stockpiles.
- Control erosive forces of storm water runoff with effective storm flow management such as temporary concentrated flow conveyance devices, earthen dikes, drainage swales, lined ditches, outlet protection/velocity dissipation devices, and slope drains as determined feasible.

Temporary Sediment Controls

- Implement linear sediment controls such as fiber rolls, check dams, or gravel bag berms on all active and non-active DSA's during the rainy season.
- To further help prevent sediment discharge stabilized construction site entrances, temporary drainage inlet protection, and street sweeping and vacuuming will be necessary.
- Implement appropriate wind erosion controls year-round.

Non-Storm Water Management

- The appropriate non-storm water BMP's will be implemented year-round as follows:
- Water conservation practices are implemented on all construction sites and wherever water is used.
- Paving and Grinding procedures are implemented where paving, surfacing, resurfacing, grinding, or saw cutting may pollute storm water runoff or discharge to the storm drain system or watercourses.
- Procedures and practices designed for construction contractors to recognize illicit connections or illegally dumped or discharged materials on a construction site and report incidents to the Resident Engineer.
- The following activities must be performed at least 100 feet from concentrated flows of storm water, drainage courses, and inlets if within the floodplain and at least 50 feet if outside of the

floodplain; stockpiling materials, storing equipment and liquid waste containers, washing vehicles or equipment, fueling and maintaining vehicles and equipment.

- Concrete curing will be used in the construction of structures such as bridges and concrete pavement. Concrete curing includes the use of both chemical and water methods. Proper procedures will minimize pollution of runoff during concrete curing.
- Since the project involves structure demolition/removal over several creeks, proper procedures will be implemented to minimize pollution during these activities.
- The following construction site BMPs are bid items for this project:
    - Job Site Management
    - Prepare Stormwater Pollution Prevention Program
    - Rain Event Action Plan
    - Storm Water Sampling and Analysis Day
    - Stormwater Annual Report
    - Move In/Move Out (Temporary Erosion Control)
    - Temporary Hydraulic Mulch (Bonded Fiber Matrix)
    - Temporary Check Dam
    - Temporary Drainage Inlet Protection
    - Temporary Fiber Roll
    - Temporary Gravel Bag Berm
    - Temporary Large Sediment Barrier
    - Temporary Construction Entrance
    - Street Sweeping
    - Temporary Concrete Washout
    - Water Quality Sampling and Analysis Day
    - Water Quality Monitoring Report
    - Temporary Creek Diversion
    - Temporary Fence (type ESA)

Supplemental Items

- Water Pollution Control Maintenance Sharing
- Additional Water Pollution Control

State Furnished Items

- Annual Construction General Permit Fee

- Concurrence from Construction regarding the temporary Construction Site BMP implementation strategy and associated quantities was given by_____, CSWC, on __/__/20XX. **TBD before RTL.**

4. Maintenance BMPs

- As this project progresses, talks will be ongoing with Maintenance with regards to the incorporation of maintenance BMPs into this project's design.
- Maintenance BMPs may include drainage inlet markers, maintenance vehicle pullouts, access gates and roads, and maintenance worker safety features.

5. Regional Water Quality Control Board Agreements, PLACs, and Other Water Quality Requirements

- There are no negotiated agreements with the Central Coast Regional Water Quality Control Board at this time.

6. Permanent BMPs

Rapid Stability Assessment

- The Rapid Stability Assessment will be assessed during PS&E.

Downstream Effects Related to Potentially Increased Flow

- The proposed improvements result in an increase of impervious area which will increase velocity and volume of flow within the project limits. This increase in velocity will be accounted for in the project design. Design information and hydrological data confirm increased flows within the project limits will have a negligible impact on downstream flow.
- This project proposes to use a either a combination or one of infiltration areas and infiltration strips that are positioned specifically separated from other hydraulic systems that conveys waters that cannot be treated. These efforts are incorporated in the development and placement of permanent best management practices (BMPs) to the maximum extent practicable. The measures incorporated into this project that improve water quality include:
    - Infiltration strips along the facility that will infiltrate the Water Quality Volume (WQV) runoff from impervious areas. This method decreases the velocity of discharge plus decreases the volume of discharge by infiltration and allowing for pollutant removal.
    - Infiltration areas are designed to infiltrate/treat WQV for waters coming from pavement and cut areas that is unable to be sheet flow to infiltration strips.
    - Landform grading that blend with the natural terrain would be no steeper than 2:1 (H:V) slopes. The quantities of dikes would be minimized to promote sheet flow to vegetated areas which provide water quality benefits and promote infiltration.
    - Design has accounted for the increased velocity and volume of flow created by the increase in impervious pavement. Increased erosion velocities associated with this project will be mitigated in accordance with the HDM.

Design Pollution Prevention (DPP) BMP Strategy

- Design Pollution Prevention BMPs will be incorporated into the project where appropriate to minimize impacts to water quality by preventing downstream erosion and stabilizing disturbed soil areas as shown on the contract drawings. These BMPs can provide water quality benefits including settling of solids and other pollutants and increasing detention time by incorporating and preserving vegetated surfaces.

Slope/Surface Protection Systems

- Areas of cut and fill will be required throughout the project to satisfy the proposed project geometry. All disturbed slopes are revegetated through the use of erosion control measures.

Proposed slopes within the project are 4:1 (H:V) where possible, with maximum 1.2:1 (H:V) slopes in areas where R/W or existing slopes do not allow for flatter slopes.

- Disturbed areas will be treated with permanent erosion control. Erosion control materials will be selected to best address the various conditions within the project site. For minimally disturbed areas erosion control materials may only require hydroseed and/or mulch. Erosion control may also include the collection and application of duff to provide suitable organic content for establishing native vegetation.
- Areas that are steep and exposed to concentrated flows will require aggressive erosion control techniques that may include compost, netting, fiber rolls, and hydroseed to control erosion and establish vegetation for long term protection.
- Slope rounding will be incorporated where appropriate and will be included in the engineer's roadway excavation cost.

Concentrated Flow Conveyance Systems,

- Concentrated flow conveyance systems, such as ditches, berms, dikes, swales, overside drains, flared end sections and outlet protection/velocity dissipation devices are proposed for this project to intercept and divert surface flows and convey these flows to minimize soil erosion. Dikes route the runoff to existing and proposed drainage inlets. Design Pollution Prevention TBMP areas are placed at outlet of drainage systems to provide treatment before discharge into earthen areas. These drainage features will be shown on the Drainage Plans.

Preservation of Existing Vegetation

- Preservation of existing vegetation to minimize the areas of disturbance will be implemented to the maximum extent feasible.
- Vegetation to remain is identified on the contract plans and is protected with temporary ESA fencing. A period to Establish Erosion Control may be required

Treatment BMP Strategy

- This project proposes to create approximately 0.612 acres of new impervious surfaces, NIS. This project will be required by the current Caltrans NPDES permit to treat 100% of storm water from 0.612 acres of impervious surfaces within this project's limits. The TBMP implementation goal for this project will be to infiltrate runoff from 0.612 acres of paved surfaces generated by the 85th percentile 24 hour storm event.
- The 85th percentile 24 hour storm event for this location (Big Sur Station) is 1.38 in.
- This project will pursue Design Pollution Prevention Infiltration Area TBMPs (strips/swales), DPPIA TBMPs to will infiltrate 100% of the WQV for this project.
- Any DPP Infiltration TBMPs for this project will utilize a 2- 4" compost Blanket incorporated to a depth of 6 to 8 inches. Attached is the T-1 checklist and TBMP mapping for additional information.
- The Water Quantity Volume (WQV) to infiltrate by the DPP Infiltration TBMPs is as follows:
    - Area = 20,909 sq ft (0.480 acres)
    - Volumetric Runoff Coefficients (Rv) = 0.60 (80%impervious)
    - Precipitation depth = 1.38 in. (85th percentile 24-hour storm event at Big Sur Weather Reporting Station)

  WQV = 26,659 (0.60) (1.38/12) = 1,840 cu ft

- Soil through the project area consist of the following HSG Types:
    - 25 % HSG Type B
    - 75 % HSG Type D
- TBMP Contributing Drainage Area (CDA) Mapping, TBMP Design Calculations (Infiltration Tool output sheets and Bioswale Design Tool output sheets), and project plans showing TBMP deployment will be included as Supplemental Attachments (see Calculations and supporting information for sizing TBMPs and Plans showing BMP deployment) within the PS&E Stormwater Data Reports. In addition, these items will be available in the project file, and the resident engineer file.
- Project specific permanent BMP measures will be incorporated into the contract documents and Treatment BMPs will be estimated in accordance with the Project Design Cost Estimate Method.

Table E-1. Overall Project Treatment and Credit Summary Table[1]

	Post Construction Treatment Area (ac)	A = N/A
Total Treated Area	Treated Impervious Area (CT R/W) (ac)	B = N/A
	Treated Impervious Area (Outside CT R/W) (ac)	C = N/A
	Treated Pervious Area (CT R/W) (CUs) (ac)[2]	D = N/A
	Treated Pervious Area (Outside CT R/W) (CUs) (ac)[2]	E = N/A
	Post Construction Treatment Balance (ac)[3]	F = (B+C) – A = 0.00

1 This table is provided as an example. The table may be edited, altered, or removed as applicable or as directed by the District/Regional Design Stormwater Coordinator.

2 This acreage can only be applied to compliance unit credit, if applicable.

3 If the total treated area is not equal to (or greater than) the project required Post Construction Treatment Area, then alternative treatment must be identified for this amount.

4 Available alternative compliance credits

- Negative Value - amount of treatment needed through alternative compliance.
- Positive Value – amount of treatment available for alternative compliance banking (within the same watershed) or compliance units as determined by the District. Used as alternative compliance banking. This area cannot be double counted.

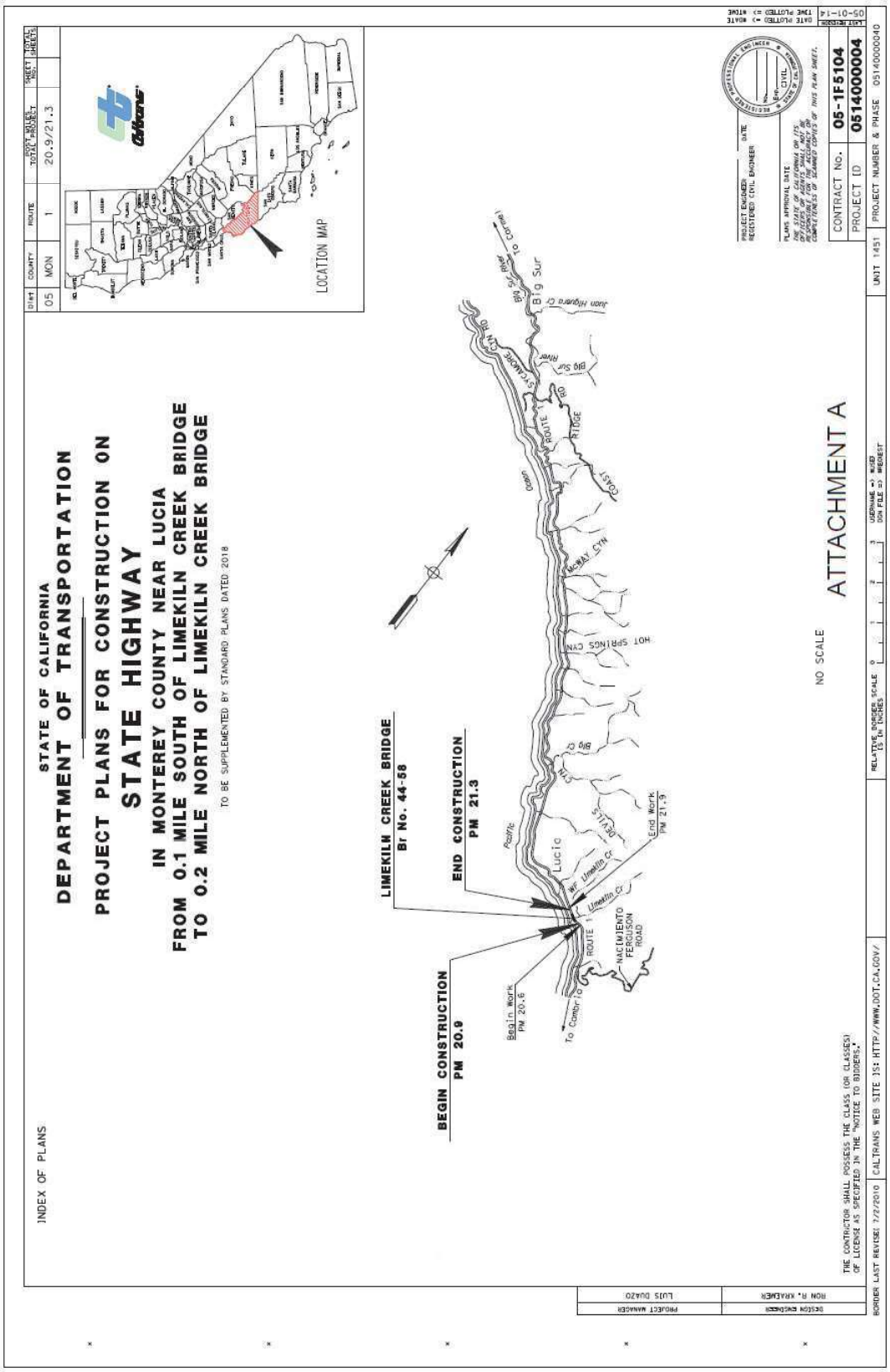
Required Attachments

- Vicinity Map
- Evaluation Documentation Form (EDF)
- Risk Level Determination Documentation
- SWDR Attachment for SMARTS Input

Supplemental Attachments

- Checklist SW-1, Site Data Sources
- Checklist T-1, Part 1 (Treatment BMPs), if applicable
- Calculations and supporting information related to BMPs (To be completed at PS&E)

- Contributing Drainage Area Maps (to delineate the areas being used to size Treatment BMPs or to claim CU credit) or Drainage Plans (To be completed at PS&E)
- Plans showing BMP Deployment (i.e., Layout Sheets, Drainage Sheets, Water Pollution Control Sheets, etc.) (To be completed at PS&E)
- Checklist T-1, Part 11 (DPP Infiltration/Treatment BMPs)


STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN MONTEREY COUNTY NEAR LUCIA
FROM 0.1 MILE SOUTH OF LIMEKILN CREEK BRIDGE
TO 0.2 MILE NORTH OF LIMEKILN CREEK BRIDGE
TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2018
INDEX OF PLANS
LOCATION MAP
LIMEKILN CREEK BRIDGE
Br No. 44-58
END CONSTRUCTION
PM 21.3
BEGIN CONSTRUCTION
PM 20.9
Begin Work
PM 20.6
End Work
PM 21.9
NO SCALE
ATTACHMENT A
CONTRACT No. 05-1F5104
PROJECT ID 0514000004
PROJECT ENGINEER
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."
CALTRANS WEB SITE IS: HTTP://WWW.DOT.CA.GOV/
DESIGN ENGINEER
RON R. KRAEMER
PROJECT MANAGER
LUIS DUAZO

APPENDIX E

Evaluation Documentation Form

DATE: 11/3/2023

Project ID / EA: 05-1400-0004-0 (05-1F5100)

No.	Criteria	Yes ✓	No ✓	Supplemental Information for Evaluation
1.	Begin Project evaluation regarding requirement for implementation of Treatment BMPs	✓		See Figure 4-1, Project Evaluation Process for Consideration of Permanent Treatment BMPs. Continue to 2.
2.	Is the scope of the Project to install Treatment BMPs (e.g., Alternative Compliance or TMDL Compliance)?		✓	If **Yes**, go to 8. If **No**, continue to 3.
3.	Is there a direct or indirect discharge to surface waters?	✓		If **Yes**, continue to 4. If **No**, go to 9.
4.	As defined in the WQAR, does the Project have: 1. Areas of Special Biological Significance (ASBS), 2. A TMDL area where Caltrans is named stakeholder, or 3. Other Pollution Control Requirements for surface waters within the project limits?		✓	**If Yes to any**, contact the District/Regional Stormwater Coordinator to discuss the Department's obligations, go to 8 or 5. _____*(Dist./Reg. SW Coordinator initials)* **Limekiln Creek is 303(d) listed. As per the DNC go to question #5** If **No**, continue to 5.
			✓	
		✓		
5.	Are any existing Treatment BMPs partially or completely removed? (ATA condition #1, See PPDG Section 4.4.1)		✓	If **Yes**, go to 8 **AND** continue to 6. If **No**, continue to 6.
6.	Is this a Routine Maintenance Project?		✓	If **Yes**, continue to 9. If **No**, go to 7.
7.	Does the project result in 10,000 SQ FT or more of new impervious surface (NIS)?	✓		If **Yes**, go to 8. *0.612 ac NIS (NIS=NNI+ RIS)* If **No**, continue to 9.
8.	Project is required to implement Treatment BMPs.	Complete Checklist T-1, Part 1.		
9.	Project is not required to implement Treatment BMPs. AW AW *(Dist. /Reg. SW Coord. Initials)* *(Project Engineer Initials)* 07/25/2024 *(Date)*	Document for Project Files by completing this form and attaching it to the SWDR.		

See Figure 4-1, Project Evaluation Process for Consideration of Permanent Treatment BMP

Facility Information

Start Date: 07/07/2027	**Latitude:** 36.0089
End Date: 12/31/2027	**Longitude:** -121.5190

Calculation Results

Rainfall erosivity factor (R Factor) = **27.63**

A rainfall erosivity factor of 5.0 or greater has been calculated for your site's period of construction.

You do NOT qualify for a waiver from NPDES permitting requirements and must seek Construction General Permit (CGP) coverage. If you are located in an area where EPA is the permitting authority (pdf), you must submit a Notice of Intent (NOI) through the NPDES eReporting Tool (NeT).Otherwise, you must seek coverage under your state's CGP.

Facility Information

Start Date: 01/01/2028	**Latitude:** 36.0089
End Date: 12/31/2028	**Longitude:** -121.5190

Calculation Results

Rainfall erosivity factor (R Factor) = **74.14**

A rainfall erosivity factor of 5.0 or greater has been calculated for your site's period of construction.

You do NOT qualify for a waiver from NPDES permitting requirements and must seek Construction General Permit (CGP) coverage. If you are located in an area where EPA is the permitting authority (pdf), you must submit a Notice of Intent (NOI) through the NPDES eReporting Tool (NeT).Otherwise, you must seek coverage under your state's CGP.

Facility Information

Start Date: 01/01/2029	**Latitude:** 36.0089
End Date: 12/31/2029	**Longitude:** -121.5190

Calculation Results

Rainfall erosivity factor (R Factor) = **74.14**

A rainfall erosivity factor of 5.0 or greater has been calculated for your site's period of construction.

You do NOT qualify for a waiver from NPDES permitting requirements and must seek Construction General Permit (CGP) coverage. If you are located in an area where EPA is the permitting authority (pdf), you must submit a Notice of Intent (NOI) through the NPDES eReporting Tool (NeT).Otherwise, you must seek coverage under your state's CGP.

Facility Information

Start Date: 01/01/2030	**Latitude:** 36.0089
End Date: 10/25/2030	**Longitude:** -121.5190

Calculation Results

Rainfall erosivity factor (R Factor) = **48.59**

A rainfall erosivity factor of 5.0 or greater has been calculated for your site's period of construction.

You do NOT qualify for a waiver from NPDES permitting requirements and must seek Construction General Permit (CGP) coverage. If you are located in an area where EPA is the permitting authority (pdf), you must submit a Notice of Intent (NOI) through the NPDES eReporting Tool (NeT).Otherwise, you must seek coverage under your state's CGP.

This project's overall R factor between the Construction Start Date of July 7,2027 and Construction Date of October 25, 2030, would be:

Overall R Factor = 27.63 + 74.14 + 74.14 + 48.59 = 224.50

PROJECT FACT SHEET

RISK LEVEL DETERMINATION			Information Source
Project Identifier/EA :	05-1400-0004-0 (05-1F5100)		
Project Description:	Limekiln Bridge Replacement		
Dist-County-Route:	05-MON-1		
Regional Water Board:	Region 3, Central Coast		
MS4 Area:	N/A		
Begin PM:	20.90		
End PM:	21.30		
Mid Project Latitude:	36.0089		
Mid Project Longitude:	-121.5190		
Mid Project Postmile:	21.1		
Begin Construction:	7/7/2027		
End Construction:	10/25/2030		
DSA (Acres):	3.65		
Total Project Area (Acres):	10.883		
Total Imperv Before Const(Acres):	1.240		
Total Imperv After Const(Acres):	1.852		
Slope Ratio/Percent Grade:			
Average Length of Slopes:			
Project Engineer:	Scott Morris		
Project Landscape Architect:	Zach Tanner		

Risk Level Components	w/GIS Map Method for Sediment Risk (A)	w/Individual Method for Sediment Risk (B)	
R factor	224.50	0.00	EPA/NPDES Calculator
K factor & soil category	0.32	0.00	NRCS website for online soil surveys
LS factor	17.24	0.00	SWRCB Risk Determination Worksheet
Soil loss(ton/acre)	1238.52	0.00	SWRCB Risk Determination Worksheet
Sediment Risk (low, med, or High	High	Low	SWRCB Risk Determination Worksheet
Receiving Water	Limekiln Creek		
303(d) listed for sediment	No		
Beneficial uses for:			
Cold	YES		
Spawn	YES		
Migratory	YES		
Receiving Water Risk (low or high)	High	Low	
Combined Risk Level (1, 2, or 3)	Level 3	Level 1	
Prepared By: Autumn Wycoff		11/3/2023	
Checked By:		Date:	

SEDIMENT RISK WORKSHEET (A)

Project Identifier/ EA: 05-1400-0004-0 (05-1F5100)	Entry
A) R Factor	
Analyses of data indicated that when factors other than rainfall are held constant, soil loss is directly proportional to a rainfall factor composed of total storm kinetic energy (E) times the maximum 30-min intensity (I30) (Wischmeier and Smith, 1958). The numerical value of R is the average annual sum of EI30 for storm events during a rainfall record of at least 22 years. "Isoerodent" maps were developed based on R values calculated for more than 1000 locations in the Western U.S. Refer to the link below to determine the R factor for the project site. https://lew.epa.gov/	
R Factor Value	224.5
B) K Factor (weighted average, by area, for all site soils)	
The soil-erodibility factor K represents: (1) susceptibility of soil or surface material to erosion, (2) transportability of the sediment, and (3) the amount and rate of runoff given a particular rainfall input, as measured under a standard condition. Fine-textured soils that are high in clay have low K values (about 0.05 to 0.15) because the particles are resistant to detachment. Coarse-textured soils, such as sandy soils, also have low K values (about 0.05 to 0.2) because of high infiltration resulting in low runoff even though these particles are easily detached. Medium-textured soils, such as a silt loam, have moderate K values (about 0.25 to 0.45) because they are moderately susceptible to particle detachment and they produce runoff at moderate rates. Soils having a high silt content are especially susceptible to erosion and have high K values, which can exceed 0.45 and can be as large as 0.65. Silt-size particles are easily detached and tend to crust, producing high rates and large volumes of runoff. Use Site-specific data must be submitted. Site-specific K factor guidance	
K Factor Value	0.32
C) LS Factor (weighted average, by area, for all slopes)	
The effect of topography on erosion is accounted for by the LS factor, which combines the effects of a hillslope-length factor, L, and a hillslope-gradient factor, S. Generally speaking, as hillslope length and/or hillslope gradient increase, soil loss increases. As hillslope length increases, total soil loss and soil loss per unit area increase due to the progressive accumulation of runoff in the downslope direction. As the hillslope gradient increases, the velocity and erosivity of runoff increases. Use the LS table located in separate tab of this spreadsheet to determine LS factors. Estimate the weighted LS for the site prior to construction. LS Table	
LS Factor Value	17.24
Watershed Erosion Estimate (=RxKxLS) in tons/acre	1238.5216
Site Sediment Risk Factor Low Sediment Risk: < 15 tons/acre Medium Sediment Risk: >=15 and <75 tons/acre High Sediment Risk: >= 75 tons/acre	**High**
Prepared By: A. Wycoff 11/3/2023 Checked By:	

RECEIVING RISK (A)

Project Identifier/EA:	05-1400-0004-0 (05-1F5100)	
	Entry	Score
A. Watershed Characteristics	yes/no	
A.1. Does the disturbed area discharge (either directly or indirectly) to a **303(d)-listed water body impaired by sediment?** For help with impaired water bodies please check the attached worksheet or visit the link below: 2006 Approved Sediment-Impaired WBs Worksheet http://www.waterboards.ca.gov/water_issues/programs/tmdl/303d_lists2006_epa.shtml	Yes	High
OR		
A.2. Does the disturbed area discharge to a water body with designated beneficial uses of SPAWN & COLD & MIGRATORY? http://www.ice.ucdavis.edu/geowbs/asp/wbguse.asp		

COMBINED RISK (A)

Project Identifier/EA: 05-1400-0004-0 (05-1F5100)

Receiving Water Risk	Sediment Risk: Low	Sediment Risk: Medium	Sediment Risk: High
Low	Level 1	Level 2	
High	Level 2		Level 3

Project Sediment Risk: High
Project RW Risk: High
Project Combined Risk: Level 3

Monthly Precipitation: BIG SUR STATION

Start Year: 1948
End Year: 2005
Number of Years: 58

Average number of days per month with precipitation:

Month	>=0.1 in	>=0.5 in
January	7.8	4.7
February	7.7	4.4
March	7.2	3.8
April	4.3	2.1
May	1.8	0.6
June	0.5	0.1
July	0.1	0
August	0.1	0
September	0.9	0.2
October	2.2	1.2
November	5.1	3
December	7.5	4.3
Yearly Total	45.1	24.4

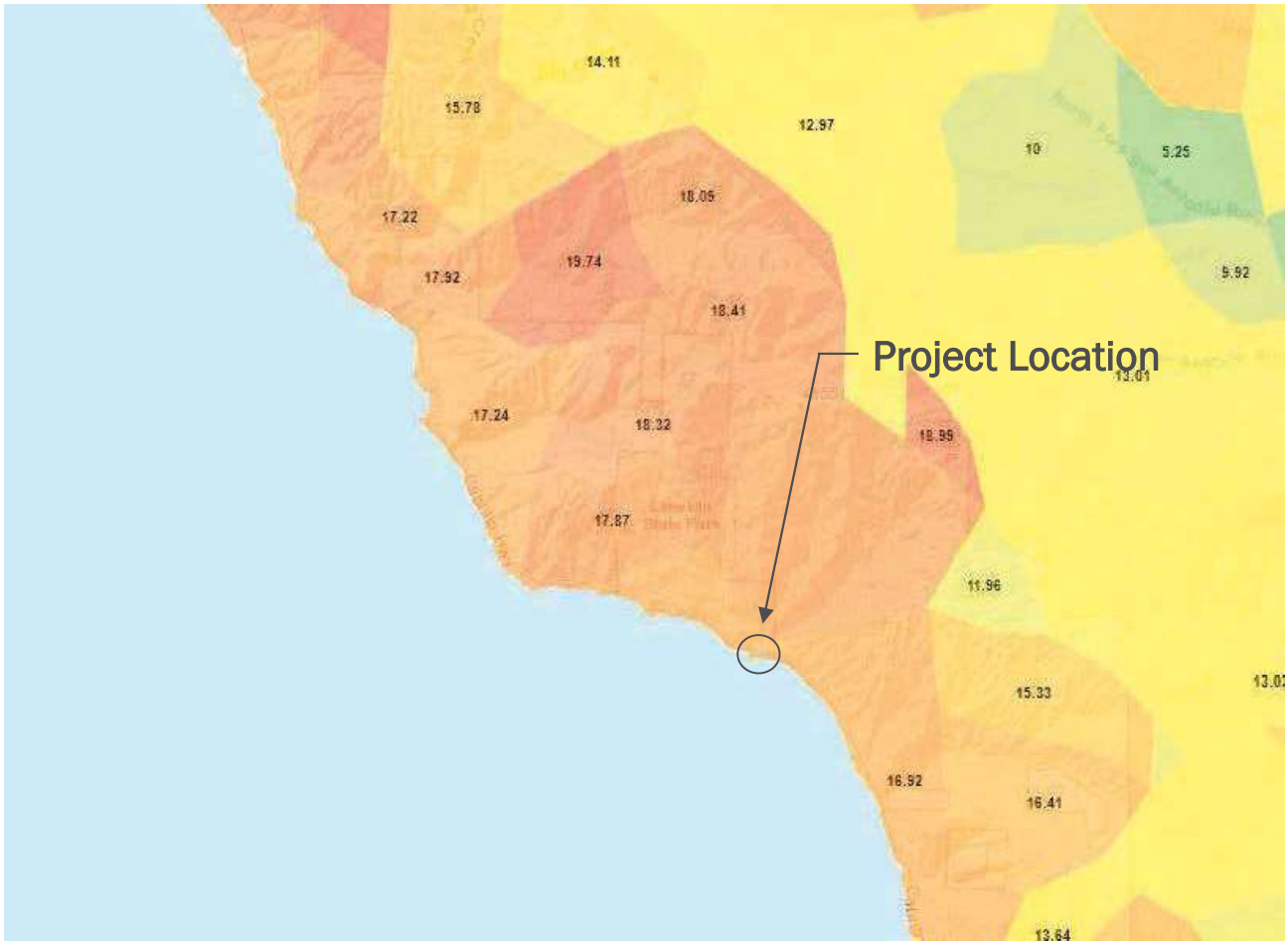
Monthly Precipitation: POINT PIEDRAS BLANCA

End Year: 1975
Number of Years: 28

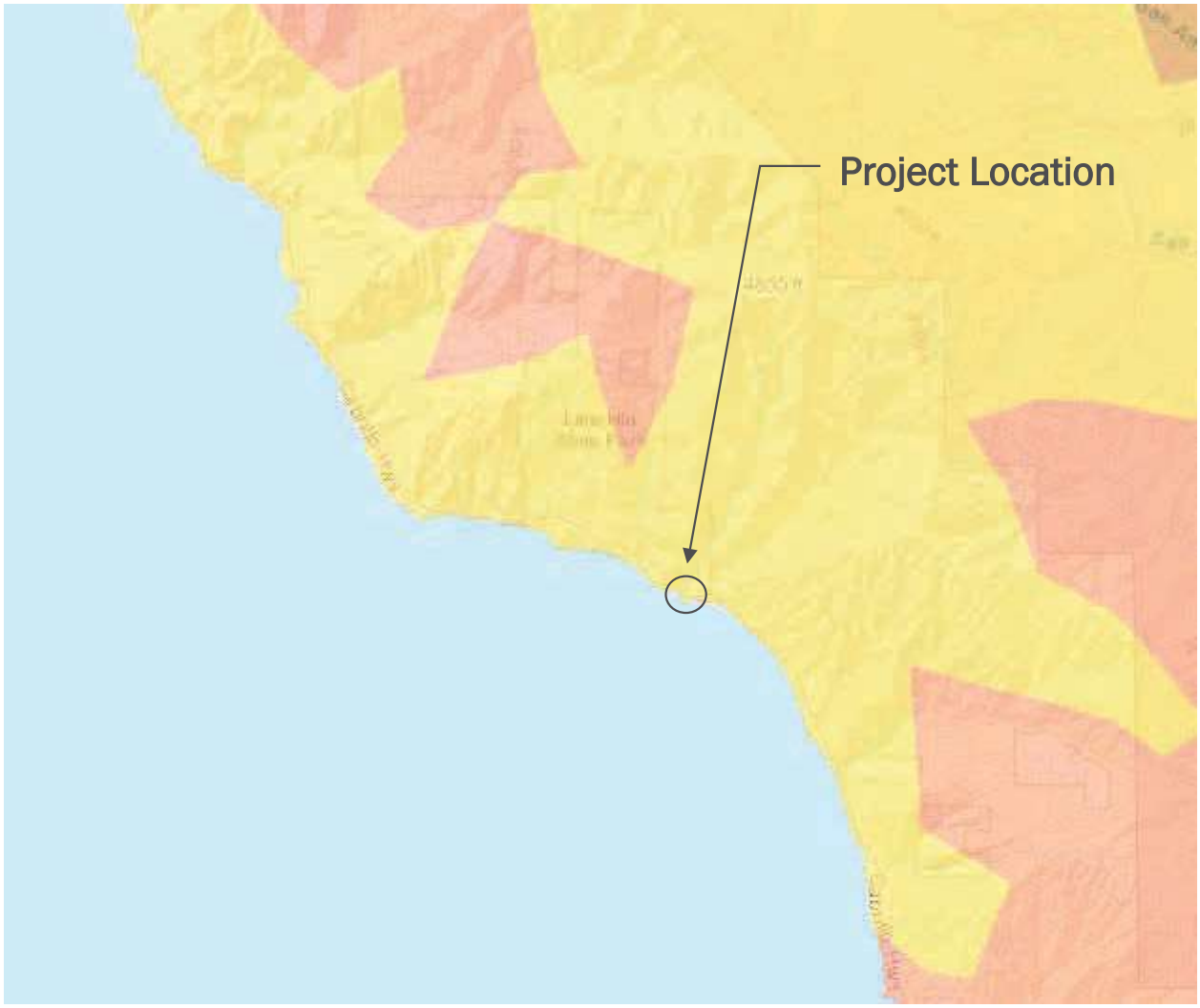
Average number of days per month with precipitation:

Month	>=0.1 in	>=0.5 in
January	6.1	2.9
February	5.3	2.2
March	4.5	1.9
April	2.9	1.1
May	1	0.2
June	0.1	0
July	0.1	0
August	0.1	0
September	0.3	0
October	1.4	0.4
November	3.7	1.7
December	5.1	2.5
Yearly Total	30.8	13

LS Factor (Hillslope-length, Hillslope-gradient)



K Factor (Soil Erodibility)



[1]Checklist SW-1, Site Data Sources

Prepared by: **Autumn . Wycoff** Date: **11/3/2023** District-Co-Route: **05-MON-001**

PM: **20.9/21.3** Project ID (EA): **05-1400-0004-0 (05-1F5100)** RWQCB: **Central Coast Regions 3**

DATA CATEGORY/SOURCES	Date
Topographic	
• Survey information received from Caltrans Survey. This information is based on aerial and several field surveys. Information includes digital terrain models (DTM), contours, spot elevations, and existing features such as vegetation, drainage facilities, roads and buildings.	2001-2023
Hydraulic	
• Caltrans Basin Size http://svctenvims.dot.ca.gov/wqpt/basinsizer.aspxr	
Soils	
• NRCS Soil Survey- https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx	
•	
Climatic	
•	
• EPA R-Factor Calculator- https://www.epa.gov/npdes/rainfall-erosivity-factor-calculator-small-construction-sites	
Water Quality	
• Project Planning and Design Guide- https://design.onramp.dot.ca.gov/hydraulics-and-stormwater-design	
• Water Quality Planning Tool- http://www.owp.csus.edu/WQPT/wqpt.aspx	
• Storm Water GIS Library https://svgcdeaprod.dot.ca.gov/Stormwater_GIS_Library/	
•	

Treatment BMPs
Checklist T-1, Part 1

Prepared by: **Autumn . Wycoff** Date: **11/3/2023** District-Co-Route: **05-MON-001**

PM: **20.9/21.3** Project ID (EA): **05-1400-0004-0 (05-1F5100)** RWQCB: **Central Coast Regions 3**

Consideration of Treatment BMPs

This checklist is used for projects that require the consideration of Approved Treatment BMPs, as determined from the process described in Section 4 (Project Treatment Consideration) and the Evaluation Documentation Form (EDF). This checklist will be used to determine which Treatment BMPs should be considered for each BMP contributing drainage area within the project. Supplemental data will be needed to verify siting and design applicability for final incorporation into a project.

Complete this checklist for each phase of the project. This will help to determine if any changes to the BMP strategy are necessary, based on site specific information gathered during later phases. Use the responses to the questions as the basis of developing the narrative in Section 6 of the Storm Water Data Report to document that Treatment BMPs have been appropriately considered and/or incorporated.

Before evaluating an area for treatment capabilities or to incorporate a Treatment BMP, calculate the numeric sizing requirement for each contributing drainage area (Water Quality Volume [WQV] from the 85th percentile 24 hour storm event or Water Quality Flow [WQF] rate). Soil and geometric information for the project area will be necessary to use this T-1 Checklist.

Identify the overall project Post Construction Treatment Area

Refer to Section 4.4 Treatment Areas for more information on these various surfaces.

Post Construction Treatment Area = NNI + RIS + ATA (1) + ATA (2)

NNI = Net New Impervious Area

RIS = Replaced Impervious Surface

ATA (1) = Additional Treatment Area required for existing Treatment BMPs that were removed as part of the project

ATA (2) = Additional Treatment Area required when NNI is 50 percent or greater than total project impervious

What is the Post Construction Treatment Area for the project? **0.612 Acres** (A in Table E-1)

This post construction treatment area is the impervious area required to be treated by the project. The PE is to incorporate BMPs until the summation of the treated impervious area of all the BMPs is equivalent to the post construction treatment area for the Project.

Once this area has been treated, the project is in compliance with the post construction treatment requirement.

Total Maximum Daily Load (TMDL) Retrofit Projects

If the project is installing Treatment BMPs to only address TMDL requirements, then there is no required post construction treatment area. The Treatment BMPs for a TMDL retrofit project should be designed to treat the impervious and pervious contributing drainage areas, as they are both eligible for Compliance Unit (CU) credits.

Overall Project Evaluation

Answer all questions, unless otherwise directed.

A. Overall Project Consideration

1. Is the project in a watershed with prescriptive Treatment BMP requirements in an adopted TMDL implementation plan or are there any other requirements for project area (i.e., District, Regional Board, Lawsuit, etc.)? ☐ Yes ☒ No

   If Yes, consult the District/Regional Storm Water Coordinator to determine if there are written agreements related to specific Treatment BMPs. In this case, determine if the rest of the T-1 Checklist needs to be followed to address other post construction requirements. If not, document BMP(s) in the Individual Treatment BMP Summary Table, provide information on the basis of the BMP requirement and any regulatory coordination in the SWDR narrative, and complete the SWDR Summary Spreadsheets. Otherwise, continue.

   If No, continue.

2. Does the receiving water have a TMDL for litter/trash, or is there a region specific requirement related to trash? ☐ Yes ☒ No

   If Yes, first evaluate BMPs that can treat other pollutants and are considered to be full capture devices (GSRDs or other) for litter/trash. If other BMPs cannot be sited, consult with the District/Regional Storm Water Coordinator to determine if standalone full capture devices (GSRDs or other) are required to be incorporated. If standalone devices are required and no other Treatment BMPs are being considered, go to question 6 of "Individual BMP Evaluation".

   If No, continue.

3. Is the project located in an area that uses traction sand more than twice a year? ☐ Yes ☒ No

   If Yes, first consider BMPs that can treat other pollutants and can capture traction sand. If other BMPs cannot be sited, consult the District/Regional Storm Water Coordinator to determine if standalone traction sand trap devices should be incorporated.

   If standalone devices are required and no other Treatment BMPs are being considered, go to question 6 of "Individual BMP Evaluation". Otherwise, continue with this checklist to identify Treatment BMPs that provide traction sand and other pollutant removal, or to design Treatment BMPs in series.

   If No, continue.

B. Dual Purpose Facilities

Does the project have (or propose to include) any dual purpose facilities that could meet treatment requirements (e.g., Dry Weather Flow Diversion, flood control basins, etc.)? ☐ Yes ☒ No

If Yes and 100 percent of the post construction treatment area will be treated by the dual purpose facility, go to question 6 of "Individual BMP Evaluation". Document the basis of treatment in the SWDR narrative and complete the SWDR Summary Spreadsheets.

If Yes, but 100 percent of the post construction treatment area has not been addressed, continue.

If No, continue.

C. Evaluate overall project area for infiltration opportunities using existing and proposed roadside surfaces (DPP Infiltration Areas). Assure the DPP Infiltration Area is stabilized to handle Highway drainage design flows, for both sheet and concentrated flows (See HDM section 800).

Document DPP Infiltration Areas on the "Individual Treatment BMP Summary Table" located at the end of this checklist.

1. Based on site conditions, do the DPP Infiltration Areas infiltrate 100 percent of the WQV generated by the post construction treatment area for the project? ☐ Yes ☐ No

   Yes, go to question 6 of "Individual BMP Evaluation".

   If No, account for area infiltrated and continue.

2. Can infiltration for these areas be increased by using soil amendments or other means? ☐ Yes ☐ No

   If Yes, and 100 percent of the WQV generated by the post construction treatment area is infiltrated, **go to question 6** of "Individual BMP Evaluation".

   If Yes, but 100 percent of the WQV generated by the post construction treatment area is not infiltrated, continue with checklist to identify Treatment BMPs that will treat the remaining required treatment area.

   If No, continue.

- Identify the Treatment BMPs being considered and complete the Individual Treatment BMP Summary Table and Overall Project Treatment Summary Table on the following pages. Refer to Appendix B of the PPDG and review the checklists identified below for every Treatment BMP under consideration.

☐ Complete

Document the basis of design in the SWDR narrative and complete the SWDR Summary Spreadsheets.

X DPP infiltration areas: Checklist T-1, Part 11

____ Infiltration Devices: Checklist T-1, Part 2

____ Biofiltration Strips and Biofiltration Swales: Checklist T-1, Part 3

____ Detention Devices: Checklist T-1, Part 4

____ Traction Sand Traps: Checklist T-1, Part 5

____ Dry Weather Diversion: Checklist T-1, Part 6

____ GSRDs: Checklist T-1, Part 7

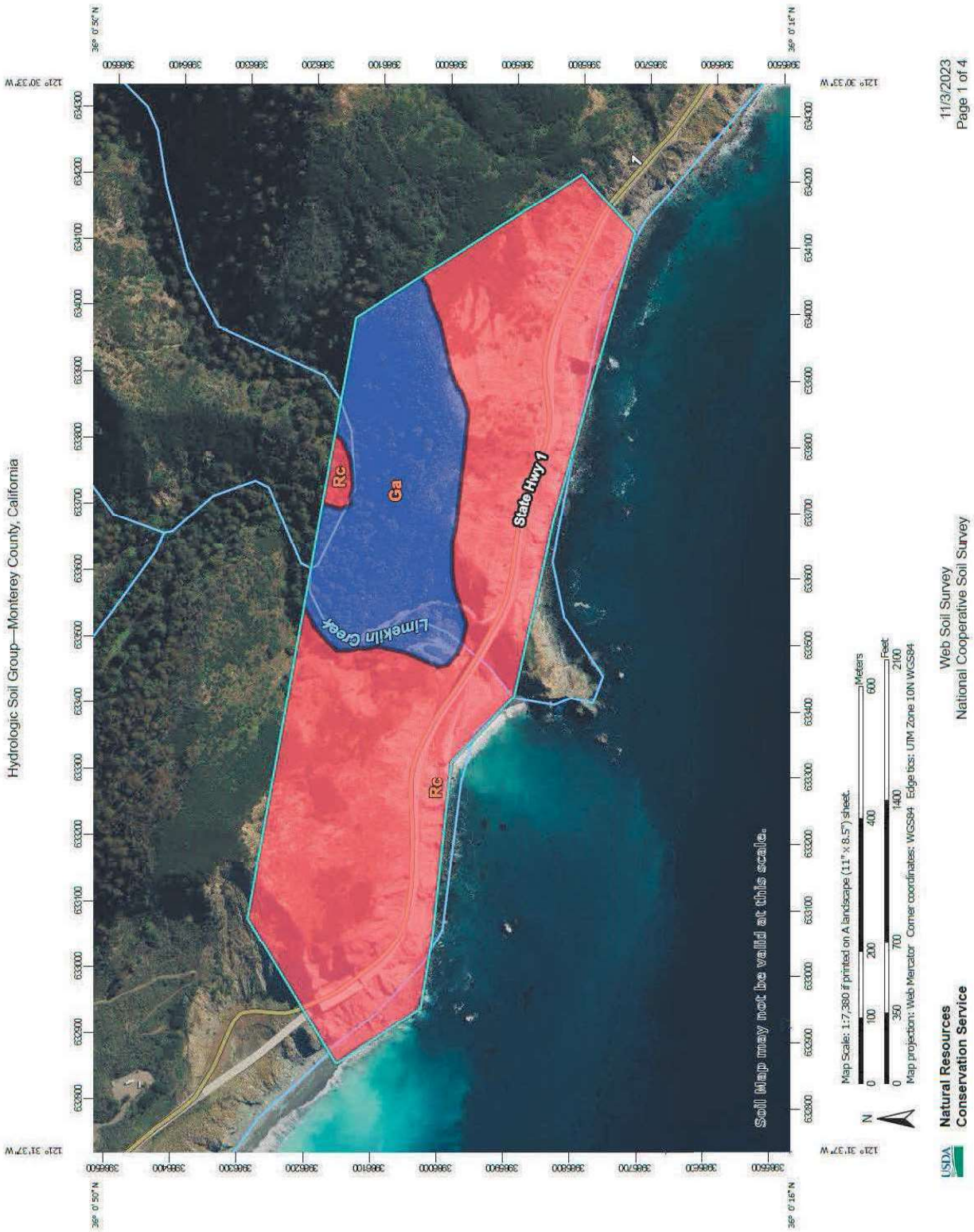
____ Media Filter [Austin Sand Filter and Delaware Filter]: Checklist T-1, Part 8

Note:

Multi-Chamber Treatment Train (MCTT) is not listed here because Caltrans has found that other approved BMPs are equally effective and more sustainable due to lower life cycle costs.

Wet Basins are not listed here due to feasibility issues due to site feasibility and issues with long term operation and maintenance.

MCTT and Wet Basins may be considered or implemented upon the recommendation of the District/Regional Storm Water Coordinator.


Hydrologic Soil Group—Monterey County, California
11/3/2023
Page 1 of 4
Rc
Ga
Limekiln Creek
State Hwy 1
Rc
Soil Map may not be valid at this scale.
Web Soil Survey
National Cooperative Soil Survey
Natural Resources
Conservation Service
USDA
Map Scale: 1:7,380 if printed on A landscape (11" x 8.5") sheet.
Meters
Feet
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Ga	Gamboa-Sur complex	B	24.5	25.6%
Rc	Rock outcrop-Xerorthents association, 30 to 75 percent slopes	D	71.2	74.4%
Totals for Area of Interest			**95.7**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Treatment BMPs
Checklist T-1, Part 11

Prepared by: **Autumn . Wycoff** Date: **11/3/2023** District-Co-Route: **05-MON-001**

PM: **20.9/21.3** Project ID (EA): **05-1400-0004-0 (05-1F5100)** RWQCB: **Central Coast Regions 3**

DPP Infiltration Areas

Feasibility[1]

- Does local Basin Plan or other local ordinance provide influent limits on quality of water that can be infiltrated, and would infiltration pose a threat to groundwater quality? ☐Yes ☒No
- Does infiltration at the site compromise the integrity of any slopes in the area? ☐Yes ☐No

If "Yes" to any question above, DPP Infiltration Areas are not feasible; stop here and consider other approved Treatment BMPs.

- Are DPP Infiltration Areas proposed at sites where known contaminated soils or groundwater plumes exist?
  If "Yes", consult with District/Regional NPDES Coordinator about how to proceed. ☐Yes ☒No
- If adequate area cannot be obtained, document in Section 6 of the SWDR that the inability to obtain adequate area prevents the incorporation of these Treatment BMPs into the project. ☐Complete

Design Elements

* **Required** Design Element – A "Yes" response to these questions is required to further the consideration of this BMP into the project design. Document a "No" response in Section 6 of the SWDR to describe why this Treatment BMP cannot be included into the project design.

** **Recommended** Design Element – A "Yes" response is preferred for these questions, but not required for incorporation into a project design.

- Has native soil gradation and infiltration rate been determined (see Design Guidance for more detail)? (Must be completed for PS&E level design.) * ☐Yes ☐No
- Has the infiltration rate of the DPP Infiltration Area been calculated and maximized through amendments where appropriate? ** ☐Yes ☐No
- Is the DPP Infiltration Area capacity sufficient to capture the WQV, or portion thereof? ** ☐Yes ☐No

If "No", document the percentage and amount of the WQV captured. ☐ Complete

- Is a surface reinforcing material required? ☐Yes ☐No

If "Yes", select material based on the permissible shear and velocity (refer to HDM Chapter 860 and Table 865.2).* ☐ Complete

[1] *This feasibility evaluation is applicable to areas that are being modified for infiltration as part of the project treatment strategy. For existing areas within the project limits that are being delineated as DPP Infiltration Areas, proceed to the Design Elements section.*

E Phase

ute	Direction of Travel	Begin PM	Ending PM	Begin Lat	Begin Long	Ending Lat	Ending Long	BMP Size (sf)	WQF/WQV (%)	Length (ft)*	Width ft

Attachment H_Storm Water Data Report

Final Audit Report 2024-07-25

Created:	2024-07-24
By:	Madeleine Rasmussen (s150815@dot.ca.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAA_sQNlNXHiDaX0yEMiYUrfQXaMjM99tls

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2024-07-25 - 4:46:31 PM GMT- IP address: 146.75.146.1

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Document emailed to Enrique Castillo (enrique.castillo@dot.ca.gov) for signature
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2024-07-25 - 5:33:00 PM GMT- IP address: 149.136.25.247

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Signature Date: 2024-07-25 - 5:36:22 PM GMT - Time Source: server- IP address: 149.136.25.247

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ATTACHMENT I

Risk Register

Risk Register for 05-1F510, Limekiln Creek Bridge Replacement

Form v3.4 last modified April 2019

Risk Checkpoint:	PS&E
Date:	7/2/2024
Project Nickname:	Limekiln Creek Bridge Replacement
EA:	05-1F510
Co-Rt, Post Miles:	MON-1, 20.9/21.3
Project Manager:	Luis Duazo
FY & Program (SHOPP or STIP):	2020(SHOPP)
Capital Costs:	$89,344k
Support Costs:	$29,046k
Total Costs:	$118,390k
RTL Target:	12/1/2026

Phase	Cost Contingency Range $k			Schedule Contingency Range (Wkg Days)		
	Optimistic	PERT	Pessimistic	Optimistic	PERT	Pessimistic
0-PA&ED	$9	$22	$43	14	43	80
1-PS&E	$116	$310	$607	208	479	937
2-RW Sup	$2	$4	$5	6	11	16
3-Con Sup	$609	$1,158	$2,149	228	728	1637
Support Contingency	$735	$1,494	$2,804	456	1261	2670
9-RW Cap	$53	$464	$1,070	1	62	142
4-Con Cap	$737	$2,229	$3,820	255	649	928
Capital Contingency	$790	$2,693	$4,890	256	711	1070
Total Contingency	$1,525	$4,187	$7,694	712	1972	3740

Risk Identification								Risk Assessment			Risk Response				All Level Risks			
Status	ID #	Type	Category	Title	Risk Statement	Current status / assumptions	Risk Trigger	Probability (P)	Cost Impact Schedule Impact (I)	Cost Score Schedule Score (PxI)	Strategy	Response Actions	Risk Owner	Updated	Impacted Phase	Support (Hrs) Capital Cost ($k)	Schedule (Days)	Calculated Contingency
Active	1	Threat	Environmental	Section 7 Consultation Takes Longer Than Expected	If resource agencies do not agree with impact analysis or that the proposed avoidance and minimization efforts are sufficient, then formal Section 7 consultation could take longer than expected, which should negatively affect the schedule and result in addition capital and support costs.	Consultation has been pushed to 1-phase to reduce risk. Early technical assistance has been conducted. Risk to RTL & construction schedule, budget & ROW costs (post-construction mitigation)	Resource agencies (USFWS, NMFS, CDFW etc.) do not agree with impact analysis and BMPs described in permit applications.	2-Low (11-30%)	2 - Low (<$5,586k)	4	Accept	Caltrans has conducted extensive coordination with permitting agencies during 0 phase to incorporate agency concerns into analysis. Additional coordination will be required in 1-phase, during Section 7 process.	Environmental	10/31/2023	3-Con Sup	O 40 hours ML 400 hours P 600 hours PERT 374 hours	O 0 ML 30 P 90 35 days	$47k 35
								100%	4 - Moderate (1-3 months)	8					9-RW Cap	O $0k ML $300k P $750k PERT $325k	O 0 ML 30 P 90 35 days	$325k 35
Retired	2	Threat	Environmental	Section 7 Consultation Takes Longer Than Expected	If formal Section 7 consultation with the USFWS is required for impacts to the least Bell's vireo, additional time will be needed to conduct the formal consultation, negatively impacting the schedule for the project. Formal Section 7 consultation would be expected to take 12 months. The probability of this occurring is moderate.	Risk to PA&ED schedule, budget.		3-Moderate (31-50%)	4 - Moderate ($751k - $1,500k	12	Accept		Environmental	6/22/2023	2-RW Sup	O 0 hours ML 0 hours P 0 hours	O 0 ML 0 P 0	
								100%	4 - Moderate (1-3 months)	12					3-Con Sup	O 0 hours ML 0 hours P 0 hours	O 0 ML 0 P 0	
Active	3	Threat	Environmental	unanticipated special-status species/mitigation	It is possible that habitat for crotch bumble bee, marsh sandwort, or other unanticipated special-status species could be found during pre-construction surveys which may result in the need for mitigation. Unanticipated mitigation may also be needed for special-status species known to occur. Agency consultation/coordination could be required, which may delay construction or affect the scope, schedule and cost. Mitigaiton would result in increased ROW capital or post-construction support costs.	Risk to Construction schedule, budget.	Unanticipated special-status species are encountered during preconstruction surveys	1-Very Low (1-10%)	16 - Very High (>$22,346k)	16	Accept	Caltrans has conducted extensive coordination with permitting agencies during 0 phase to incorporate agency concerns into analysis. Additional coordination will be required in 1-phase, during Section 7 process. Surveys are required prior to construction.	Environmental	11/8/2023	9-RW Cap	O $10k ML $60k P $400k PERT $109k	10 days 50 days 80 days 49 days	$6k 3
								5%	4 - Moderate (1-3 months)	4					3-Con Sup	O 20 hours ML 80 hours P 200 hours PERT 90 hours	O 10 ML 60 P 120 62 days	$1k 4
Active	4	Threat	Environmental	Project re-analyzed due to scope or area of work changes.	If the project scope or area of work changes, or additional work is required, the project will have to be re-analyzed, which could impact scope, schedule and cost. The probability of this occurring is unknown but is anticipated to be low. If the project scope changes, sensitive natural resources that are currently avoided may be affected, requiring additional permits from resource agencies and mitigation. This would negatively affect project scope, schedule and cost. The probability of this occurring is unknown.	Risk to PA&ED & PSE schedule, budget.	Design changes that may affect biological resources	2-Low (11-30%)	2 - Low (<$5,586k)	4	Accept	Environmental and design to coordinate closely on design changes and work to avoid additional/unnecessary environmental impacts.	Environmental	6/22/2023	0-PA&ED Sup	O 10 hours ML 20 hours P 120 hours PERT 35 hours	O 60 ML 180 P 360 190 days	$1k 38
								20%	4 - Moderate (1-3 months)	8					1-PS&E Sup	O 10 hours ML 20 hours P 120 hours PERT 35 hours	O 30 ML 60 P 90 60 days	$1k 12
Active	5	Threat	Environmental	Extensive biological monitoring during construction needed.	As a result of the need for extensive biological monitoring during construction, additional hours may be needed in Task 280 to fund the task order for biological monitoring services, which would result in a negative impact to the cost of the project.	Risk to PA&ED schedule, budget.	Unanticipated permit conditions	1-Very Low (1-10%)	16 - Very High (>$22,346k)	16	Accept	Caltrans has conducted extensive coordination with permitting agencies during 0 phase to incorporate agency concerns into analysis. Additional coordination will be required in 1-phase, during Section 7 process. MCCE has been updated to show the most recent biological monitoring requirements which are unlikely to change substantially.	Environmental	11/7/2023	3-Con Sup	O 50 hours ML 10,000 hours P 30,000 hours PERT 11,675 hours	O 500 ML 2000 P 5000 2,250 days	$73k 113
								5%	1 - Very Low (Insignificant)	1					1-PS&E Sup	O ML P	O 20 ML 30 P 40 30 days	2
Retired	6	Threat	Environmental	Specialized biological survey services needed.	As a result of Section 7 consultation with the USFWS and/or NOAA/NMFS, specialized biological survey services may need to be contracted out in the 0 phase, which would lead to a negative impact on the cost and scope for the project.	Risk to PA&ED schedule, budget.		2-Low (11-30%)	2 - Low (<$5,586k)	4	Accept		Environmental	6/22/2023				
								20%	2 - Low (<1 month)	4								
Active	7	Threat	Construction	Breakdown of WD not available.	Number of working days 800 taken from functional unit project fact sheet with little or no Construction review. The breakdown of WD for Roadway portion and Structure portion is not available.	Risk to PA&ED schedule, budget.	Issues with calculation of working days	2-Low (11-30%)	2 - Low (<$5,586k)	4	Accept	Ellaborate on breakdown of working day determination during PA&ED	Construction	11/7/2023	0-PA&ED Sup	O 20 hours ML 40 hours P 120 hours PERT 50 hours	O ML P	$2k
								20%	2 - Low (<1 month)	4								

Risk Identification								Risk Assessment			Risk Response				All Level Risks			
Status	ID #	Type	Category	Title	Risk Statement	Current status / assumptions	Risk Trigger	Probability (P)	Cost Impact Schedule Impact (I)	Cost Score Schedule Score (PxI)	Strategy	Response Actions	Risk Owner	Updated	Impacted Phase	Support (Hrs) Capital Cost ($k)	Schedule (Days)	Calculated Contingency
Active	8	Opportunity	Construction	Contractor works dual shifts.	Night work and Day work going on at same time (Dual shift).	Opportunity to accelerate construction schedule.	Contractor and Con Support willingness to work dual shifts	2-Low (11-30%)	2 - Low (<$5,601k)	4	Avoid	Given the nature and location of the work, it is likely undesirable from a safety stand point to pursue night work.	Construction	11/7/2023	3-Con Sup	O 400 hours ML 2,000 hours P 4,000 hours PERT 2,067 hours	O ML P	$52k
									4 - Moderate (1-3 months)	8					4-Con Cap	O $80k ML $100k P $300k PERT $130k	O 40 ML 20 P 10 22 days	$26k 5
								20%										
Active	9	Opportunity	Construction	Contractor works on weekends.	Weekend work, 6 or 7 day work week.	Opportunity to accelerate construction schedule.	Contractor and Con Support willingness to work 6 or 7 day weeks	3-Moderate (31-50%)	2 - Low (<$5,601k)	6	Accept	Contractor may elect to work weekend shifts as needed. If Caltrans is pursuing an accelerated schedule with the intent of working weekends, this would need to be specified in PS&E.	Construction	11/7/2023	3-Con Sup	O 4,000 hours ML 2,000 hours P 4,000 hours PERT 2,667 hours	O ML P	$133k
									4 - Moderate (1-3 months)	12					4-Con Cap	O $80k ML $100k P $300k PERT $130k	O 80 ML 40 P 20 44 days	$52k 18
								40%										
Active	10	Threat	Construction	Inspectors works overtime.	Overtime required due to increased workload, and travel time.	Threat to CON support budget.	Construction support understaffed and/or commuting from outside of Big Sur	4-High (51-70%)	4 - Moderate ($5,587k - $11,173k	16	Accept	Budget conservatively for OT associated with increased work load and travel time for Construction Support	Construction	11/7/2023	3-Con Sup	O 1,500 hours ML 2,500 hours P 4,000 hours PERT 2,584 hours	O ML P	$193k
									2 - Low (<1 month)	8								
								60%										
Active	11	Threat	Construction	Constructability review issues not resolved.	Excessive CCO's identified in Constructability Review that the PDT team was unable to resolve.	Threat to CON support and capital budget.	Identification of excessive CCO's by PDT	3-Moderate (31-50%)	8 - High ($11,204k - $22,406k)	24	Avoid	Re-evaluate identified CCO's during PA&ED phase.	Construction	11/7/2023	3-Con Sup	O 500 hours ML 1,500 hours P 3,000 hours PERT 1,584 hours	O ML P	$79k
									4 - Moderate (1-3 months)	12					4-Con Cap	O $1,000k ML $4,000k P $6,000k PERT $3,834k	O 0 ML 20 P 40 20 days	$1,534k 8
								40%										
Active	12	Threat	Construction	Utility Relocation.	Unknown at this time if utilities will need to be relocated. Unexpected or discovered utility issues could also cause need for additional support costs and capital funds for R/W.	Threat to CON support and capital budget.	Discovery of unexpected or unknown utility during construction	2-Low (11-30%)	2 - Low (<$5,586k)	4	Accept	Utility investigation during PS&E.	Construction	11/7/2023	3-Con Sup	O 40 hours ML 80 hours P 120 hours PERT 80 hours	O ML P	$2k
									2 - Low (<1 month)	4					4-Con Cap	O $5k ML $40k P $100k PERT $45k	O 0 ML 10 P 30 12 days	$9k 3
								20%										
Active	13	Opportunity	Construction	Consultant usage.	Use of consultants in construction could help even out workload.	Opportunity to accelerate construction schedule.	Consultants and CT budget available	2-Low (11-30%)	2 - Low (<$5,586k)	4	Accept	Budget for consultant usage.	Construction	11/7/2023	3-Con Sup	O 2,000 hours ML 6,000 hours P 12,000 hours PERT 6,334 hours	O ML P	$158k
									2 - Low (<1 month)	4								
								20%										
Active	14	Threat	Design	California Coastal Trail	The project may be required to construct or contribute to the California Coastal Trail	Risk to PA&ED, Design, Schedule, and Budget	CCC requires contribution to California Coastal Trail as part of the CDP.	2-Low (11-30%)	4 - Moderate ($5,587k - $11,173k	8	Mitigate	Mitigate by designing a portion of the California Coastal Trail or providing funds.	Design	11/7/2023	0-PA&ED Sup	O 50 hours ML 100 hours P 500 hours PERT 159 hours	O 10 ML 20 P 40 22 days	$4k 5
									4 - Moderate (1-3 months)	8					4-Con Cap	O $10k ML $50k P $200k PERT $69k	O 5 ML 10 P 20 11 days	$14k 3
								20%										
Retired	15	Threat	Design	Design Exception	Unable to secure design exception for the advisory and mandatory features outlined in the PID.	Risk to the schedule if we have to redesign. Additional risk to the budget because additional cost associated with not obtaining the exceptions.		3-Moderate (31-50%)	4 - Moderate ($5,587k - $11,173k	12	Mitigate	This risk may be retired once PA&ED is achieved. 11/6/2023 Update: The DSDD was approved/signed on 10/10/2023. Risk can be retired.	Design	11/7/2023				
									2 - Low (<1 month)	6								
								40%										
Active	16	Threat	Construction	Foundation Work	Difficult Drilling through hard rock, groundwater conditions, tidal flows, caving, and access	Risk to schedule	Differing site conditions during foundation work	4-High (51-70%)	2 - Low (<$5,586k)	8	Mitigate	Perform geotechnical borings and site investigations during PS&E phase. Prepare design and schedule based on geotechnical findings.	Construction	11/7/2023	1-PS&E Sup	O 80 hours ML 200 hours P 400 hours PERT 214 hours	O ML P	$17k
									4 - Moderate (1-3 months)	16					4-Con Cap	O $20k ML $80k P $200k PERT $90k	O 5 ML 15 P 40 18 days	$54k 11
								60%										
Active	17	Threat	Construction	Rock fall	Rock fall on slopes above the construction work area	Risk to budget	Unanticipated unstable slope	3-Moderate (31-50%)	4 - Moderate ($5,587k - $11,173k	12	Mitigate	Perform slope stability or landslide hazard analysis during PS&E phase. Prepare design of earthwork and slope stability based on findings. Re-evaluate slope stability at 95%.	Construction	11/7/2023	1-PS&E Sup	O 80 hours ML 200 hours P 400 hours PERT 214 hours	O ML P	$11k
									4 - Moderate (1-3 months)	12					4-Con Cap	O $80k ML $150k P $300k PERT $164k	O 5 ML 15 P 40 18 days	$66k 8
								40%										

Risk Identification								Risk Assessment			Risk Response				All Level Risks			
Status	ID #	Type	Category	Title	Risk Statement	Current status / assumptions	Risk Trigger	Probability (P)	Cost Impact Schedule Impact (I)	Cost Score Schedule Score (PxI)	Strategy	Response Actions	Risk Owner	Updated	Impacted Phase	Support (Hrs) Capital Cost ($k)	Schedule (Days)	Calculated Contingency
Active	18	Threat	Right of Way	Securing Park Property	Difficult time negotiating Limekiln State Park Right of Way requirements.	Risk to schedule	M225 maps not delivered on schedule.	3-Moderate (31-50%)	4 - Moderate ($5,587k - $11,173k	12	Mitigate	Ensure scheduled M224/M225 are met to provide sufficient time for ACQ to negotiate with SP	Right of Way	10/30/2023	2-RW Sup	O 40 hours ML 80 hours P 120 hours PERT 80 hours	O 15 ML 25 P 40 26 days	$4k 11
								40%	4 - Moderate (1-3 months)	12								
Retired	19	Threat	Environmental	Buried archaeological deposits are found in the project area APE.	Testing will be required to identify whether or not buried archaeological deposits are located in the project area APE. It is possible that project activities could impact archaeological deposits where the bridge replacement is proposed.	Risk to PA&ED schedule, budget.		2-Low (11-30%)	2 - Low (<$5,586k)	4	Avoid		Environmental	4/22/2015				
								20%	2 - Low (<1 month)	4								
Retired	20	Threat	Environmental	Access and staging could impact the masonry features that are contributing elements the of the Carmel-San Simeon Highway	The project has known contributing elements to the Carmel-San Simeon Highway Historic District. As designed, many of these features will be avoided. However, if access and staging locations are sited close to the features, they may require ESAs, which will require additional technical documents.	Risk to PA&ED schedule, budget.		2-Low (11-30%)	2 - Low (<$5,586k)	4	Avoid		Environmental	4/22/2015				
								20%	2 - Low (<1 month)	4								
Retired	21	Threat	Environmental	Project activities could impact known archaeological deposits where the bridge replacement is proposed.	The project proposes work in the vicinity of a documented archaeological site. If project activities impact the archaeological site, the impacts from the proposed project will have an adverse effect on the site which will require additional technical documents.	Risk to PA&ED schedule, budget.		2-Low (11-30%)	2 - Low (<$5,586k)	4	Avoid		Environmental	4/22/2015				
								20%	2 - Low (<1 month)	4								
Retired	22	Threat	Construction	Buried archaeological deposits are found in the project area APE.	If archaeological deposits are identified in the area of impact and they are determined eligible to the National Register of Historic Places, then Phase III excavations will be required. Phase III studies will likely take place during the construction of the bridge.	Risk to CON schedule, budget.		2-Low (11-30%)	2 - Low (<$5,586k)	4	Avoid		Environmental	4/22/2015				
								20%	2 - Low (<1 month)	4								
Retired	23	Threat	Project Management	Schedule Accelerated	The project's RTL was moved and the overall schedule accelerated by about 21 months in order to fit within the 2015 Fiscally Constrained 10 Year SHOPP Plan cycle in accordance with the April 15, 2015 Draft SHOPP Long Lead Procedures.	Risk to RTL.	Rationale: Initial estimates based on input from the functional units overseeing critical path activities placed RTL on 12/22/26. Schedule was accelerated to fit within the 10 year SHOPP plan cycle (see Risk #23). Logic would dictate that there's an	3-Moderate (31-50%)	4 - Moderate ($5,587k - $11,173k	12	Accept	Early recognition / preparation of PCR if milestone delayed beyond fiscal year.	Project Management	4/30/2015				
								40%	4 - Moderate (1-3 months)	12								
Retired	24	Threat	Project Management	4th Quarter Delivery.	The RTL was placed in the 4th quarter of the 2024/25 fiscal year in order to limit the number of months the schedule was accelerated as described in risk #23.	Risk to Contract for Delivery.	Rationale: Initial estimates based on input from the functional units overseeing critical path activities placed RTL on 12/22/26. Schedule was accelerated to fit within the 10 year SHOPP plan cycle (see Risk #23). Logic would dictate that there's an	3-Moderate (31-50%)	4 - Moderate ($5,587k - $11,173k	12	Accept	Early recognition / preparation of PCR if milestone delayed beyond fiscal year.	Project Management	4/30/2015				
								40%	4 - Moderate (1-3 months)	12								
Active	25a	Threat	Environmental	Locally Collected Plant Species	As the result of various permit conditions the use of locally collected native seeds and plants for revegetation may be required which could lead to higher mitigation planting costs.	Currently the project does not include the use of locally collected native seed for use on State Park property	Right of Entry negotiations with State Parks to identify if this is going to be required by the agency.	3-Moderate (31-50%)	4 - Moderate ($5,587k - $11,173k	12	Avoid	According to Environmental, permit negotiations with the applicable jurisdctions is ongoing. Risk to remain until applicable permits are required. If locally collected plants are required, request additional PS&E Support and Construction Capital funding for the PS&E phase for a child project. Opportunity to use a seed collection program that may be being devoloped as advanced mitigation for the big sur coast.	Landscape Architecture, Corby Kilmer	7/2/2024	1-PS&E Sup	O 200 hours ML 300 hours P 500 hours PERT 317 hours	O 125 ML 250 P 375 250 days	$16k 100
								40%	2 - Low (<1 month)	6					4-Con Cap	O $75k ML $150k P $200k PERT $146k	O 0 ML 0 P 0	$59k
Active	26b	Threat	Environmental	Locally Collected Plant Species	As the result of work occurring on State Park property the use of locally collected native seeds and plants for revegetation may be required which could lead to higher mitigation planting costs.	Currently the project does not include the use of locally collected native seed for use on State Park property.	Right of Entry negotiations with State Parks to identify if this is going to be required by the agency.	3-Moderate (31-50%)	4 - Moderate ($5,587k - $11,173k	12	Avoid	If locally collected plants are required, request additional Construction Support funding for a child project.	Construction	11/7/2023	3-Con Sup	O 200 hours ML 300 hours P 500 hours PERT 317 hours	O 125 ML 250 P 375 250 days	$16k 100
								40%	2 - Low (<1 month)	6								
Active	27a	Threat	Environmental	Invasive Plant Management	Permitting agencies including State Parks may require the removal and management of invasive plant species which could increase project costs	Currently the project does not include invasive plant management as part of the	Direction from Environmental regarding environmental commitments to be identified in the Environmental Document and expectations	3-Moderate (31-50%)	8 - High ($11,174k - $22,346k)	24	Avoid	According to Environmental, permit negotiations with the applicable jurisdctions is ongoing. Risk to remain until applicable permits are required. If invasive plant management is required, request additional PS&E	Landscape Architecture, Corby Kilmer	11/7/2023	1-PS&E Sup	O 160 hours ML 200 hours P 300 hours PERT 210 hours	O 75 ML 125 P 250 138 days	$11k 56
																O $50k ML $100k P $200k	O 250 ML 750 P 1000	$44k

Risk Identification								Risk Assessment			Risk Response				All Level Risks			
Status	ID #	Type	Category	Title	Risk Statement	Current status / assumptions	Risk Trigger	Probability (P)	Cost Impact Schedule Impact (I)	Cost Score Schedule Score (PxI)	Strategy	Response Actions	Risk Owner	Updated	Impacted Phase	Support (Hrs) Capital Cost ($k)	Schedule (Days)	Calculated Contingency
					and lead to a landscape split-off project.	project scope.	Document and expectations from permitting agencies to obtain permits.	40%	2 - Low (<1 month)	6		Support and Construction Capital funding for the PS&E phase.	Corby Kilmer		4-Con Cap	PERT $109k	709 days	284
Active	28b	Threat	Environmental	Invasive Plant Management	Permitting agencies including State Parks may require the removal and management of invasive plant species which could increase project costs and lead to a landscape split-off project.	Currently the project does not include invasive plant management as part of the project scope.	Direction from Environmental regarding environmental commitments to be identified in the Environmental Document and expectations from permitting agencies to obtain permits.	3-Moderate (31-50%)	8 - High ($11,174k - $22,346k)	24	Avoid	If invasive plant management is required that extends the construction contract, request additional Construction Support funding.	Construction	11/7/2023	3-Con Sup	O 160 hours ML 200 hours P 300 hours PERT 210 hours	O 75 ML 125 P 250 138 days	$11k 56
								40%	2 - Low (<1 month)	6								
Active	29	Threat	Structure Design	Structure Aesthetics	As a result of the project being in a coastal zone, and on a scenic highway and byway and not having local agency or public input at this time enhanced structure aesthetics may be required which may lead to impacts on costs.	Structure aesthetics is anticipated to be integrated into the design once the visual impact analysis is complete or if local agency or public comments deem it necessary.	Visual Impact Assessment determines that the proposed structure aesthetics are not adequate to off set the visual impact of the new infrastructure.	3-Moderate (31-50%)	4 - Moderate ($5,587k - $11,173k	12	Avoid	Re-evaluate during early PA&ED to determine the level of aesthetic treatment required for the new infrastructure to off set the visual impact.	Landscape Architecture, Corby Kilmer	6/19/2023	1-PS&E Sup	O 100 hours ML 200 hours P 300 hours PERT 200 hours	O ML P	$10k
								40%	1 - Very Low (Insignificant)	3					4-Con Cap	O $50k ML $100k P $300k PERT $125k	O ML P	$50k
Active	30	Threat	Environmental	Split-off Planting Project	As a result of unanticipated permitting requirements or State Park requirements a split-off planting project with a three year plant establishment may be required which could lead to additional project costs.	Currently assumes replacement planting with one year PE for mitigtation planting.	Environmental to advise on anticipated environmental commitments and expectations from permitting agencies to obtain permits.	3-Moderate (31-50%)	8 - High ($11,174k - $22,346k)	24	Avoid	According to Environmental, permit negotiations with the applicable jurisdctions is ongoing. Until the Coastal Development Permit is issued, the risk for a possible Split-off Planting Project remains. If a Split-off Planting Project is required, request additional PS&E Support and Construction Capital funding for the PS&E phase.	Landscape Architecture, Corby Kilmer	11/7/2023	1-PS&E Sup	O 1,000 hours ML 1,200 hours P 1,700 hours PERT 1,250 hours	O 125 ML 250 P 375 250 days	$63k 100
								40%	2 - Low (<1 month)	6					3-Con Sup	O 800 hours ML 1,000 hours P 1,200 hours PERT 1,000 hours	O 75 ML 125 P 250 138 days	$50k 56
Active	31	Threat	Environmental	Split-off Planting Project	As a result of unanticipated permitting requirements or State Park requirements a split-off planting project with a three year plant establishment may be required which could lead to additional project costs.	Currently assumes replacement planting with one year PE for mitigtation planting.	Environmental to advise on anticipated environmental commitments and expectations from permitting agencies to obtain permits.	3-Moderate (31-50%)	8 - High ($11,174k - $22,346k)	24	Avoid	According to Environmental, permit negotiations with the applicable jurisdctions is ongoing. Until the Coastal Development Permit is issued, the risk for a possible Split-off Planting Project remains. If a Split-off Planting Project is required, request additional PS&E Support and Construction Capital funding for the PS&E phase.	Construction	11/7/2023	4-Con Cap	O $250k ML $300k P $350k PERT $300k	O 250 ML 750 P 1000 709 days	$120k 284
								40%	2 - Low (<1 month)	6								
Active	32	Threat	Environmental	Hydroacoustic Monitoring	If hydroacoustic effects to special-status aquatic species cannot be avoided, then hydroacoustic monitoring and additional coordination with agencies will be required, resulting in increase support and capital costs. Hydroacoustic monitoring may also result in construction delays.	Risk to budget and delays during construction.	Construction cannot avoid hydroacoustic effects to species (e.g. pile driving near waters)	3-Moderate (31-50%)	16 - Very High (>$22,346k)	48	Accept	Early recognition of construction methodology. Design avoids impacts within/adjacent to sensitive areas. Early coordination with agencies.	Environmental	7/3/2023	4-Con Cap	O $60k ML $100k P $600k PERT $177k	O 3 ML 14 P 30 15 days	$71k 6
								40%	4 - Moderate (1-3 months)	12					1-PS&E Sup	O 20 hours ML 40 hours P 80 hours PERT 44 hours	O 7 ML 14 P 20 14 days	$3k 6
Retired	33	Threat	Environmental	Working Days	Working days will effect campground closure.							Working days have been determined and coordinated with State Parks. Risk has been retired.	Environmental	11/7/2023				
Active	34	Opportunity	Construction	Construction Staff Use of State Park Campground	If Construction staff (both Caltrans and Contractor) able to utilize campground during Construction, then longer shifts may become more feasible, resulting in an accelerated constructions schedule.	Opportunity to accelerate construction schedule by reducing staff travel time.	Campground allows long-term use	3-Moderate (31-50%)	2 - Low (<$5,601k)	6	Accept	Inquire to State Parks during PA&ED phase. Maintain coordination with State Parks.	Construction	11/7/2023	0-PA&ED Sup	O 20 hours ML 80 hours P 120 hours PERT 77 hours	O ML P	$4k
								40%	4 - Moderate (1-3 months)	12					3-Con Sup	O 2,000 hours ML 1,000 hours P 200 hours PERT 1,034 hours	O 40 ML 20 P 0 20 days	$52k 8
Active	35	Threat	Construction	Weather Impacting Access to Construction Site	If adverse weather leads to closures north/south of the construction site, then access to the construction site may be limited, resulting in a delay in the construction schedule.	Risk to budget and delays during construction.	Unanticpated road closure(s)	3-Moderate (31-50%)	4 - Moderate ($5,602k - $11,203k	12	Mitigate	Evaluate mitigation measures during PA&ED phase (i.e. work seasons./suspensions, alternative haul routes (will Nacimiento-Ferguson Rd be open?), Caltrans vs Contractor risk/cost of alternative/longer haul routes due to closures.)	Construction	11/7/2023	0-PA&ED Sup	O 120 hours ML 200 hours P 400 hours PERT 220 hours	O ML P	$11k
								40%	8 - High (3-6 months)	24					4-Con Cap	O $20k ML $80k P $200k PERT $90k	O 20 ML 40 P 100 47 days	$36k 19
Active	36a	Threat	Geotechnical	Onsite Slide Reactivated	If there is a cut in the toe of the slope a landslide may activate resulting in significant damage to the roadway, campsite, and beach.	Geotech recommendations have been heard and discussed within the PDT but the Geotech recommendations conflict with State Parks and Coastal Commision goals.	The alignment requires cuts into the slope.	5-Very High (>70%)	16 - Very High (>$22,406k)	80	Avoid	Design the roadway (alignment and bridge) in a way to avoid altering the slope geometry.	Geotech	11/9/2023	3-Con Sup	O 160 hours ML 640 hours P 2,000 hours PERT 787 hours	O 31 ML 120 P 365 146 days	$83k 125
								85%	16 - Very High (>6 months)	80								

Risk Identification								Risk Assessment			Risk Response				All Level Risks			
Status	ID #	Type	Category	Title	Risk Statement	Current status / assumptions	Risk Trigger	Probability (P)	Cost Impact Schedule Impact (I)	Cost Score Schedule Score (PxI)	Strategy	Response Actions	Risk Owner	Updated	Impacted Phase	Support (Hrs) Capital Cost ($k)	Schedule (Days)	Calculated Contingency
Active	36b	Threat	Geotechnical	Onsite Slide Reactivated				5-Very High (>70%)	16 - Very High (>$22,406k)	80	Transfer	Design and construct the roadway and bridge counter to Caltrans recommendations and secure an Agreement from the Coastal Commision and/or State Parks to fund the repair and/or replacement of the roadway facility.	Geotech	11/9/2023	3-Con Sup	O 160 hours ML 640 hours P 2,000 hours PERT 787 hours	O 31 ML 120 P 365 146 days	$83k 125
									16 - Very High (>6 months)	80								
								85%										
Active	37	Threat	Project Management	Difficulty in Obtaining Coastal Development Permit	As a result of coastal access impacts to the beachgoing experience, the Coastal Commission may impose additional requirements in issuing the Coastal Development Permit (CD)) that may lead to cost increase and/or schedule delay.	Risk to construction budget	Unanticipated requirements in the CDP.	3-Moderate (31-50%)	8 - High ($11,204k - $22,406k)	24	Accept	Caltrans has conducted extensive coordination with the Coastal Commission during 0 phase to incorporate agency concerns into the design. Additional coordination will be required in 1-phase, during issuance of the CDP.	Environmental	11/8/2023	1-PS&E Sup	O 120 hours ML 200 hours P 400 hours PERT 220 hours	O 75 ML 100 P 200 113 days	$11k 46
									4 - Moderate (1-3 months)	12					4-Con Cap	O $100k ML $200k P $500k PERT $234k	O ML P	$94k
								40%										
Active	38	Threat	Project Management	State Parks Mitigation Requirements	As a result of closure of the campground during construction, State Park's compensatory mitigation requirements may be more than what is currently planned (payment for loss of campsite revenues) which may lead to cost increase.	Risk to construction or right of way budget.	Unanticipated requirements imposed by State Parks	3-Moderate (31-50%)	4 - Moderate ($5,602k - $11,203k	12	Accept	Caltrans has conducted extensive coordination with the State Parks during 0 phase to incorporate agency concerns into the design. Additional coordination with the State Parks will be required in 1-phase.	Right of Way	11/8/2023	9-RW Cap	O $100k ML $200k P $500k PERT $234k	O ML P	$94k
									2 - Low (<1 month)	6								
								40%										
Active	39	Threat	Geotechnical	Design Change following investgation	If the alignment or bridge design is changed after the Geotechnical field investigation then more investigation would be needed or more conservative subsurface properties would be required. As a result of the alignment being changed additional investigation or conservative design estimates would be required which would lead to design delays and additonal costs.	Assumption: Geotechnical investigation will follow the alternative selection	A change in alignment following the investigation	3-Moderate (31-50%)	1 - Very Low (Insignificant)	3	Accept	Make conservative estimates (O) or Remobilize and investigate (ML & P).	Geotech	11/9/2023	1-PS&E Sup	O 40 hours ML 400 hours P 800 hours PERT 407 hours	O 5 ML 21 P 63 26 days	$21k 11
									4 - Moderate (1-3 months)	12								
								40%										
Active	40	Threat	Environmental	Obtaining MOA for Cultural Resources	As a result of having an Adverse Effect on Cultural Resources, an MOA with the SHPO is required to resolve Adverse Effects, which may take 6 months to execute after selection of Alternative, which may delay FED.	Assumes we have a minimum of 6 months between DED and FED	If SHPO takes longer to review the MOA, then FED may be pushed out.	3-Moderate (31-50%)	4 - Moderate ($5,602k - $11,203k	12	Mitigate	As for expedited review at SHPO of the MOA	Environmental	1/30/2024	1-PS&E Sup	O 80 hours ML 120 hours P 200 hours PERT 127 hours	O 30 ML 60 P 90 60 days	$7k 24
									4 - Moderate (1-3 months)	12								
								40%										
Active	41	Threat	Environmental	Potential lawsuit	As a result of public comments challenging document adequecy and deferred mitigation from Albion Bridge Stewards, Caltrans may be at risk of a lawsuit which could lead to construction delays.	Assumes Albion would go forward with a lawsuit. Their website explains they are dedicated to interfering with Caltrans projects to protect the environment surrounding Highway 1.	The public comment requested a higher level document and claimed it did not meet CEQA and NEPA standards.	3-Moderate (31-50%)	8 - High ($11,229k - $22,456k)	24	Escalate	Coordinate with Legal.	Environmental	7/1/2024	1-PS&E Sup	O 350 hours ML 2,100 hours P 6,300 hours PERT 2,509 hours	O 60 ML 180 P 800 264 days	$126k 106
									16 - Very High (>6 months)	48					3-Con Sup	O 350 hours ML 2,100 hours P 6,300 hours PERT 2,509 hours	O 60 ML 180 P 800 264 days	$125k 106
								40%										
Active	42	Threat	Environmental	Offsite mitigation	If State Parks will not let Caltrans use their lands for replanting ratios, or, Caltrans deems it too risky to do mitgiation on State Parks lands, then offsite mitigation may be required.	Revegation could utilize state parks land in project area, which should provide enough acreage to meet permit requirements.	Stateparks/CT cannot agree to monitoring/mitation requirements, or State Parks will not grant right of entry permit post-construction	3-Moderate (31-50%)	16 - Very High (>$22,456k)	48	Accept	Work with advance mitigation to identify alternative mitigatoin areas if needed. Work with State Parks and environmental management to determine if SP land can be used.	Environmental	6/12/2024	9-RW Cap	O $30k ML $75k P $250k PERT $97k	O 0 ML 60 P 120 60 days	$39k 24
									8 - High (3-6 months)	24					1-PS&E Sup	O 50 hours ML 250 hours P 500 hours PERT 259 hours	O 0 ML 30 P 120 40 days	$13k 16
								40%										
Active	43	Threat	Utilities	AT&T Utility Relocation	If the AT&T line needs to be relocated and/or undergrounded as part of the project this could lead to a R/W cost increase and schedule delay.	Risk to R/W budget and schedule.	Identify early in the PS&E phase.	3-Moderate (31-50%)	4 - Moderate ($5,921k - $11,839k	12	Accept	Coorinate early in PS&E with AT&T.	Right of Way	7/24/2024	2-RW Sup	O 40 hours ML 100 hours P 200 hours PERT 107 hours	O 0 ML 60 P 120 60 days	$5k 24
									4 - Moderate (1-3 months)	12					9-RW Cap	O $30k ML $75k P $200k PERT $89k	O 0 ML 60 P 120 60 days	$36k 24
								40%										
Active	44	Threat	Design	K-Rail Upgrade Requirement	As a result of new traffic safety specifications, k-rail used on the project may need to be upgraded to new F-23 MASH compliant barrier which could lead to construction cost increase.	Current k-rail standards are being used.	New barrier system is required per spec.	4-High (51-70%)	4 - Moderate ($5,921k - $11,839k	16	Accept	Incorporate as soon as possible in PS&E if necessary.	Design	7/24/2024	4-Con Cap	O $50k ML $100k P $200k PERT $109k	O 0 ML 30 P 60 30 days	$66k 18
									1 - Very Low (Insignificant)	4								
								60%										

ATTACHMENT J

SHOPP Performance Report

SHOPP Project - Accomplishment - Performance Measures - Benefits

District: 05 **Tool ID:** 25034 **Project ID:** 0514000004 **EA:** 1F510 **Co-Rte-PM:** MON-001-20.9/21.3 (Primary Location)

Res In PID WP: 05/03/24 **Project Manager:** Luis Duazo

Save to Excel

☑ Bridge ☑ Pavement ☐ Drainage ☐ Facilities ☑ Signs and Lighting ☐ Mobility ☐ Roadside ☑ Bicycle and Pedestrian Infrastructure ☐ Sustainability /Climate Change ☐ Advance Mitigation /Mitigation ☐ Major Damage & Betterments ☐ Green-house Gases ☐ Relinquishment

Performance & Accomplishments (PRG)

	ActID	Activity Detail	Performance Objective	Unit of Measurement	Quantity	Pre-Good	Pre-Fair	Pre-Poor	New	Post-Good	Post-Fair	Post-Poor	HQ Program Review - Agree with District?	HQ Comment	Review Date	Performance Change Date After Review	Comment
1	A02	Bridge Replacement/New Construction (201.110, .111, .113, .322)	Bridge and Tunnel Health	Square Feet	19536.000			19,536.000		19,536.000							
2	A02		Bridge Scour Mitigation				19,536.000			19,536.000							
3	A02		Bridge Seismic Restoration			19,536.000				19,536.000							
4	A02		Bridge Goods Movement Upgrades			19,536.000				19,536.000							
5	A03	Bridge Rail (201.112)	Bridge Rail Replacement and Upgrade	Linear Feet	1265.000			1,265.000		1,265.000							
6	A08	Number of Bridges	No Performance Objective in the SHSMP	Each	1.000												
7	B25	Asphalt Pavement Minor Rehab (CAPM)	Pavement Class II	Lane Miles	0.188		0.188			0.188							
8	E07	Guard Rail (201.010, .015)	No Performance Objective in the SHSMP	Linear Feet	208.000				208.000								
9	E55	Proactive Safety Vehicles	Proactive Safety	Annual Fatal & Serious Injury Collisions	0.010			0.010		0.010							
10	H32	Is any Location Within the Project Limits Ped/Bike Accessible?	No Performance Objective in the SHSMP	Yes/No	Yes												

ATTACHMENT K

Document Distribution List

D5 Distribution List (send to these people after PID and PR are completed and signed)			
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**Send only when applicable

Report changes to Dan See **Last Revised: 12/6/2023**

05-1F510 PR for Scott's Signature_REVISED

Final Audit Report 2024-08-28

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