Big Creek to Carmel Drainage Restoration

On State Route 1 in Monterey County
05-MON-1-PM 27.76-70.87
Project ID Number 0521000006

Initial Study
with Proposed Mitigated Negative Declaration

Volume 1 of 2

Prepared by the
State of California Department of Transportation

November 2022

Caltrans

General Information About This Document

What's in this document:
The California Department of Transportation (Caltrans) has prepared this Initial Study, which examines the potential environmental impacts of alternatives being considered for the proposed project in Monterey County in California. 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, potential impacts of each of the alternatives, and proposed avoidance, minimization, and/or mitigation measures.

What you should do:

- Please read the document. 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, Monday through Friday, from 8:00 a.m. to 5:00 p.m. If you would like to receive a printed version of this document, please contact Lara Bertaina at 805-779-0792 or by email at lara.bertaina@dot.ca.gov.

- Tell us what you think. If you have any comments regarding the proposed project, please request a public hearing and/or send your written comments to Caltrans by the deadline. Submit comments via U.S. mail to: Lara Bertaina, District 5 Environmental Division, California Department of Transportation, 50 Higuera Street, San Luis Obispo, California 93401. Submit comments via email to: lara.bertaina@dot.ca.gov.

- Submit comments by the deadline: December 12, 2022

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

Printing this document: To save paper, this document has been set up for two-sided printing (to print the front and back of a page). Blank pages occur where needed throughout the document to maintain proper layout of the chapters and appendices.

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please write to or call Caltrans, Attention: Lara Bertaina, District 5 Environmental Division, 50 Higuera Street, San Luis Obispo, California 93401; phone number 805-779-0792 (Voice), or use the California Relay Service 1-800-735-2929 (Teletype to Voice), 1-800-735-2922 (Voice to Teletype), 1-800-855-3000 (Spanish Teletype to Voice and Voice to Teletype), 1-800-854-7784 (Spanish and English Speech-to-Speech), or 711.

05-MON-1-PM 27.76-70.87
Project ID Number 0521000006

Replace or rehabilitate drainage culverts on State Route 1 from post miles 27.76 to 70.87 in Monterey County

INITIAL STUDY
with Proposed Mitigated Negative Declaration

Submitted Pursuant to: (State) Division 13, California Public Resources Code

THE STATE OF CALIFORNIA
Department of Transportation
and
Responsible Agencies:
California Transportation Commission
California Department of Fish and Wildlife
Central Coast Regional Water Quality Control Board
Cooperating Agencies:
U.S. Army Corps of Engineers
U.S. Fish and Wildlife Service
National Marine Fisheries Service

John Luchetta
Deputy District Director Environmental, District 5
California Department of Transportation
CEQA Lead Agency

October 27, 2022
Date

The following individual can be contacted for more information about this document:

Lara Bertaina, Caltrans District 5 Environmental, 50 Higuera Street, San Luis Obispo, California 93401; 805-779-0792; lara.bertaina@dot.ca.gov

DRAFT
Proposed Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

State Clearinghouse Number: [pending]

District-County-Route-Post Mile: 05-MON-1-PM 27.76-70.87

EA/Project Number: EA 05-1N360 and Project ID Number 0521000006

Project Description

The California Department of Transportation (Caltrans) proposes to rehabilitate nine existing drainage systems at eight locations on State Route 1 in Monterey County. Existing drainage systems at the proposed locations have exceeded their design life and have deteriorated or failed. The project work includes replacing or rehabilitating existing culverts and replacing or upgrading end treatments and headwalls as needed.

Determination

An Initial Study has been prepared by Caltrans, District 5. On the basis of this study, it is determined that the proposed action with the incorporation of the identified mitigation measures will not have a significant effect on the environment for the following reasons:

The project would have no effect on agriculture and forest resources, energy, geology and soils, hazards and hazardous materials, land use and planning, mineral resources, population and housing, public services, recreation, transportation, tribal cultural resources, hydrology and water quality, utilities and service systems, or wildfire.

The project would have no significant effect on air quality, noise, greenhouse gas emissions, aesthetics, and cultural resources.

With the incorporation of the mitigation measures listed below, the project would not have a significant effect on biological resources:

- To mitigate any impact on California red-legged frogs and their critical habitat, temporary impacts will be restored, and habitat conditions enhanced with native plantings.

- To mitigate any impact on California red-legged frogs and their critical habitat, permanent impacts to jurisdictional areas will be mitigated through the implementation of the Mitigation Monitoring Plan.

- To mitigate any impact on the Smith's blue butterfly, in the event of impacts to seacliff buckwheat removal outside of the maintenance buffer, buckwheat shall be replanted from seed or individual seedlings at the discretion of a U.S. Fish and Wildlife Service-approved biologist. If seedlings are used, replace them at a 2-to-1 ratio. Establishment is defined as survival to the end of a five-year

monitoring period. 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 replacement ratio by area).

- To prevent a net loss of wetlands or another aquatic resource acreage, function, and value, onsite restoration and reestablishment are proposed at a 1-to-1 ratio (acreage) for temporary impacts and a 3-to-1 ratio (acreage) for permanent impacts. Please see Table 2.2 for more information on the proposed mitigation at each location.

_____

John Luchetta
Deputy District Director Environmental, District 5
California Department of Transportation

_____

Date

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Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (known as Caltrans) proposes the Big Creek to Carmel Drainage Restoration project on State Route 1 in Monterey County. The project would rehabilitate nine existing drainage systems at eight locations along the Big Sur Coast between post mile 27.7 near Big Creek to post mile 70.87 within the City of Carmel-by-the-Sea. In this region, State Route 1, along most of the project length, is a two-lane conventional highway with 12-foot lanes. Shoulder widths vary from zero to 8 feet, with most being 4 feet or less. State Route 1 in the project vicinity generally serves local and interregional traffic, primarily including the usage of local recreational facilities, local commuters, and limited commercial users. See Figure 1-1 for the project vicinity map and Figure 1-2 for the project location map.

For the proposed project, Caltrans is the lead agency under the California Environmental Quality Act (known as CEQA). Caltrans is also the lead agency under the National Environmental Policy Act (known as NEPA). Caltrans has determined that the project qualifies for a Categorical Exclusion under NEPA and will complete that documentation before project approval.

1.2 Purpose and Need

1.2.1 Purpose

The purpose of this project is to rehabilitate existing drainage systems in Monterey County that have exceeded their design life and have deteriorated or failed to maintain operations and reduce maintenance on State Route 1.

1.2.2 Need

The Drainage Systems Reports that were developed by the Culvert Inspection Program identified existing culverts that need to be repaired or replaced due to issues, such as deterioration, corrosion, damage, shape loss, or joint separation. If the culverts are allowed to continue to deteriorate, then undermining of the roadway will occur, and the highway will be compromised.

1.3 Project Description

This project proposes to rehabilitate nine existing drainage systems at eight locations on State Route 1 in Monterey County, from post miles 27.76 to

70.87. Existing drainage systems at the proposed locations have exceeded their design life and have deteriorated or failed. The project work would include replacing or rehabilitating existing culverts and replacing or upgrading end treatments and headwalls as needed. All existing culverts that would be replaced would be replaced via the open-cut method, also referred to as the cut-and-cover method.

For each location, open-cut construction would begin with excavating and trenching half the width of the traveled way and its nearby embankment. The existing culvert would be removed and replaced with a new culvert of equal or greater size. After the placement of the new culvert, the trench would be backfilled. The height of the cover, which is the height from the top of the new culvert to the bottom of the new pavement, determines what material would be used for backfilling. Although culverts would be replaced using the same construction method, other drainage elements proposed for each of the eight locations depends on individual site conditions. The specific improvements proposed for each location are described as follows:

Location 1 at Post Mile 27.76:

Caltrans proposes to replace two drainage structures at post mile 27.76. For drainage structure 1A, the existing 30-inch corrugated steel pipe would be replaced with a new 30-inch reinforced concrete pipe. For drainage structure 1B, the existing 30-inch corrugated steel pipe would be replaced with a new 30-inch alternative pipe culvert. For the outlet, a new 7.5-foot-wide by 15-foot-long rock slope protection would be installed, along with a new 30-foot alternate flared end section.

Location 2 at Post Mile 29.63:

Caltrans proposes to replace the existing corrugated steel pipe with a new 30-inch reinforced concrete pipe. For the inlet, the existing riser pipe would be replaced with a new riser pipe to connect to the new culvert, along with the existing headwall being replaced with a new standard headwall. For the outlet, a new 30-inch concrete flared end section and a 7.5-foot-wide by 15-foot-long rock slope protection would be installed.

Location 3 at Post Mile 30.10:

Caltrans proposes to replace the existing 30-inch corrugated steel pipe with a new 30-inch reinforced concrete pipe. For the inlet, the existing headwall would be replaced with a new standard headwall. For the outlet, a new 30-inch concrete flared end section and a 7.5-foot-wide by 15-foot-long rock slope protection would be installed.

Location 4 at Post Mile 30.86:

Caltrans proposes to replace the existing 30-inch corrugated steel pipe with three different culvert segments: two new 30-inch reinforced concrete pipes and a new 30-inch alternative pipe culvert. For the inlet, the existing headwall would be replaced with a new headwall. For the outlet, a new standard headwall would be installed along with a 4.5-foot-wide by 4.5-foot-long rock slope protection.

Location 5 at Post Mile 31.73:

Caltrans proposes to replace the existing 18-foot corrugated steel pipe with a new 24-foot reinforced concrete pipe. For the inlet, the existing headwall would be replaced with a new standard headwall. For the outlet, a new 24-foot concrete flared end section and a 6-foot-wide by 10-foot-long rock slope protection would be installed.

Location 6 at Post Mile 33.87:

Caltrans proposes to replace the existing 24-inch corrugated steel pipe with two different culvert segments: a new 24-inch reinforced concrete pipe and a new 24-inch alternative pipe culvert. For the inlet, a new standard headwall would be installed. For the outlet, a 24-inch high density polyethylene down drain with 6-foot-wide by 12-foot-long rock slope protection would be installed.

Location 7 at Post Mile 54.46:

Caltrans proposes to replace the existing 24-inch corrugated steel pipe with a new, upsized 36-inch reinforced concrete pipe. For the inlet, the existing headwall would be replaced with a new standard headwall. For the outlet, a new 36-inch concrete flared end section and a 9-foot-wide by 14-foot-long rock slope protection would be installed.

Location 8 at Post Mile 70.87:

Caltrans proposes to replace the existing 24-inch corrugated steel pipe with a new 24-inch reinforced concrete pipe. For the inlet and outlet, the existing headwall would be replaced with a new standard headwall.

Figure 1-1 Project Vicinity Map

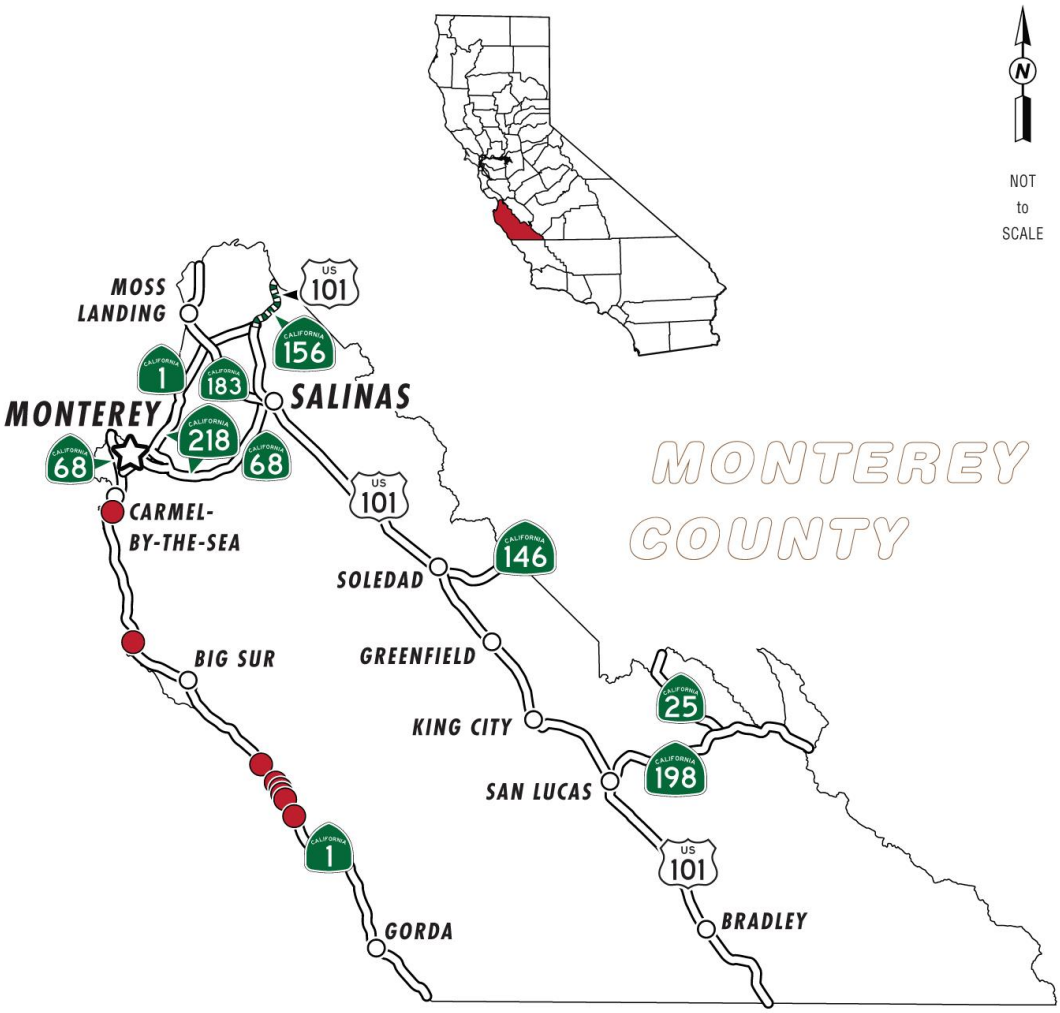
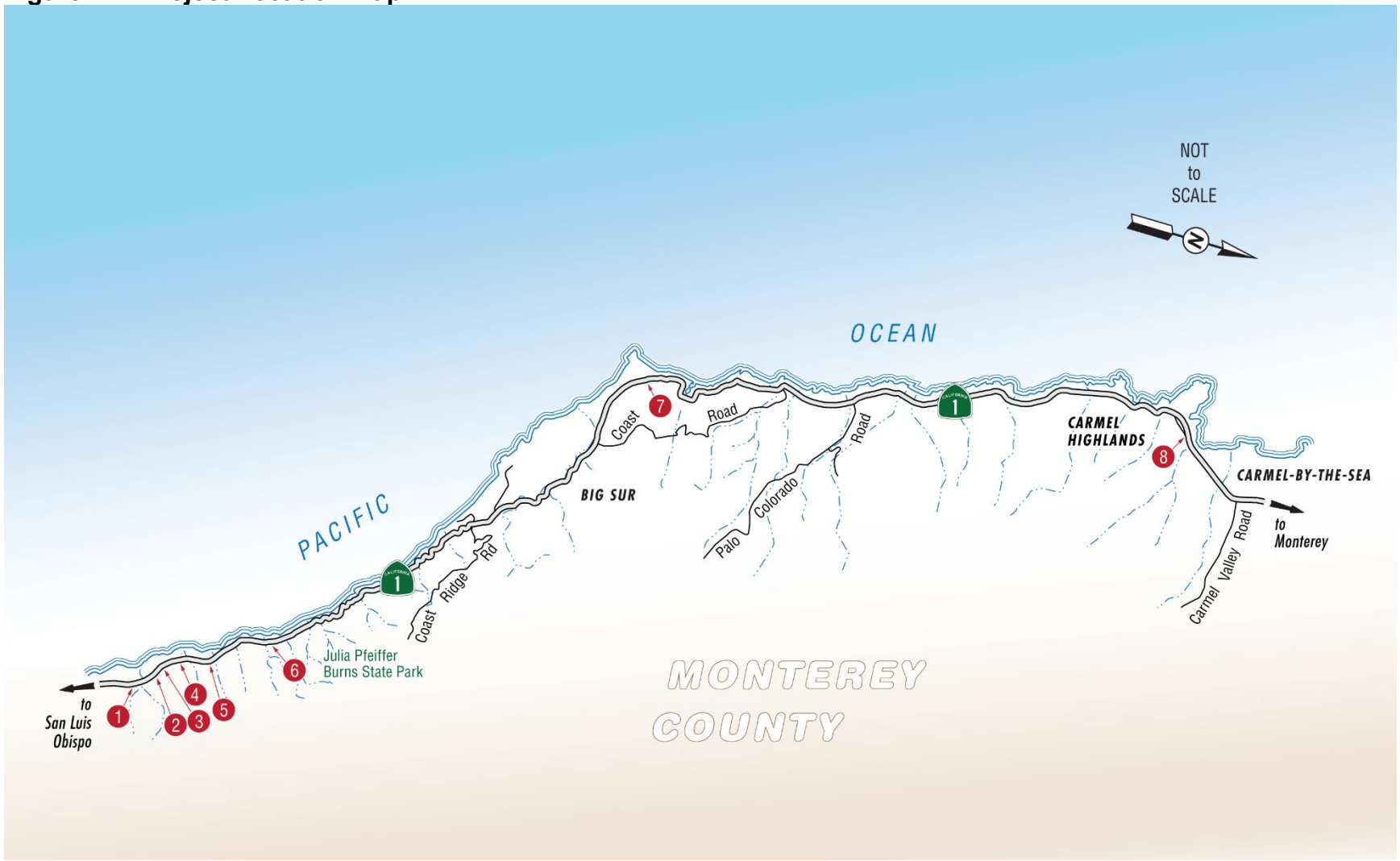


Figure 1-2 Project Location Map



1.4 Project Alternatives

The project development team is analyzing two alternatives—the Build Alternative and the No-Build (No-Action) Alternative.

1.4.1 Build Alternatives

The Build Alternative would rehabilitate drainage systems as recommended by Caltrans Central Region Hydraulics, District 5 Maintenance, and as considered by the project development team as follows:

- Nine drainage systems at eight project locations on State Route 1 from post miles 27.76 to 70.87.

The rehabilitation strategy considered for each drainage system is as follows:

- Use open-cut construction to replace all eight undermined culverts with similar or larger diameter culverts as necessary.
- Replace undermined headwalls and place new headwalls as necessary.
- Place earth filling at the culvert's inlet and outlet as necessary.
- Place rock slope protection at the culvert's inlet and outlet as necessary.
- Use one-way traffic control to facilitate construction.

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 listed later in this chapter under "Standard Measures and Best Management Practices Included in All Build Alternatives."

1.4.2 No-Build (No-Action) Alternative

Under the No-Build Alternative, the nine drainage systems that Caltrans proposes to rehabilitate along State Route 1 would remain in their current condition within the project limits. The work proposed for the project would not be done. The No-Build Alternative would not address the purpose and need of the project. The condition of the culverts and drainage elements would continue to deteriorate, which could compromise and degrade the roadway. Under the No-Build Alternative, routine maintenance activities would continue.

1.5 Standard Measures and Best Management Practices Included in All Build Alternatives

The project would include a list of Caltrans standard measures that are typically used on all Caltrans projects. Caltrans standard measures are considered features of the project and are evaluated as part of the project. Caltrans standard measures are not implemented to address any specific effects, impacts, or circumstances associated with the project but are instead implemented as part of the project's design to address common issues encountered on projects. The measures listed below are related to environmental resources and are applicable to the project. These measures can be found in Caltrans 2018 Standard Specifications document.

- 7-1 Legal Relations and Responsibility to the Public
- 10-4 Water Usage
- 10-5 Dust Control
- 10-6 Watering
- 12-1 Temporary Traffic Control
- 12-3 Temporary Traffic Control Devices
- 12-4 Traffic Control Systems
- 13-1 Water Pollution Control
- 13-2 Water Pollution Control Program
- 13-4 Job Site Management
- 13-6 Temporary Sediment Control
- 13-7 Temporary Tracking Control
- 13-10 Temporary Linear Sediment Barriers
- 14-1 Environmental Stewardship
- 14-2 Cultural Resources
- 14-6 Biological Resources
- 14-7 Paleontological Resources
- 14-8 Noise and Vibration

- 14-9 Air Quality
- 14-10 Solid Waste Disposal and Recycling
- 14-11 Hazardous Waste and Contamination
- 14-12 Other Agency Regulatory Requirements
- 17-2 Clearing and Grubbing
- 18-1 Dust Palliatives
- 20-1 Landscape
- 20-3 Planting
- 20-4 Plant Establishment Work
- 21-2 Erosion Control Work

Additional standard measures would be added to the project as necessary or appropriate.

1.6 Discussion of the NEPA Categorical Exclusion

This document contains information regarding compliance with the California Environmental Quality Act (CEQA) and other state laws and regulations. Separate environmental documentation, supporting a Categorical Exclusion determination, will be prepared in accordance with the National Environmental Policy Act. When needed for clarity, or as required by CEQA, this document may contain references to federal laws and/or regulations (CEQA, for example, requires consideration of adverse effects on species identified as a candidate, sensitive, or special-status species by the U.S. National Marine Fisheries Service and the U.S. Fish and Wildlife Service—that is, species protected by the Federal Endangered Species Act).

1.7 Permits and Approvals Needed

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

Table 1.1 Summary of Required Permits and Approvals

Agency	Permit/Approval	Status
Monterey County	Coastal Development Permit	To be obtained before construction.
California Coastal Commission	Coastal Development Permit	To be obtained before construction.
U.S. Army Corps of Engineers	Section 404 Permit	To be obtained before construction.
Regional Water Quality Control Board	Section 401 Permit	To be obtained before construction.
California Department of Fish and Wildlife	Section 1602 Lake and Streambed Alteration Agreement	To be obtained before construction.
U.S. Fish and Wildlife Service	Programmatic Biological Opinion; California Red-Legged Frog	To be obtained before signing of the final environmental document.
U.S. Fish and Wildlife Service	Programmatic Biological Opinion; Smith's Blue Butterfly	To be obtained before signing of the final environmental document.

Chapter 2 CEQA Evaluation

2.1 CEQA Environmental Checklist

This checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. Potential impact determinations include Significant and Unavoidable Impact, Less Than Significant Impact With Mitigation Incorporated, Less Than Significant Impact, and No Impact. In many cases, background studies performed in connection with a project will indicate that there are no impacts to a particular resource. A “No Impact” answer reflects this determination. The questions in this checklist 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.

“No Impact” determinations in each section are based on the scope, description, and location of the proposed project as well as the appropriate technical report (bound separately in Volume 2), and no further discussion is included in this document.

2.1.1 Aesthetics

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” (California Public Resources Code Section 21001[b]). Considering the information in the Visual Impact Assessment dated January 2022, the following significance determinations have been made:

Except as provided in Public Resources Code Section 21099:

Question—Would the project:	CEQA Significance Determinations for Aesthetics
a) Have a substantial adverse effect on a scenic vista?	**Less Than Significant Impact**

Question—Would the project:	CEQA Significance Determinations for Aesthetics
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	**Less Than Significant Impact**
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	**Less Than Significant Impact**
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	**Less Than Significant Impact**

Affected Environment

State Route 1 in Monterey County is designated as an Official State Scenic Highway, a National Scenic Byway, and an All-American Road. State Route 1 has long been recognized for its scenic qualities, and the state and national scenic designations illustrate the heightened degree of sensitivity concerning the aesthetic character of the highway. Monterey County planning policies emphasize the protection of visual resources along State Route 1 and underscore the concern and sensitivity regarding aesthetic issues along this route. The project is within the Coastal Zone, which emphasizes visual quality preservation. In addition, the Coast Highway Management Plan (Caltrans 2003), a comprehensive planning document developed with extensive community input, includes a section on identifying and preserving the scenic qualities of the route. The local communities have a history of active participation in projects involving potential changes to the visual environment.

State Route 1 in the project vicinity is a two-lane conventional highway that serves local and interregional traffic, primarily including the usage of local recreational facilities, local commuters, and limited commercial users. Viewers along State Route 1 are primarily in motor vehicles and are involved in a variety of activities, including recreation and tourism, local commuting, and limited service and commercial travel. Bicycle touring is also common within the project area. Pedestrian activity is common at the many formal and informal pullouts and vista points along the route. Non-vehicular activity is also common in the Big Sur village area. The viewer groups most affected by

the project are those that travel the highway and off-roadway viewers near the project. Viewers through the project areas generally have high expectations regarding scenic quality, and the state and federal scenic designations further heighten viewers' anticipation of scenic resources along this route. Roadside views along State Route 1 within the project area are mostly limited to the foreground and middle ground on the inland side of the road and mid-to-long-distance views toward the ocean.

The project passes through several landscape types along its length. The landform of the region is generally characterized by steep slopes and ravines forming a series of ridgelines and valleys as the mountains rise from the Pacific Ocean. The topography supports a mostly curvilinear—consisting of or bounded by curved lines—roadway, which produces views for the highway traveler ranging from close-in views of the inland slopes to mid-range coastline views and wide-open panoramas.

Throughout the region, vegetation is a primary component of visual character. State Route 1 passes through a variety of plant communities and vegetative types along the Big Sur Coast. In general, creeks and drainages hold stands of sycamore, redwood, cottonwood, and willows. Oak and other native trees are found mostly at the upper elevations along with coastal chaparral. Although native plant communities are the most visually prevalent, exotic plants, such as pampas grass, have generally been associated with the scattered residential and commercial development along the highway through the Big Sur village area.

Along State Route 1 through the Big Sur coast, the primary developments are the roadway itself and related features, occasional roadside home sites, and tourist-oriented businesses. Along the southern end of the project limits, developments have a low to moderate visual presence in the landscape. In general, the scale and frequency of structures and other built amenities throughout the area are such that although visible, they don’t dominate the views when seen in the context of the overall landscape. The northern section of the project limits is the most developed. Residential uses are the primary development, although some tourist-oriented businesses are part of the view. Overhead utilities and roadside signage are visible elements along the route. Due to topography throughout much of the region, cut slopes are associated with the highway facility and can often be seen from the road. Components of the existing culvert system can be seen at numerous locations along the route.

Environmental Consequences

Scenic vistas throughout the project area primarily include expansive mid-to-distant views of the Pacific Ocean, the rocky shoreline, dramatic topography and hillsides, native vegetative patterns, and undeveloped landscapes. At various locations, the project would cause vegetation removal, soil disturbance, placement of new concrete walls and other components, engineered rock masses, on-surface pipes, and a connection apparatus.

Many of these project features would be highly visible from State Route 1 and/or roadside pullouts. The existing scenic vistas in these areas would be noticed due to the disruption of vegetative patterns, scarring of the land, and newly built elements that visually conflict with the natural scenery. The primary cause for the effect on the scenic vistas would be the color contrast between project elements, such as new down drains, rock slope protection, disturbed earth, and the respective nearby ground plane. Measures specifically addressing the visual contrast issue associated with this project would minimize potential effects on the scenic vista.

As previously mentioned, the entirety of the project is within an Officially Designated State Scenic Highway. Scenic resources associated with the viewing experience throughout the project area include expansive views of the Pacific Ocean, the rocky shoreline, dramatic topography and hillsides, native vegetative patterns, and undeveloped landscapes. The project would not block ocean vistas; however, other coastal scenic resources, such as views of native vegetation and undisturbed hillsides, would have a minor reduction because of the project. Measures specifically addressing this issue would minimize the noticeability of the project and reduce its potential effect on the views of native vegetation.

At several work locations, the project would require native vegetation removal, excavation and earthwork, construction of new concrete headwalls and other features, engineered rock placements, and on-surface pipes and connectors. In some situations, due mostly to topography and view angle, some project features would not be seen from public viewpoints. However, at most locations, project components would be at least moderately visible from State Route 1 and/or roadside pullouts nearby.

The project has the potential to result in noticeable changes to the existing visual character at various project locations. Similar to the visual effects described for scenic vistas, at various locations, the visual character would undergo a minor reduction due to the disruption of vegetative patterns, scarring of the land, and newly built elements that visually conflict with the natural scenery. In addition, these newly built elements would increase the perception of “visual clutter” along the Big Sur corridor and, as such, would not support the aesthetic values expressed in the Coast Highway Management Plan and other coastal planning documents.

In most instances, the noticeability of change would be increased by the visual contrast between the color and reflectivity of the new project elements and the nearby ground cover. Measures to specifically address this visual contrast issue, however, would minimize the noticeability of the individual project elements and reduce its potential effect on the existing visual character.

Avoidance, Minimization, and/or Mitigation Measures

The following measures would avoid or minimize impacts on the visual environment.

VIS-1: Preserve as much existing vegetation as possible. Prescriptive clearing and grubbing and grading techniques that save the most existing vegetation should be used.

VIS-2: 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-3: Following construction, regrade and recontour any new construction access roads, staging areas, and other temporary uses as necessary to match the surrounding natural topography along State Route 1, avoiding unnatural-appearing remnant landforms.

VIS-4: All metal components related to visible down drains and inlets, including but not limited to corrugated metal pipes, flared end section connectors, anchorage systems, and cable barriers, should be darkened or colored to blend with the surroundings and reduce reflectivity. The Caltrans District 5 Landscape Architecture Program shall determine the specific color.

VIS-5: All concrete components related to headwalls, drain inlet aprons, flared end sections, and other concrete elements should be colored to blend with the surroundings and reduce reflectivity. The Caltrans District 5 Landscape Architecture Program shall determine the specific color.

VIS-6: The posts and beams of all new or replaced guardrails should be colored and/or darkened to blend with the surroundings and reduce reflectivity. The Caltrans District 5 Landscape Architecture Program shall determine the color.

VIS-7: All rock slope protection should be placed in natural-appearing shapes rather than geometric patterns to the greatest extent possible to reduce its engineered appearance.

VIS-8: Following the placement of rock slope protection, the rock should be colored to blend with the surroundings and reduce reflectivity. The Caltrans District 5 Landscape Architecture Program shall determine the specific color.

2.1.2 Agriculture and Forest Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California 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.

The project is not located near any prime farmland, unique farmland, or farmland of statewide importance and would, therefore, not convert any farmland under these designations to nonagricultural use or conflict with existing zoning for agricultural use or a Williamson Act contract.

Considering this information, the following significance determinations have been made.

Question—Would the project:	**CEQA Significance Determinations for Agriculture and Forest Resources**
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?	**No Impact**
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	**No Impact**
c) Conflict with existing zoning, 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))?	**No Impact**
d) Result in the loss of forest land or conversion of forest land to non-forest use?	**No Impact**
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to nonagricultural use or conversion of forest land to non-forest use?	**No Impact**

2.1.3 Air Quality

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

Considering this information and the information in the Air Quality, Noise, and Water Quality Technical Assessment Memorandum dated August 2021, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Air Quality
a) Conflict with or obstruct implementation of the applicable air quality plan?	**No Impact**
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?	**No Impact**
c) Expose sensitive receptors to substantial pollutant concentrations?	**Less Than Significant Impact**
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	**No Impact**

Affected Environment

The project is within the North Central Coast Air Basin. The Monterey Bay Air Resources District regulates air quality in the basin. The basin is considered in attainment for all federal ambient air quality standards and non-attainment transitional for state ambient air quality standards for ozone and non-attainment for airborne particulate matter less than 10 microns in diameter (Particulate Matter 10).

Environmental Consequences

This project would not increase capacity, increase the number of lanes, or change the alignment of the highway significantly. There will be no difference in long-term air emissions with or without the proposed project. However, there will be a temporary increase in air emissions and fugitive dust during construction. The use of heavy equipment during project construction can generate fugitive dust that may have substantial temporary impacts on local air quality if large amounts of excavation, soil transport, and subsequent fill operations are necessary. Minor earthwork would be required for the

improvements associated with this project. Minimal dust generation would be expected from the earthwork component of this project.

Due to the use of standard construction dust and emission minimization practices and procedures (Caltrans Standard Specifications Section 14-9.02 Air Pollution Control), it is anticipated that project emissions of particulate matter and equipment emissions will be well within the daily thresholds of the Monterey Bay Air Resources District. Per Caltrans Standard Specifications Section 14-9.02 Air Pollution Control, the contractor is responsible for complying with all local air pollution control rules, regulations, ordinances, and statutes that apply to the work performed under the contract, including those provided in Government Code Section 11017 (Public Contract Code Section 10231).

Construction emissions are further calculated and discussed in the Greenhouse Gas section (Section 2.1.8).

Avoidance, Minimization, and/or Mitigation Measures

The following measure would avoid or minimize impacts on air quality.

AIR-1: To minimize dust emissions from the project, Section 14-9.02 (Air Pollution Control) of the 2018 Standard Specifications states that the contractor is responsible for complying with all local air pollution control rules, regulations, ordinances, and statutes that apply to work performed under the contract, including those provided in Government Code Section 11017 (Public Contract Code Section 10231). By incorporating appropriate engineering design and stormwater Best Management Practices during construction, minimal, short-term air quality impacts are expected.

2.1.4 Biological Resources

Considering the information in the Natural Environment Study dated June 2022, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Biological Resources
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 Atmospheric Administration Fisheries?	**Less Than Significant Impact With Mitigation Incorporated**

Question—Would the project:	CEQA Significance Determinations for Biological Resources
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	**Less Than Significant Impact**
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	**Less Than Significant Impact With Mitigation Incorporated**
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?	**No Impact**
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	**No Impact**
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?	**No Impact**

Affected Environment

The Area of Potential Effect, identified by the Caltrans Design Engineer, includes the areas of construction, staging, stockpiling, detours, and channel modifications. From the Area of Potential Effect, the Biological Study Area was delineated. The Biological Study Area is defined as the area that may be directly, indirectly, temporarily, or permanently impacted by construction and construction-related activities. The Biological Study Area occurs on State Route 1, predominately in narrow strips between the coast ranges to the east and descending to the Pacific Ocean immediately to the west. The size of the Biological Study Area is collectively spread across eight distinct locations. The entirety of the project limits is within the coastal zone (see Appendix B for the coastal policy analysis completed for this project).

The biological resources that have the potential to be affected by the proposed project are discussed in more detail below.

Natural Communities and Habitats of Concern

Central Lucian Coastal Scrub: The Central (Lucian) Coastal Scrub best describes the dominant vegetation community present in the Biological Study Area at several of the project locations. Dominant species in this community include California sagebrush, poison oak, and seaside golden yarrow. This community is often on exposed, south-facing slopes with shallow, rocky soils. It is common on the ocean side of the Santa Lucia Range between Monterey and Point Conception.

Kikuyu Grass Herbaceous Seminatural Alliance: At several project locations, small mats of kikuyu grass are growing in the Biological Study Area. Kikuyu grass is often the dominant species within the alliance, with species such as silver lupine, sweet fennel, California sage, and coast morning glory also being present in the herbaceous layer. The alliance is typical of steep coastal cliffs, bluffs, road cuts, coastal dunes, and coastal scrubs. This alliance is found directly along both sides of State Route 1 or along the ruderal/disturbed habitat along the road shoulder.

Sticky Snakeroot Herbaceous Seminatural Alliance: At project location 2 (post mile 29.63), a small, sticky snakeroot patch exists near the culvert outlet. Characteristics of this alliance include greater than 90 percent relative cover of sticky snakeroot in the herbaceous layer. This alliance intermixes with the surrounding Central Lucian Coastal Scrub at the fringes of the alliance. Coast morning glory is also persistent in this herbaceous layer.

Willow Shrublands: The Arroyo Willow Shrubland Alliance (arroyo willow thickets) is present at several project locations and is characterized as Arroyo Willow being greater than 50 percent relative cover in the shrub or tree canopy. This alliance is most similar to Central Coast Riparian Scrub. In this community, arroyo willow is the dominant species in the overstory. Other species present in these communities include species, such as coffeeberry, black sage, seaside woolly sunflower, California sage, and blackberry. At several locations, this community can be found directly next to the culvert inlet and outlet. Because the Biological Study Area is so exposed to wind, most of the arroyo willow in the Biological Study Area is relatively small and compact.

Seaside Woolly Herbaceous Alliance: Patches of seaside woolly sunflowers are present near the culvert inlet and outlet at several locations. Other species present in these communities include poison oak, blackberry, coyote bush, monkey flower, and coast morning glory. This alliance is characterized by a 50 percent relative cover of seaside woolly sunflowers in the herbaceous layer. Eucalyptus Woodlands Seminatural Alliance: At several project locations, a stand of eucalyptus is present along the southbound side of State Route 1. Trees in this stand are mature and offer quality avian habitat. The understory in this alliance is comprised mostly of herbaceous non-natives.

Smooth Horsetail Herbaceous Alliance: At the project location at post mile 54.46, Smooth Horsetail Herbaceous Alliance occurs directly next to the road shoulder of the northbound lane of State Route 1. This alliance is characterized by greater than 50 percent smooth horsetail in the herbaceous layer. Smooth horsetail is present in a singular dense patch, likely due to the impervious nature of the compacted soils on the road shoulder.

Blueblossom Chaparral Shrubland Alliance: At project location 4 (post mile 30.86), blueblossom chaparral occurs on both sides of State Route 1, next to the culvert inlet and outlet. Other species present include coffeeberry and California sage. This alliance is characterized by greater than 50 percent relative cover of blueblossom in the shrub canopy.

Cape Ivy Mats: At project location 6 (post mile 33.87), cape ivy is the sole dominant species in this habitat and does not fit the description of any vegetation alliances. Cape ivy is spread over the entire shrub and herbaceous understory on the west-facing slope on the west side of State Route 1. Other species present in this community are similar to that of central (Lucian) coastal scrub and include blackberry, poison oak, California sage, and French broom.

Annual Non-Native Grassland: This community is found along the northbound side of State Route 1 where it abuts the Caltrans property line. Dominant species include introduced grasses such as rattlesnake grass, slender wild oat, and soft chess brome. Small patches of native shrubs, such as coyote bush, are also present. Other forbs present include yellow sweetclover and poison hemlock.

Wetlands, Other Waters, and Riparian Areas

Wetlands, other waters, and riparian areas that occur along the banks of streams or rivers are resources protected under several laws and regulations, which are regulated by federal, state, and local agencies. Wetlands function to improve water quality, detain stormwater runoff, recharge groundwater, and provide wildlife habitats. Riparian habitat along streams provides cover from predators and shade, helps regulate water temperatures, and supports valuable habitat for a variety of wildlife species.

Potential jurisdictional waters were delineated for the Wetland Assessment of this project.

Potential U.S. Army Corps of Engineers Other Waters were delineated at Location 4 (post mile 30.86), Location 7 (post mile 54.46), and Location 8 (post mile 70.87). Potential U.S. Army Corps of Engineers wetlands were delineated at Location 2 (post mile 29.63), Location 3 (post mile 30.10), and Location 8 (post mile 70.87), where all three wetland indicators were deemed present by Caltrans. The three wetland indicators include hydrophytic vegetation, hydric soils, and/or wetland hydrology. No other federal jurisdictional wetlands were delineated at any of the other locations due to the lack of one or more of the three wetland parameters.

California Department of Fish and Wildlife and Regional Water Quality Control Board jurisdictional areas along with California Coastal Commission single-parameter coastal zone wetlands and environmentally sensitive habitat areas (supporting the presence of at least one of the following: hydrophytic vegetation, hydric soils, or wetland hydrology) were also delineated at five of the eight project locations. Location 1 (post mile 27.76), Location 5 (post mile 31.73), and Location 6 (post mile 33.87) lacked potentially jurisdictional waters. Each of the other proposed culvert locations was determined to fall under either the U.S. Army Corps of Engineers, Regional Water Quality Control Board, California Department of Fish and Wildlife, and/or California Coastal Commission jurisdiction.

Special-Status Plant and Animal Species

The term special-status species refers to plants or animals that are federally or state listed as endangered, threatened, or rare, species that are candidates or proposed for federal or state listing, and species considered special concern species by federal or state agencies. There is potential for 57 special-status plant species and 34 special-status animal species to occur within the Biological Study Area and surrounding area. No special-status plant species were seen during the appropriately timed biological field surveys, but habitat for 25 species was recognized. The presence of two special-status animal species—the California red-legged frog and Smith's Blue Butterfly—was inferred during field surveys, and potential habitat was documented for four additional species.

The special-status plant and animal species that have the potential to be affected by the project are described in greater detail below:

California Red-Legged Frog: The California red-legged frog is a federally threatened species and is considered a Species of Special Concern by the California Department of Fish and Wildlife. The California red-legged frog uses a variety of habitats, including aquatic, riparian, and upland habitats. The California red-legged frog uses both riparian and upland habitats for foraging, shelter cover, migration, and dispersal.

No protocol surveys were conducted for the California red-legged frogs, and the species was not seen during general wildlife surveys. The Biological Study Area, specifically at Location 2 (post mile 29.63) contains suitable aquatic breeding, aquatic nonbreeding, upland, and dispersal habitats. Due to the presence of critical habitat for the California red-legged frog between project locations, and relatively nearby known occurrences, the presence of the species within the project's Biological Study Area is inferred.

The Biological Study Area for Project Location 7 (post mile 54.46) falls entirely within the federally designated California red-legged frog Critical Habitat Unit Monterey County 3, "Big Sur Coast." This unit is about 27,542 acres, from Little Sur River south to McWay Canyon. This unit includes

locations in and around the Big Sur River drainage and includes the following watersheds: Point Sur, Big Sur River, Ventana Creek, Sycamore Canyon, and Partington Creek. This unit is considered essential for the conservation of the species because it contains the largest coastal habitat within the Monterey Bay region and provides connectivity to more interior units farther north. This unit contains permanent and ephemeral aquatic habitats for breeding and nonbreeding and upland and dispersal habitats.

Smith's Blue Butterfly: The Smith's blue butterfly is a federally endangered taxon. Host plants for Smith's blue butterflies include coast buckwheat and seacliff buckwheat. At peak flowering of their host buckwheat plants, adult Smith's blue butterflies emerge from their pupal cases for a single flight season extending from mid-June to early September. All life stages are dependent on the host plants; adults feed on the nectar and deposit eggs on the flowers, and larvae feed on the flowers and seeds and pupate on or beneath the plants.

Botanical surveys revealed the presence of seacliff buckwheat, which is a host plant for Smith's blue butterfly, within the Biological Study Area at locations 1, 4, and 7. All of these individuals are growing on steep, rocky, unstable west-facing slopes along the northbound lanes of State Route 1. Because of the substrate they are attached to, most are diminutive—extremely or unusually small—in size and offer no duff or collection of material beneath the plants. The hillsides these individuals are attached to subject them to a high amount of disturbance from wind exposure and erosion. Individuals are interspersed within a hillside that is not highly vegetated and together does not amount to a stand of seacliff buckwheat because of their sporadic distribution. Outside of the individuals observed, surrounding hillsides appeared to contain few to no additional seacliff buckwheat.

Even with the relatively low-quality habitat of seacliff buckwheat, the presence of Smith's blue butterfly was assumed.

Invasive Species

Executive Order 13112 defines invasive species as any species, including its seeds, eggs, spores, or other biological material capable of propagating that species that is not native to that ecosystem and whose introduction does or is likely to cause economic or environmental harm or harm to human health.

Biological surveys identified 38 plant species in the Biological Study Area that are listed as invasive by the online California Invasive Plant Council Database. Of these identified plant species, seven were rated as high invasiveness, 17 were rated as moderate invasiveness, and 14 were observed with an invasiveness rating of "limited."

Environmental Consequences

Natural Communities and Habitats of Concern

Impacts on natural communities and habitats within the project's Biological Study Area have been quantified based on ground disturbance, vegetation disturbance, and removal. These impact areas were overlain with the mapping of habitats and jurisdictional areas. The maximum amount of potential disturbance due to construction, resulting in both permanent and temporary impacts, has been assumed in the Biological Study Area. The disturbance would occur at proposed work areas, areas of cut and fill, staging locations, access locations, and more. These estimates of permanent and temporary impacts on natural communities and habitats of concern are presented in Table 2.1.

Permanent impacts would result predominately from the installation of rock slope protection and new headwalls at relevant locations. Temporary impacts would occur from grading construction access areas and excavations for cut and cover. Sources of impacts would likely include but would not be limited to trucks, cranes, bulldozers, backhoes, forklifts, compactors, clamshells, excavators, hoe rams, jackhammers, compressors, scrapers, paver grinders, pavers, and worker foot traffic. Equipment would be temporarily staged in existing roadside turnouts, the edges of State Route 1, or in other already disturbed areas.

Wetlands, Other Waters, and Riparian Areas

Estimates of permanent and temporary impacts on potential jurisdictional wetlands, other waters, riparian habitats, and other upland habitats are presented in Table 2.1. These impacts were determined by overlaying the project's Biological Study Area with the jurisdictional determination mapping prepared by Caltrans for the Jurisdictional Waters Assessment.

The total estimated temporary impacts to the U.S. Army Corps of Engineers' jurisdictional other waters are 187 square feet (0.0043 acre). The total estimated temporary impacts to the U.S. Army Corps of Engineers' jurisdictional wetlands are 697 square feet (0.016 acre). The total estimated temporary impacts to Regional Water Quality Control Board jurisdictional areas are 1,093 square feet (0.0251 acre). The total estimated temporary impacts to California Department of Fish and Wildlife jurisdictional areas are 396 square feet (0.0091 acre). The total estimated permanent impacts to California Coastal Commission coastal zone wetlands and environmentally sensitive habitat areas are 17 square feet (0.0004 acre) and 3,498 square feet (0.0803 acre) of temporary impacts.

Permanent impacts to coastal jurisdictional areas are presented as net impacts between all of the project locations. Permanent impacts to coastal jurisdictional areas would occur as the result of expanded or new placement of rock slope protection or a headwall. Temporary impacts to jurisdictional

areas would occur as the result of vegetation trimming, excavation, equipment access, and foot traffic.

Table 2.1 Summary of Potential Impacts to Jurisdictional Riparian Areas and Natural Communities and Habitats of Concern

Natural Community/Habitat	Permanent Impacts (Square Feet/Acres)	Temporary Impacts (Square Feet/Acres)
Ruderal/Disturbed Areas	None	15,725 square feet/0.361 acre
Non-Native Annual Grassland Areas	None	784 square feet/0.018 acre
Disturbed Hillside	174 square feet/0.004 acre	21,867 square feet/0.502 acre
Central Lucian Coastal Scrub	87 square feet/0.002 acre	13,852 square feet/0.318 acre
Kikuyu Grass Herbaceous Seminatural Alliance	None	4,966 square feet/0.114 acre
Sticky Snakeroot Herbaceous Seminatural Alliance	87.12 square feet/0.002 acre	784 square feet/0.018 acre
Arroyo Willow Shrubland Alliance	17 square feet/0.0004 acre	2,134 square feet/0.049 acre
Seaside Woolly Herbaceous Alliance	87 square feet/0.002 acre	4,269 square feet/0.098 acre
Eucalyptus Woodland Natural Alliance	None	6,186 square feet/0.142 acre
Blueblossom Chapparal Shrubland Alliance	None	5,401 square feet/0.124 acre
Cape Ivy Mats	None	4,094 square feet/0.094 acre
Smooth Horsetail Herbaceous Alliance	None	1,724 square feet/0.004 acre
U.S. Army Corps of Engineers Jurisdictional Other Waters	None	187 square feet/0.0043 acre
U.S. Army Corps of Engineers Jurisdictional Wetlands	None	697 square feet/0.016 acre
Regional Water Quality Control Board Jurisdictional Areas	None	1,093 square feet/0.0251 acre

Natural Community/Habitat	Permanent Impacts (Square Feet/Acres)	Temporary Impacts (Square Feet/Acres)
California Department of Fish and Wildlife Jurisdictional Areas	None	396 square feet/0.0091 acre
California Coastal Commission Jurisdictional Areas	17 square feet/0.0004 acre	3,498 square feet/0.0803 acre
California Red-Legged Frog Critical Habitat	105 square feet/0.0024 acre	4,574 square feet/0.105 acre

Special-Status Plant and Animal Species

Because of a lack of suitable habitat and/or no observations during appropriately timed floristic surveys, the Federally Endangered Section 7 effects determination is that the proposed project would not affect any special-status plant species.

California red-legged frog and Critical Habitat: The proposed project could result in the injury or mortality of California red-legged frogs if present during construction activities at Location 2 (post mile 29.63). A potential need to capture and relocate California red-legged frogs could subject these animals to stresses that could result in adverse effects. Injury or mortality could occur via accidental crushing by construction equipment or even worker foot traffic. Erosion and sedimentation could occur, which could directly or indirectly affect water quality. Construction activities are expected to result in a temporary loss of aquatic habitat for the California red-legged frog, though the extent of this is estimated to be minor.

The Federal Endangered Species Act Section 7 effects determination is that the proposed project may affect and is likely to adversely affect the California red-legged frog. The basis for this determination is that the presence of the California red-legged frog has been inferred, and there would be a low but possible potential for take of the species during any dewatering activities and construction.

The Federal Endangered Species Act Section 7 effects determination is that the proposed project may also affect and is likely to adversely affect the California red-legged frog critical habitat. At Location 7 (post mile 54.46), it is expected that a very small amount (0.105 acre) of California red-legged frog critical habitat would be temporarily impacted, and an even smaller amount (0.0024 acre) permanently impacted. While the proposed project could temporarily disrupt upland habitat for California red-legged frogs at this location, the extent and effects of this are estimated to be minor and restricted to a single construction season. Location 7 does not convey enough water to support aquatic habitat for the California red-legged frog and encountering individuals is not expected.

Smith's Blue Butterfly and Critical Habitat: All of the seacliff buckwheat (host plant for the Smith's blue butterfly) individuals identified within the project area are within the 10-foot maintenance buffer described in the Programmatic Biological Opinion for Smith's blue butterfly between Caltrans and the U.S. Fish and Wildlife Service. Due to their proximity to disturbance and maintenance of State Route 1, if these individuals were to be impacted, they would be relocated along with any collectible duff material to nearby seacliff buckwheat stands out of harm's way as described in the Programmatic Biological Opinion. It is expected, at this time, that due to the steep hillsides the individuals are now present on, no impacts would occur to these seacliff buckwheats. Individuals will be flagged for avoidance, and construction crews will be made aware of their presence and avoidance needs.

Based on the possibility that these identified seacliff buckwheats may need to be relocated or additional seacliff buckwheats are identified during later surveys, the effects determination is the proposed project may affect and is likely to affect Smith's blue butterfly.

Invasive Species

Ground disturbance and other activities related to construction could potentially spread or introduce invasive species within the Biological Study Area. The distribution of the most invasive plant species is mostly sparsely scattered throughout the Biological Study Area and most common in the ruderal and disturbed areas along the edges of State Route 1.

The spread of invasive species would be managed with the implementation of the avoidance and minimization measures listed below.

Avoidance, Minimization, and/or Mitigation Measures

The measures listed below would reduce potential impacts on biological resources. Mitigation measures are labeled as such, and the remaining measures are avoidance or minimization measures.

The measures have been organized by the primary resource or species they are designed to protect but may apply to several biological resources.

It should also be noted that the Water Pollution Control Program and many of the Best Management Practices and standard specifications outlined in Section 1.6 would avoid and minimize impacts on biological resources.

California Red-Legged Frog and Critical Habitat

Along with the measures below, it should also be noted that Mitigation Measure BIO-15, discussed later under Wetlands, Other Waters, and Riparian Areas, would also provide mitigation for California red-legged frogs and their critical habitat.

BIO-1: Applicable measures from the Programmatic Biological Opinion between Caltrans and the U.S. Fish and Wildlife Service for California red-legged frog shall be implemented. The Programmatic Biological Opinion contains an extensive list of measures for each phase of the construction period. Some of the notable measures are summarized below:

- Only U.S. Fish and Wildlife Service-approved biologists shall participate in activities associated with the capture, handling, and monitoring of California red-legged frogs.
- Ground disturbance shall not begin until written approval is received from the U.S. Fish and Wildlife Service that the biologist is qualified to conduct the work.
- Preconstruction surveys must be completed 48 hours before any construction work starts. The surveys shall include identification and appropriate treatment and relocation of California red-legged frogs.
- Biologists to conduct worker environmental awareness training for construction personnel.
- Biological monitor shall be onsite until all disturbance of the habitat area is completed.
- Minimize the project footprint and locate access routes outside of potential habitat areas.
- Follow appropriate Caltrans Standard Specifications and Best Management Practices relevant to working near waterways, refueling, and trash storage.
- Caltrans shall attempt to schedule work for times of the year when impacts to the California red-legged frog would be minimal.
- Unless approved by the U.S. Fish and Wildlife Service, water shall not be impounded in a manner that may attract California red-legged frogs.
- A U.S. Fish and Wildlife Service-approved biologist shall permanently remove any individuals of exotic species, such as bullfrogs.
- The fieldwork code of practice developed by the Declining Amphibian Task Force shall be followed at all times to prevent the introduction of diseases.
- Restore the site to natural contours and revegetate it with native plants suitable for the habitats within the project area.
- Avoid using herbicides and follow appropriate protocols if herbicides must be used.

Mitigation Measure BIO-2: Temporary impacts to California red-legged frog habitat will be restored at a proposed 1-to-1 ratio (acreage), and habitat conditions will be enhanced with native plantings.

Smith's Blue Butterfly

BIO-3: Applicable measures from the Programmatic Biological Opinion between Caltrans and the U.S. Fish and Wildlife Service for the Smith's Blue Butterfly shall be implemented. The Programmatic Biological Opinion contains an extensive list of measures for each phase of the construction period. Some of the notable measures are summarized below:

- Caltrans will ensure that all construction activities follow well-defined procedures to avoid the effects on the Smith's blue butterfly.
- Avoid using herbicides and follow appropriate protocols if herbicides must be used.
- 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 of its life stages and the handling of buckwheat plants.
- Caltrans will ensure that ground disturbance for maintenance or project activities will not begin within stands of buckwheat until a U.S. Fish and Wildlife Service-approved biologist is on site.
- U.S. Fish and Wildlife Service-approved biologists will verify that the proposed work activity within stands of buckwheat meets all criteria established for use of this biological opinion.
- For maintenance work or project activity within stands of buckwheat, 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 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.
- A biological monitor shall be onsite until all disturbance of the habitat area is completed.
- Restore the site to natural contours and revegetate it with native plants suitable for the habitats within the project area.
- Minimize the project footprint and locate access routes outside of any potential habitat areas.
- 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. Weed-free hay and

straw bales would be used for erosion control measures when they become available.

Mitigation Measure BIO-4: In the event of impacts to seacliff buckwheat removal outside of the maintenance buffer, buckwheat shall be replanted from seed or individual seedlings at the discretion of a U.S. Fish and Wildlife Service-approved biologist. If seedlings are used, replace them at a 2-to-1 ratio. The establishment is defined as survival to the end of a five-year monitoring period. If buckwheat is replanted from seed, the total area occupied by buckwheat at the end of the five-year monitoring period will be the same as the area of buckwheat plants removed (1-to-1 replacement ratio by area).

Invasive Species

BIO-5: Only clean fill shall be imported. When practicable, invasive exotic plants in the project site shall be removed and properly disposed of. All vegetation removed from the construction site shall be taken to a landfill to prevent the spread of invasive species. If the soil from weedy areas must be removed offsite, the top 6 inches containing the seed layer in areas with weedy species shall be disposed of at a landfill.

BIO-6: Invasive species listed in the California Invasive Plant Council's Invasive Plant Inventory shall not be included in the Caltrans erosion control seed mix, erosion control plans, or planting plans.

BIO-7: The contract specifications for permanent erosion control will require using regionally appropriate California native forb and grass species that occur in the same general geographic area as the project site.

BIO-8: Mulches used on the project will be from source materials that will not introduce exotic species.

Wetlands, Other Waters, and Riparian Areas

A variety of avoidance and minimization measures will be implemented for potential impacts to jurisdictional areas resulting from the project:

BIO-9: Before construction, Caltrans shall obtain a Section 404 Nationwide Permit from the U.S. Army Corps of Engineers, a Section 401 Water Quality Certification from the Regional Water Quality Control Board, a Section 1602 Streambed Alteration Agreement from California Department of Fish and Wildlife, and a Coastal Development Permit (or Waiver) from the California Coastal Commission.

BIO-10: Before construction, Caltrans shall prepare a Mitigation and Monitoring Plan to mitigate impacts to vegetation and natural habitats. The Mitigation Monitoring Plan shall be consistent with federal and state regulatory requirements and will be amended with any regulatory permit conditions, as

required. Caltrans shall implement the Mitigation Monitoring Plan as necessary during construction and immediately following project completion.

BIO-11: Before any ground-disturbing activities, Environmentally Sensitive Areas fencing shall be installed around jurisdictional waters, coastal zone Environmentally Sensitive Habitat Areas, and the dripline of trees to be protected within project limits. Caltrans-defined Environmentally Sensitive Areas shall be noted on design plans and delineated in the field before the start of construction activities.

BIO-12: During construction, all project-related hazardous materials spills within the project site shall be cleaned up immediately. Readily accessible spill prevention and cleanup materials shall be kept by the contractor onsite at all times during construction.

BIO-13: During construction, erosion control measures shall be implemented. Fiber rolls and barriers shall be installed as needed between the project site and jurisdictional other waters, wetlands, and riparian habitats. At a minimum, erosion controls shall be maintained by the contractor daily throughout the construction period.

BIO-14: During construction, the cleaning and refueling of equipment and vehicles shall occur only within a designated staging area. This area shall either be a minimum of 100 feet from aquatic areas or, if the area is less than 100 feet from aquatic areas, the area must be surrounded by barriers (for example, fiber rolls or equivalent). The staging areas shall conform to Best Management Practices applicable to attaining zero discharge of stormwater runoff. At a minimum, all equipment and vehicles shall be checked and maintained by the contractor daily to ensure proper operation and avoid potential leaks or spills.

Mitigation Measure BIO-15: The goal of compensatory mitigation is to prevent a net loss of wetlands or another aquatic resource acreage, function, and value. Several types of compensatory mitigation are available to offset impacts on the waters of the U.S., including the creation, restoration, enhancement, and preservation of either onsite or offsite wetlands and/or other waters.

Onsite restoration and reestablishment are proposed at a 1-to-1 ratio (acreage) for temporary impacts and a 3-to-1 ratio (acreage) for permanent impacts.

Revegetation efforts will be detailed in Caltrans' Landscape Architecture Plans and/or Erosion Control Plans and the final Mitigation Monitoring Plan. The Mitigation Monitoring Plan will be developed in coordination with a Caltrans District 5 biologist and will include specifications to ensure the reestablishment of natural habitats impacted. The final Mitigation Monitoring Plan will detail mitigation commitments and be consistent with standards and mitigation requirements from the applicable regulatory agencies. The

Mitigation Monitoring Plan will be prepared when full construction plans are prepared and will be finalized through the permit review process with regulatory agencies. It is expected that restoration efforts will be onsite and in kind and consist of the same native species impacted and other associated native species known to occur within the project limits. Table 2.2 summarizes the expected types of mitigation at each project location.

Table 2.2 Summary of Mitigation

Project Location	Mitigation Anticipated
Location 1 at Post Mile 27.76	No jurisdictional waters are present, and no compensatory mitigation is proposed. Upland habitats impacted to accommodate temporary access will be restored with relevant vegetation and will not require wetland plant species to be restored.
Location 2 at Post Mile 29.63	Contains a three-parameter wetland in a coastal seep, along with a coastal environmentally sensitive habitat area (willow shrubland) that will be subject to temporary impacts for culvert replacement work. Regeneration/restoration/reestablishment of wetland species will occur in kind.
Location 3 at Post Mile 30.10	Contains a three-parameter wetland (and coastal environmentally sensitive habitat area) in a coastal seep that will be subject to temporary impacts. Regeneration/restoration/reestablishment of wetland species will occur in kind.
Location 4 at Post Mile 30.86	Contains a channel that has an *ordinary high water mark* and a narrow strip of nearby riparian vegetation. Temporary impacts will occur to the channel up and downstream of the culvert. Temporary impacts to the channel and riparian zone will be replaced in kind.
Location 5 at Post Mile 31.73	No jurisdictional waters are present, and no compensatory mitigation is proposed. Upland habitats impacted to accommodate temporary access will be restored with relevant vegetation and will not require wetland plant species to be restored.
Location 6 at Post Mile 33.87	No jurisdictional waters are present, and no compensatory mitigation is proposed. Upland habitats impacted to accommodate temporary access will be restored with relevant vegetation and will not require wetland plant species to be restored.
Location 7 at Post Mile 54.46	Contains jurisdictional other waters as well as a coastal environmentally sensitive habitat area (willow shrubland). Permanent impacts will be mitigated at a 3-to-1 ratio, and temporary impacts will be replanted and replaced in kind.
Location 8 at Post Mile 70.87	Contains jurisdictional other waters as well as a three-parameter wetland. All impacts will be temporary and replaced in kind.

Natural Communities and Habitats of Concern

BIO-16: Environmentally Sensitive Area fencing will be installed along the maximum disturbance limits to minimize disturbance to habitats/vegetation. Caltrans Standard Special Provisions for installing Environmentally Sensitive Area fencing will be included in the construction contract and will be identified in the project plans. Before the start of construction activities, environmentally sensitive areas will be delineated in the field and will be approved by the Caltrans environmental division.

BIO-17: Areas of temporary disturbance to natural habitats will be stabilized and replanted; these include areas supporting central (Lucian) coastal scrub, willow woodland, seaside woolly sunflower patches, horsetail meadow, and blue blossom chaparral.

2.1.5 Cultural Resources

Considering the information in the Historic Property Survey Report, Historic Resource Evaluation Report, Archaeological Survey Report, and Finding of No Adverse Effect (all dated January 2022), the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Cultural Resources
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	**Less Than Significant Impact**
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	**No Impact**
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	**No Impact**

Affected Environment

Caltrans implemented several methods to support studies and identify the affected environment.

In January 2021, Caltrans sent letters to the Native American Heritage Commission, requesting a search of the Sacred Lands Files and a list of interested Native Americans. In February 2021, the Native American Heritage Commission responded with the negative results of the Sacred Lands Files, along with providing a list of Native Americans who have requested consultation for projects in the area.

Since the CEQA environmental document for this project is a Focused Initial Study, Native American consultation is required under state law Assembly Bill 52 (Public Resources Code 21080.3.1). In February 2021, Caltrans sent letters to the list of individuals provided by the Native American Heritage Commission to initiate consultation under Assembly Bill 52 and Section 106 of the National Historic Preservation Act. The letter described the project and asked if there were any specific concerns about the project area from the Native American community. Caltrans provided additional information to tribes that requested it. No specific concerns were expressed by any of the tribal groups. Consultation is ongoing and will continue through the duration of the project and as requested by any tribal member.

In December 2021, Caltrans sent letters to the Monterey County Historical Society and the Big Sur Historical Society to notify them of the project and inquire whether either society had any special interest in or knowledge of the property. Later that same month, the Big Sur Historical Society responded to Caltrans and had no comments at this time while also requesting to stay on the list for future updates to the project. No responses have been received to date from the Monterey County Historical Society.

Architectural History

The Area of Potential Effect was established as the entire area where project-related activities may cause direct or indirect effects on historic properties. The Carmel-San Simeon Highway Historic District is the only historic property in the project area of potential effect. Because the project occurs within the 75-mile-long Carmel-San Simeon Highway Historic District, the Architectural Area of Potential Effect is made up of the entire historic district.

The Carmel-San Simeon Highway Historic District includes 241 contributing resources, including 234 rustic-style rubble masonry features (158 culvert headwalls, 61 parapet walls, 10 retaining walls, and five fountains), as well as seven concrete arch bridges. The Carmel-San Simeon Highway Historic District was previously determined eligible for the National Register of Historic Places in 1996 (updated in 2006). The Historic Resource Evaluation Report prepared by Caltrans confirmed these previous determinations and that none of the headwalls are individually eligible for listing in the National Register of Historic Places or the California Register of Historical Resources; however, some of the culvert headwalls are contributing resources to the Carmel-San Simeon Highway Historic District.

Based on the previous determinations and the evaluations conducted for the current project, the project includes two contributing resources in the Carmel-San Simeon Highway Historic District, which are two historic headwalls proposed for replacement under this project.

Archaeology

Because the project work would occur only at eight separate locations along State Route 1, the Area of Direct Impact (Archaeological Area of Potential Effect) for each culvert location includes the entire area where project work, including all ground disturbance, will occur. Thus, the project's Area of Direct Impact includes eight separate areas of impact for each of the culverts.

A records search was conducted in Caltrans District 5 Cultural Resources Files and the Caltrans Cultural Resources Database. The searches were conducted within a 0.25-mile radius of the entire project limits, as opposed to just each project location. The records searches and literature reviews identified 12 previously conducted studies within this search radius and confirmed that the entire Area of Direct Impact has been previously studied. No archaeological resources were identified within the Area of Direct Impact from these record searches.

The results of Native American Consultation did not reveal any new or previously recorded cultural or tribal cultural resources in the archaeological Area of Direct Impact. A Caltrans District 5 Archaeologist surveyed the archaeological Area of Direct Impact, i.e., each culvert project location in July 2021. No archaeological resources were identified in the Area of Direct Impact during archaeological surveys. The project is located in steep and eroded gullies of the Big Sur Coast. There are no archaeological or tribal cultural resources within the Area of Direct Impact.

Environmental Consequences

Architectural History

A Finding of No Adverse Effect without Standard Conditions was completed for this project. Caltrans has determined that the undertaking will not constitute an adverse effect on the Carmel-San Simeon Highway Historic District pursuant to Section 106 Programmatic Agreement Stipulation X.B.2. Of the five types of contributing resources included in the Carmel-San Simeon Highway Historic District (concrete arch bridges, masonry fountains, masonry retaining walls, masonry parapet walls, and masonry culvert headwalls), masonry culvert headwalls are the most common and numerous, the smallest in size, the least visible from the highway, and the least aesthetically unique or structurally complex. The headwalls were constructed according to the Division of Highways Standard Specifications, using standard construction practices and materials. Removing two contributing headwalls out of more than 150 contributing headwalls would not diminish the integrity of the Carmel-San Simeon Highway Historic District in a manner or to an extent that would impair the district's ability to convey its historical significance. The Finding of No Adverse Effect prepared by Caltrans includes a discussion of the application of the Criteria of Adverse Effect and concludes that the project does not constitute an adverse effect on historic properties.

Archaeology

Since there are no archaeological or tribal cultural resources within the project's Area of Direct Impact, this project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5. Further, it is not expected that this project would disturb any human remains, including those interred outside of dedicated cemeteries.

State Historic Preservation Officer Consultation

Upon completing cultural resources studies, Caltrans' Cultural Studies Office forwarded all documents to the State Historic Preservation Officer for review in February 2022. The State Historic Preservation Officer issued a concurrence letter to Caltrans on May 4, 2022. The State Historic Preservation Officer concurred with Caltrans' determinations of eligibility and stated that they have no objections to the finding that the project will have no adverse effect on historic properties.

Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures are proposed.

2.1.6 Energy

Caltrans incorporates energy efficiency, conservation, and climate change measures into transportation planning, project development, design, operations, and in maintaining transportation facilities, fleets, buildings, and equipment to minimize the use of fuel supplies and energy sources and reduce greenhouse gas emissions. The project is not capacity increasing, and, therefore, the operation would not increase energy usage.

Energy usage would be required during construction but would be minimized whenever possible through the recycling of materials and implementation of greenhouse gas reduction strategies. Replacing or repairing the culverts is needed to prevent the undermining of the roadway and maintain the safety and reliability of the State Route 1 corridor.

The following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Energy
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?	**No Impact**
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	**No Impact**

2.1.7 Geology and Soils

Considering the information in the Geologic Hazards Report dated May 2022, along with the Paleontology Review Memorandum dated February 2021, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Geology and Soils
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.	**No Impact**
ii) Strong seismic ground shaking?	**No Impact**
iii) Seismic-related ground failure, including liquefaction?	**No Impact**
iv) Landslides?	**Less Than Significant Impact**
b) Result in substantial soil erosion or the loss of topsoil?	**Less Than Significant Impact**
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	**Less Than Significant Impact**
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	**No Impact**
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	**No Impact**
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	**No Impact**

Affected Environment

The entire project limits rest within the middle of the Sur Region of the San Gregorio Fault System, which may be potentially active according to archived documentation on the California Geological Survey's Alquist-Priolo Site Investigation Reports online database and U.S. Geological Survey's online Quaternary Fault and Fold Database of the United States. California Geological Survey records indicate all faults within the project limits are not within an Alquist-Priolo Earthquake Fault Zone or within 1,000 feet of any mapped fault that is Holocene (up to 11,000 years old) or younger. The U.S. Geological Survey's online Interactive Fault Map also shows the entire project limits lie within the Sur Region of the San Gregorio Fault System. The map categorizes the onshore faults as "Late Quaternary" (less than 130,000 years) or "undifferentiated Quaternary" (less than 1.6 million years). Therefore, the structures are not considered susceptible to surface fault rupture hazards per Caltrans standards.

Upon review of geologic maps available on the California Geological Survey's database, all drainage systems in the project limits are situated on colluvium Quaternary landslide deposits overlaying the Franciscan Complex (metagraywacke, shale, and/or mélange of low-grade metamorphic rocks), Cretaceous marine sandstone, and granitic rocks of the Salinian Complex. The overall Franciscan Complex unit is relatively unstable due to a mixture of stronger rocks surrounded or embedded within a weak, finer-grained matrix.

Previous Caltrans preliminary reports for Caltrans projects within the project limits referenced soil boring records, which provided information to suggest that there is no potential for liquefication and lateral spreading in the area where all of the drainage systems are located. The U.S Department of Agriculture's Web Soil Survey data also show the grounds within the project limits to be well-draining and, therefore, no risk of liquefaction where all the drainage systems are located.

The project limits on State Route 1 are predominantly supported by artificial fill per Caltrans' Standard Specifications or bearing by hardened rock. Unified Soil Classification data from the U.S. Department of Agriculture's soil survey database also show the project limits on soils with relatively low expansive clay content. The U.S. Department of Agriculture's Web Soil Survey data also indicate that all drainage systems are on soil that is rated moderate to severe for erosion hazards. Monterey County's online Geologic Hazards Map also rated the entire area along State Route 1 and the project limits as a high risk for erosion.

All the drainage systems along State Route 1 within the project limits are in landslide-prone areas and situated on Quaternary landslide deposits (colluvium), according to the geologic maps on California Geological Survey's database. The Geologic Hazards Map application from Monterey County's Geographic Information Systems Department webpage also identifies the

areas within the project limits to be at risk for landslides. Both seismic and/or heavy rainfall events will also contribute to landslide hazards.

Environmental Consequences

While the project is in an area that is prone to landslides and rated as a high risk for erosion, this project is not expected to further exacerbate these risks. Caltrans Design Engineering and Caltrans Office of Geotechnical Engineering were able to conclude that all eight culvert locations set for replacement could be done with “open cut” construction methods (not trenchless), and therefore issues related to geology and soils are not expected to be an issue.

No unique paleontological resource, site, or unique geologic feature would be destroyed during project construction. Project earthwork would be limited to soils along the existing shoulders that have been previously disturbed, or to geologic units with no paleontological potential or low paleontological potential that are unlikely to contain fossils.

Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures are proposed.

2.1.8 Greenhouse Gas Emissions

Considering the information in the Climate Change Technical Report dated October 2022 and the Air Quality, Greenhouse Gas, Noise, and Water Quality Memorandum dated August 2021, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Greenhouse Gas Emissions
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	**Less Than Significant Impact**
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	**Less Than Significant Impact**

Affected Environment

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.

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 report 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 applicable Metropolitan Planning Organization for the project location is the Association of Monterey Bay Area Governments. The Association of Monterey Bay Area Governments' Regional Transportation Plan/Sustainable Communities Strategy for the project area is the 2045 Metropolitan Transportation Plan/Sustainable Communities Strategy: Moving Forward. Implementation of the Plan and Strategy is expected to achieve a 4 percent per capita reduction by 2020 and a nearly 7 percent per capita reduction by 2035. The proposed project, however, is not included in the Strategy.

The regional transportation planning agency for the proposed project is the Transportation Agency for Monterey County. The Transportation Agency for Monterey County's 2018 Regional Transportation Plan identifies three primary approaches to practicing environmental stewardship:

- Reduce greenhouse gas emissions consistent with the regional targets for greenhouse gas emissions in 2020 and 2035 set by the Association of Monterey Bay Area Governments.

- Avoid or minimize impacts to local, state, and federally defined sensitive areas.

- Conserve farmland resources.

The Conservation and Open Space Element of the Monterey County 2010 General Plan contains numerous goals and policies to reduce greenhouse gas emissions and vehicle miles traveled. Notable goals and policies relevant to transportation projects include:

- Policy OS-10.2: Mass transit, bicycles, pedestrian modes of transportation, and other transportation alternatives to automobiles shall be encouraged.

- Policy OS-10.15: Within 12 months of the adoption of the general plan, the county shall quantify the current and projected (2020) greenhouse gas emissions associated with county operations and adopt a greenhouse gas reduction plan for county operations. The goal of the plan shall be to reduce greenhouse gas emissions associated with county operations by at

least 15 percent less than 2005 emission levels. Potential elements of the county operations greenhouse gas reduction plan shall include, but not be limited to, the following measures:

  - An energy tracking and management system; energy-efficient lighting; lights-out-at-night policy; occupancy sensors; heating, cooling, and ventilation system retrofits; ENERGY STAR appliances; green or reflective roofing; improved water pumping energy efficiency; central irrigation control system; energy-efficient vending machines; preference for recycled materials in purchasing; use of low or zero-emission vehicles and equipment; recycling of construction materials in new county construction; solar roofs;

- Conversion of fleets (as feasible) to:

  - Electric vehicles, ultra-low-emission vehicles, methanol fleet vehicles, liquid propane gas fleet vehicles, or compressed natural gas fleet vehicles.

Environmental Consequences

Operational Emissions

The purpose of the project is to rehabilitate nine existing drainage systems at eight locations in Monterey County that have exceeded their design life and have deteriorated or failed; the project will not increase the vehicle capacity of the roadway. This type of project generally causes minimal or no increase in operational greenhouse gas emissions. Because the project would not increase the number of travel lanes on State Route 1, no increase in vehicle miles traveled would occur. While some greenhouse gas emissions during the construction period would be unavoidable, no increase in operational greenhouse gas emissions is expected.

Construction Emissions

Construction-related emissions would result from material processing and transportation, onsite construction equipment, and traffic delays due to construction. These emissions would be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

The use of long-life pavement, improved traffic management plans, and changes in materials can also help offset emissions produced during construction by allowing longer intervals between maintenance and rehabilitation activities.

Construction is expected to last for about 40 working days. Construction-generated greenhouse gas emissions were quantified based on project-specific construction data using the Caltrans Construction Emissions Tool, which largely models the emissions from construction equipment.

Greenhouse gas emissions would total about 10.33 tons of carbon dioxide equivalents during the estimated 40 days of project construction. Carbon dioxide equivalent is a measure used to compare emissions from various greenhouse gases based on their global warming potential. Calculating the carbon dioxide equivalent includes converting the emissions of other gases to the equivalent amount of carbon dioxide with the same global warming potential and then totaling the emissions together. For this project, the carbon dioxide equivalent calculation considers carbon dioxide and the converted equivalent amounts of methane, nitrous oxide, and hydrofluorocarbons. Note that this estimate is based on assumptions made during the environmental planning phase of the project and is considered a “ballpark” estimate of carbon dioxide equivalent emissions, relying on limited data inputs and default modeling. In addition to construction emissions, it should be noted that traffic delays during construction may result in increased greenhouse gas emissions from vehicles and that the production and processing of construction materials such as concrete would also produce emissions.

All construction contracts include Caltrans Standard Specifications related to air quality. Section 7-1.02A and 7-1.02C, Emissions Reduction, requires contractors to comply with all laws applicable to the project and to certify they are aware of and will comply with all California 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. Additionally, it should be noted that some construction emissions would be offset by fewer maintenance activities. Currently, maintenance needs to visit the site to check on the failed or failing drainage systems. After project construction, there would be longer intervals between maintenance and rehabilitation activities.

While the project will result in greenhouse gas emissions during construction, the project is not expected to increase operational greenhouse gas emissions. The 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 construction greenhouse gas reduction measures, the impact would be less than significant.

Caltrans is firmly committed to implementing measures to help reduce greenhouse gas emissions. These measures are outlined in the following section.

Avoidance, Minimization, and/or Mitigation Measures

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

GHG-1: Limit idling to five minutes for delivery and dump trucks and other diesel-powered equipment (with some exceptions).

GHG-2: Schedule truck trips outside of peak morning and evening commute hours.

GHG-3: For improved fuel efficiency from construction equipment:

- Maintain equipment in proper tune and working condition
- Use the right size equipment for the job
- Use equipment with new technologies

GHG-4: Earthwork balance; reduce the need for transport of earthen materials by balancing cut and fill quantities.

GHG-5: Supplement existing construction environmental training with information on methods to reduce greenhouse gas emissions related to construction.

GHG-6: Recycle existing project features onsite. This may include salvaging rebar from demolished concrete, processing waste to create usable fill, and maximizing the use of recycled materials that meet Caltrans' specifications for incorporation into new work.

2.1.9 Hazards and Hazardous Materials

As outlined in the Hazardous Waste Memorandum dated February 2021, there are no known hazardous waste issues or hazardous materials sites under Government Code Section 65962.5 within the project limits. Aerially deposited leads, naturally occurring asbestos, asbestos-containing materials, lead-containing paints, and yellow traffic stripes will not be issues on this project. Excavation activities would either be well away from the area where aerially deposited leads are typically found or would be covered with a paved surface. Naturally occurring asbestos was not mapped at the culvert locations. The project would not impact structures or facilities to an extent that would warrant a lead compliance plan, require the removal of asbestos-containing materials, or disturb hazardous yellow traffic stripe.

Potential issues related to hazardous waste that may be encountered during project construction include treated wood waste; however, it has been determined that through Caltrans' Best Management Practices, along with Standard Specifications Section 14-11.14, treated wood waste would not create a substantial hazard to the public or environment. More detailed hazardous waste investigations would occur in the project's design phase.

The project is along a rural highway with few public services aside from recreational opportunities. There are no schools or airports within 0.25 mile and 2 miles, respectively, of the project. State Route 1 is listed as a primary

evacuation route in the Carmel Valley Region Evacuation Guide. However, the traffic management plan would account for emergency evacuations, and, therefore, the evacuation plan would not be impaired. This project would not change the fire risk in the area.

Considering this information and the information in the Hazardous Waste Technical Memorandum dated February 2021, the following significance determinations have been made:

Question—Would the project:	**CEQA Significance Determinations for Hazards and Hazardous Materials**
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	**No Impact**
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	**No Impact**
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	**No Impact**
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	**No Impact**
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	**No Impact**
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	**No Impact**
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	**No Impact**

2.1.10 Hydrology and Water Quality

The project has the potential to directly discharge stormwater within the project limits into the Pacific Ocean. The project will involve minor earthwork related to culvert repair and replacement. However, the project will improve the existing degraded culvert condition and hence provide an added water quality benefit for the receiving water body. By incorporating appropriate engineering design and robust water Best Management Practices during construction, minimal short-term water quality impacts are expected. Additionally, the project contractor will prepare a site-specific Water Pollution Control Plan approved by Caltrans. Therefore, the project would not result in significant, long-term impacts on water quality.

The project would not encroach into any 100-year base floodplain. There are no significant risks associated with project implementation. The project does not constitute a significant floodplain encroachment, as defined in the Code of Federal Regulations, Title 23, Section 650.105(q).

Considering the information in the Air Quality, Noise, and Water Quality Technical Assessment Memorandum dated August 2021, along with the Floodplain Evaluation dated March 2022, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Hydrology and Water Quality
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water or groundwater quality?	**No Impact**
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	**No Impact**
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;	**No Impact**

Question—Would the project:	CEQA Significance Determinations for Hydrology and Water Quality
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite;	**No Impact**
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	**No Impact**
(iv) impede or redirect flood flows?	**No Impact**
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	**No Impact**
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	**No Impact**

2.1.11 Land Use and Planning

The project would not change the location, function, or capacity of State Route 1 and would not physically divide an established community. The project would not conflict with the Monterey County General Plan, the Big Sur Land Use Plan, or any other policy or regulation meant to avoid or mitigate an environmental effect. See Appendix C for the coastal policy analysis completed for this project.

Considering this information, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Land Use and Planning
a) Physically divide an established community?	**No Impact**
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	**No Impact**

2.1.12 Mineral Resources

Given that the project is limited to repairing an existing facility, the project would not involve the removal or extraction of mineral resources, and, therefore, there is no potential for the loss of valuable mineral resources.

Considering this information, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Mineral Resources
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	**No Impact**
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?	**No Impact**

2.1.13 Noise

Considering the information in the Air Quality, Greenhouse Gas, Noise, and Water Quality Memorandum dated August 2021, the following significance determinations have been made:

Question—Would the project result in:	CEQA Significance Determinations for Noise
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	**Less Than Significant Impact**
b) Generation of excessive groundborne vibration or groundborne noise levels?	**Less Than Significant Impact**

Question—Would the project result in:	CEQA Significance Determinations for Noise
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 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	**No Impact**

Affected Environment

The project spans about 46 miles along the State Route 1 corridor in Monterey County. All of the project's spot locations are in rural settings with very few scattered residents in the vicinity, except for the project location at post mile 73.12, which is in an urban setting surrounded by residential units.

Environmental Consequences

This project would be considered a Type Three Project since no capacity would be added to the highway, no significant change in the highway profile is expected, and local noise levels are assumed to be the same after project completion as they were before. Long-term noise abatement measures are not expected with this project.

Local noise levels in the vicinity of any given location will inevitably experience a short-term increase due to construction activities. The amount of construction noise will vary with the particular activities associated with each location and the models and types of equipment used by the contractor. Caltrans policy states that normal construction equipment should not emit noise levels greater than 86 A-weighted decibels at 50 feet from the source.

Avoidance, Minimization, and/or Noise Abatement Measures

The following avoidance and minimization measures would further reduce the potential for impacts on local noise levels:

NOISE-1: Notify the public in advance of the construction schedule when construction noise and upcoming construction activities likely to produce an adverse noise environment are expected. This notice shall be given two weeks in advance. A notice should be published in local news media of the dates and duration of the proposed construction activity. The District 5 Public Information Office would post a notice of the proposed construction and potential community impacts after receiving information from the resident engineer.

NOISE-2: Shield loud pieces of stationary construction equipment if complaints are received.

NOISE-3: Locate portable generators, air compressors, and other loud equipment away from sensitive noise receptors as feasible.

NOISE-4: Limit grouping major pieces of equipment operating in one area to the greatest extent feasible.

NOISE-5: Use newer equipment that is quieter and ensure that all equipment items have the manufacturers' recommended noise abatement measures, such as mufflers, engine covers, and engine vibration isolators, intact and operational. Internal combustion engines used for any purpose on or related to the job shall be equipped with a muffler or baffle of a type recommended by the manufacturer.

NOISE-6: Consult district noise staff if complaints are received during the construction process.

The following Caltrans Standard Specification for noise control will also be implemented:

NOISE-7: To minimize impacts on residents' normal nighttime sleep activities, it is recommended that, whenever possible, construction work be done during the day. If nighttime construction is necessary, the noisiest construction activities will be done as early in the evening as possible. Caltrans Standard Specifications Section 14-8.02 Noise Control will be implemented. This standard specification requires the contractor to control and monitor noise resulting from work activities and not to exceed 86 A-weighted decibels maximum sound level at 50 feet from the job site from 9:00 p.m. to 6:00 a.m.

2.1.14 Population and Housing

The project would not change the capacity or function of State Route 1 and would, therefore, not influence population growth. Considering this information, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Population and Housing
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)?	**No Impact**
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	**No Impact**

2.1.15 Public Services

Considering that the project would not trigger the need for new or modified public services, the following significance determinations have been made:

Question:	CEQA Significance Determinations for 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?	**No Impact**
Police protection?	**No Impact**
Schools?	**No Impact**
Parks?	**No Impact**
Other public facilities?	**No Impact**

2.1.16 Recreation

This project would rehabilitate existing drainage systems in Monterey County that have exceeded their design life and have deteriorated or failed and would not change the capacity or function of the highway. The project would, therefore, not influence the use of local recreational facilities.

Considering this information, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for 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?	**No Impact**

Question—Would the project:	CEQA Significance Determinations for Recreation
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	**No Impact**

2.1.17 Transportation

The purpose of this project is to replace or repair drainage systems along State Route 1; therefore, the project would not change the function of the highway. Because the project would not increase the capacity of the highway, it would not influence vehicles miles traveled. The project, therefore, would not conflict with relevant transportation programs, plans, ordinances, or policies. See Appendix C for the coastal policy analysis completed for this project.

Considering this information, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Transportation
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	**No Impact**
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	**No Impact**
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	**No Impact**
d) Result in inadequate emergency access?	**Less Than Significant Impact**

Affected Environment

The project spans almost 50 miles along State Route 1 in Monterey County from post miles 27.76 to 70.87. State Route 1, along most of the project length, is a two-lane conventional highway with 12-foot lanes. Shoulder widths vary from zero to 8 feet, with most being 4 feet or less. State Route 1 in the project vicinity generally serves local and interregional traffic, primarily

including the usage of local recreational facilities, local commuters, and limited commercial users.

Environmental Consequences

Highway reliability would be improved by rehabilitating degraded drainage elements that, in the long term, increase the susceptibility of the highway. There would be traffic delays during construction due to temporary closures, ramp closures, and/or one-way traffic control. However, traffic stops and detours would be executed in accordance with the transportation management plan. Emergency services would be notified of potential disruptions, delays, or detours in advance to minimize impacts to emergency access.

Avoidance, Minimization, and/or Mitigation Measures

The following avoidance and minimization measure would further reduce the potential for impacts on transportation.

TRAFFIC-1: A Traffic Management Plan will be prepared to address any potential traffic delays on State Route 1 that may occur during project construction due to temporary closures on either side of the highway. This would ensure that coastal access via State Route 1 would be maintained at all times throughout the construction period and would account for emergency access and limit delays.

2.1.18 Tribal Cultural Resources

Considering the information in the Archaeological Survey Report and Finding of No Adverse Effect, dated January 2022, the significance determinations summarized below have been made. An archaeological survey and Native American consultation conducted for the project found that there are no archaeological or tribal cultural resources within the project's area of direct impact.

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, or 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:

Question:	CEQA Significance Determinations for Tribal Cultural Resources
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	**No Impact**

Question:	CEQA Significance Determinations for Tribal Cultural Resources
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.	**No Impact**

2.1.19 Utilities and Service Systems

Based on currently available information and preliminary site investigations conducted by the project development team, Caltrans does not expect relocations for any utilities at any of the project locations. Considering this information, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Utilities and Service Systems
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	**No Impact**
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	**No Impact**
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	**No Impact**
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?	**No Impact**

Question—Would the project:	CEQA Significance Determinations for Utilities and Service Systems
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	**No Impact**

2.1.20 Wildfire

The California Department of Forestry and Fire Protection provides a fire hazard severity zone mapping tool that helps in assessing the project location's vulnerability to future wildfire events. The fire hazard severity zones are developed using a science-based and field-tested model that assigns a hazard score based on the factors that influence fire likelihood and fire behavior. Many factors are considered, such as vegetation, topography, climate, crown fire—a forest fire that spreads from treetop to treetop—potential, ember production and movement, and fire history of the area. There are three levels of hazard used in this mapping tool: moderate, high, and very high. The project spans almost 50 miles along State Route 1 in Monterey County and is predominately in a "very high" fire hazard severity zone, with several spot locations and stretches of "moderate" and "high" fire hazard severity zones. These risk levels are expected to increase under future climatic conditions.

Wildfires directly affect highways by burning infrastructure such as wooden posts for signs and guardrails. Wildfires indirectly affect highways because they can contribute to landslides and flooding exposure by burning off soil-stabilizing vegetation and reducing the capacity of soils to absorb rainfall. Wildfire smoke can also affect visibility and the health of the public and Caltrans staff.

Caltrans 2018 Revised Standard Specifications Section 7-1.02M(2) mandates fire prevention procedures during construction, including a fire prevention plan. The project would not introduce new fire-vulnerable structures into the project area and is not expected to exacerbate the impacts of wildfires intensified by climate change or be any more susceptible to wildfire damages than under the current conditions.

Considering this information, along with the information in the Climate Change Technical Report dated June 2022, the following significance determinations have been made:

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

Question—Would the project:	CEQA Significance Determinations for Wildfire
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	**No Impact**
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	**No Impact**
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	**No Impact**
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?	**No Impact**

2.1.21 Mandatory Findings of Significance

Question:	CEQA Significance Determinations for Mandatory Findings of Significance
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	**Less Than Significant Impact**

Question:	CEQA Significance Determinations for Mandatory Findings of Significance
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.)	**Less Than Significant Impact**
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	**Less Than Significant Impact**

Affected Environment

Project work would occur at eight locations along State Route 1 in Monterey County. Construction activities would occur mostly within a Caltrans right-of-way, aside from some locations where culvert work would take place in nearby land.

State Route 1 through the project area is a two-lane conventional highway that has been honored as a Designated National Scenic Byway and All-American Road. The alignment of State Route 1 within the project limits winds through open spaces and scattered residential and commercial developments along the steep Big Sur coastline. U.S. Route 101 is the main transportation route to and through the area for both passenger and commercial vehicles.

The project could affect 10 biological communities, as described in Section 2.1.4 Biological Resources. As explained in Section 2.1.5 Cultural Resources and Section 2.1.18 Tribal Cultural Resources, project work would occur outside of culturally significant areas. The project would not impact paleontological resources, as delineated in Section 2.1.7 Geology and Soils.

Environmental Consequences

The project was evaluated for potential impacts on biological resources, as explained in Section 2.1.4 Biological Resources. The approximately 4-acre Biological Study Area includes 10 biological communities that could potentially be affected by the project, spread across eight distinct locations. These biological communities vary from natural to human-made in character and include the following: Central Lucian Coastal Scrub, Kikuyu Grass Herbaceous Seminatural Alliance, Sticky Snakeroot Herbaceous Seminatural Alliance, Willow Woodlands, Seaside Woolly Herbaceous Alliance, Smooth Horsetail Herbaceous Alliance, Blue Blossom Chaparral Shrubland Alliance,

Cape Ivy Mats, and Annual Non-Native Grassland. While the project may affect the California red-legged frog, Smith's blue butterfly, jurisdictional wetlands, other waters, and riparian habitats, the impacts would be considered less than significant with the implementation of the avoidance, minimization, and/or mitigation measures outlined in Section 2.1.4 Biological Resources and Section 2.1.21 Mandatory Findings of Significance. The project would not 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, or substantially reduce the number or restrict the range of a rare or endangered plant or animal.

In addition, the project was evaluated for potential impacts on cultural resources, tribal cultural resources, and paleontological resources in Section 2.1.5 Cultural Resources, Section 2.1.18 Tribal Cultural Resources, and Section 2.1.7 Geology and Soils. It was determined that the project would have no impact on cultural or paleontological resources and, therefore, would not eliminate important examples of the major periods of California history or prehistory.

In response to item c) above: The project intends to improve existing culvert and drainage features essential for maintaining a quality transportation corridor for use by the traveling public. The project provides avoidance and minimization measures for aesthetics, air quality, and noise, as well as standard specifications for hazardous waste and noise. No significant impacts would result to the human environment.

The project includes avoidance and minimization measures to reduce the impact the project may have on the aesthetic environment. The culvert improvements included in the project would permanently add built features that are not unusual to see in the highway corridor. Construction would also disrupt vegetative patterns and scarring of the land in some areas. With the implementation of measures listed in Section 2.1.1 Aesthetics to minimize the noticeability of drainage systems, the project would slightly affect scenic vistas in the area and would be consistent with the aesthetic and visual protection goals for State Route 1. Therefore, these visual changes would cause a minor reduction of visual quality in the immediate project area.

The project would include Caltrans standard measures for hazardous waste testing and monitoring to protect the public from hazards that could arise from the project's construction activities. The project would not generate hazards or expose the public to hazards that could result in substantial adverse effects. Therefore, the project would not result in considerable impacts on the public due to hazardous waste.

The project would cause a temporary increase in air emissions and fugitive dust during the construction period. Ultimately, however, there will be no difference in long-term air emissions with or without the project. Impacts due to fugitive dust generation from heavy equipment use and earthwork during

construction would be considered less than significant with the implementation of standard construction dust and emission minimization practices and procedures.

Finally, the project would inevitably generate noise during the construction process. The increase in noise levels because of construction activities would not be substantial because construction activities would be temporary and intermittent.

Avoidance and minimization measures to reduce disturbance due to construction noise are listed in Section 2.1.13 Noise. In addition, the project includes Caltrans Standard Specifications for noise control to minimize potential noise-related disturbances caused by construction activities.

The project would not impact water quality and is not expected to exacerbate the impacts of wildfires on human beings.

Avoidance, Minimization, and/or Mitigation Measures

The following general minimization recommendations were made to reduce the overall decline in the health of the identified resources:

Jurisdictional Wetlands, Other Waters, and Riparian Habitats

Agencies with regulatory authority in jurisdictional areas include the U.S. Army Corps of Engineers, Central Coast Regional Water Quality Control Board, California Department of Fish and Wildlife, and California Coastal Commission. To facilitate an improvement in the health of this resource, these agencies should continue to support enhancement, restoration, and mitigation efforts wherever feasible.

California Red-Legged Frog and Smith's Blue Butterfly

Agencies with regulatory authority over California red-legged frogs and Smith's blue butterflies include the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife. These agencies should continue to make efforts to support projects that improve habitat acreage and function for these species through enhancement and creation. Providing suitable contiguous habitats would make both of these species more resilient and resistant to decline.

A complete list of Caltrans Standard Specifications and avoidance, minimization, and/or mitigation measures for the project can be found in Section 1.5 Standard Measures Included in All Build Alternatives, Section 2.1 CEQA Environmental Checklist, and Appendix C Avoidance, Minimization and/or Mitigation Measures Summary.

Appendix A Title VI Policy Statement

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY Gavin Newsom, Governor

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September 2021

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Toks Omishakin
Director

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Appendix B Coastal Policy Analysis

The project is within the coastal zone and, therefore, 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 set up a program under which coastal states are encouraged to develop coastal management programs. States with an approved coastal management plan can 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 of the Coastal Zone Management Act. They include the protection and expansion of public access and recreation; the projection, enhancement, and restoration of environmentally sensitive areas; the protection of agricultural lands; the protection of scenic beauties; and the protection of property and life from coastal hazards. The California Coastal Commission is responsible for implementation and oversight under the California Coastal Act.

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

The Monterey County General Plan includes a Land Use Element, which contains a local coastal program policy document outlining coastal plan policies for the county. The project is within the Big Sur Coast Land Use Planning Area, which was adopted and certified in 1988 with the Monterey County General Plan.

The following is a list of policies from Chapter 3 of the California Coastal Act (Resource Planning and Management Policies) and Monterey County's Big Sur Coast Land Use Plan. The relevant policies from each plan have been grouped together by subject. For each policy, a determination was made for whether the project is consistent with coastal zone policies, and a discussion is provided. Policies for resources that would not be affected by the project have not been included.

Public Access and Circulation
Relevant Policies

California Coastal Act, Chapter 3:

- Section 30211—Development Not To Interfere With Access
- Section 30223—Upland Areas
- Section 30252—Maintenance and Enhancement of Public Access

Big Sur Land Use Plan:

- 4.1.2-1—Highway 1 and County Roads
- 4.1.2-2—Highway 1 and County Roads
- 6.1.4-1—Public Access; General Policies

Consistency Analysis

Traffic delays on State Route 1 may occur during project construction due to temporary closures on either side of the highway. The transportation management plan proposed for the construction period would ensure that coastal access via State Route 1 would be maintained at all times. Ultimately, by repairing or replacing the proposed culverts, the project would ensure consistent coastal access via State Route 1.

No coastal policy inconsistencies are expected.

Visual and Scenic Resources
Relevant Policies

California Coastal Act, Chapter 3:

- Section 30251—Scenic and Visual Qualities

Big Sur Land Use Plan:

- 3.2.3-A.4—Critical Viewshed
- 3.2.3-A.7—Critical Viewshed
- 3.2.4-A.1—Land Not in Critical Viewshed
- 3.2.4-A.3—Land Not in Critical Viewshed
- 3.2.5-C.1—Public Highway Facilities
- 3.2.5-C.1—Utilities

Consistency Analysis

As described in more detail in the aesthetics section (Section 2.1.1), there is a potential for substantial visual impacts to occur as a result of the project due to the expected visibility and visual contrast of many of the project components, the number of work locations, and the high degree of viewer sensitivity along the scenic highway.

Roadside elements with a high degree of noticeability tend to contrast with the setting and have a greater probability of distracting from the scenic surroundings. Many of the individual elements included as part of this culvert project have the potential to be highly visible and distracting in the scenic viewshed. The extent of visibility depends largely on the context, including topography, roadway alignment, viewing distance, and the amount of existing nearby vegetation and development. In all instances, the noticeability of change would be increased by the visual contrast between the color and reflectivity of the new project elements and actions, and the nearby setting. However, it has been determined that with the implementation of the avoidance and minimization measures listed in Section 2.1.1, the potential visual impacts of this project can be reduced and would not result in substantial adverse impacts to the existing visual environment. Therefore, no coastal policy inconsistencies are expected regarding scenic resources.

Based on currently available information and preliminary site investigations conducted by the project development team, Caltrans does not expect relocations for any utilities at any of the project locations. Therefore, no inconsistencies with any coastal policies regarding utilities are expected.

Archaeological and Paleontological Resources

Relevant Policies

California Coastal Act, Chapter 3:

- Section 30244—Archaeological or Paleontological Resources

Big Sur Land Use Plan:

- 3.11.1—Archaeological Resources
- 3.11.2-1—Archaeological Resources
- 3.11.2-2—Archaeological and Paleontological Resources

Consistency Analysis

There are no known archaeological resources within or next to the project area, and the area has a low potential for the presence of paleontological resources.

While archaeological and paleontological resources are not expected to be encountered, standard specifications that cover appropriate handling of these

resources if they were to be inadvertently discovered have been included in the project. Therefore, the project would be consistent with coastal policies related to archaeological and paleontological resources.

Historical Resources
Relevant Policies

Big Sur Land Use Plan

- 3.10.2-1—Historical Resources
- 3.10.2-4—Historical Resources

Consistency Analysis

As described in more detail in the cultural resources section (Section 2.1.5), there is one historic property in the project's Area of Potential Effect, the Carmel-San Simeon Highway Historic District. Caltrans has determined that the proposed replacement of two contributing headwalls out of more than 150 headwalls would constitute a minor impact on the integrity of the historic district as a whole and would not diminish the integrity of the Carmel-San Simeon Highway Historic District in a manner that would impair the district's ability to convey its historical significance. Therefore, the project would be consistent with coastal policies related to historic resources.

Hazards and Hazardous Waste
Relevant Policies

California Coastal Act, Chapter 3:

- Section 30232—Oil and Hazardous Substance Spills

Big Sur Land Use Plan:

- 3.7.2-3—Hazardous Areas
- 3.7.3-2—Hazardous Areas
- 3.7.3-A.1—Geologic Hazards
- 3.7.3-A.4—Geologic Hazards
- 3.7.3-A.7—Geologic Hazards
- 3.7.3-A.8—Geologic Hazards
- 3.7.3-A.9—Geologic Hazards
- 3.7.3-A.11—Geologic Hazards
- 3.7.3-B.2—Flood Hazards

Consistency Analysis

There are no hazardous waste sites or businesses commonly associated with hazardous waste generation near the project. Implementation of Caltrans Best Management Practices, Standard Specifications, and the measure included in the Water Pollution Control Program would limit the potential for hazardous waste spills to occur, and provide instructions for the appropriate containment, cleanup, and handling of hazardous substances due to accidental spills. The project would, therefore, be consistent with California Coastal Act Policy 30232.

The project is along a rural highway with few public services aside from recreational opportunities. State Route 1 is listed as a primary evacuation route in the Carmel Valley Region Evacuation guide. However, the traffic management plan would account for emergency evacuations, and, therefore, the evacuation plan would not be impaired. This project would not change the fire risk in the area.

While the project is in an area that is prone to landslides and rated as a high risk for erosion, the project is not expected to further exacerbate these risks. Caltrans Design Engineering and Caltrans Office of Geotechnical Engineering were able to conclude that all eight culvert locations set for replacement could be done with “open cut” construction methods (not trenchless); therefore, issues related to geology and soils are not expected to be an issue. For more information regarding geologic hazards, please see Section 2.1.7 Geology and Soils of the environmental document.

Air Quality and Greenhouse Gas

Relevant Policies

California Coastal Act

- Section 30253 c, d—Minimization of Adverse Impacts: Pollution; Energy Conservation

Consistency Analysis

The project would not add additional lanes or capacity to the highway; therefore, no long-term changes in emissions would result. By incorporating appropriate engineering design and following Best Management Practices and standard specifications during construction, minimal, short-term air quality impacts would be expected. Implementing the greenhouse gas reduction strategies listed in Section 2.1.8 would help offset greenhouse gas emissions during project construction. No coastal policy inconsistencies are expected.

Water Quality and Erosion

Relevant Policies

California Coastal Act, Chapter 3:

- 30231—Biological Productivity; Water Quality

Big Sur Land Use Plan

- 3.4.3-B.1—Rivers and Streams
- 3.4.3-B.3—Rivers and Streams
- 3.4.3-C.1—Water Resource Study Area

Consistency Analysis

As described in more detail in the hydrology and water quality section (Section 2.1.10), the project has the potential to directly discharge stormwater within the project limits into the Pacific Ocean. The project will involve minor earthwork related to culvert repair/replacement. The project will improve the existing degraded culvert condition and hence provide an added water quality benefit for the receiving water body. By incorporating the appropriate engineering design and robust stormwater Best Management Practices during construction, minimal, short-term water quality impacts are expected. Additionally, the project contractor will prepare a site-specific Water Pollution Control Plan approved by Caltrans. Therefore, the project would not result in significant, long-term impacts on water quality, and no coastal policy inconsistencies are expected.

Environmentally Sensitive Habitat Areas; Biological Resources

Relevant Policies

California Coastal Act, Chapter 3:

- Section 30233—Diking, Filling, or Dredging
- Section 30236—Water Supply and Flood Control
- Section 30240—Environmentally Sensitive Habitat Areas; Adjacent Developments
- Section 30260—Location or Expansion

Big Sur Land Use Plan

- 3.3.2-1—Environmentally Sensitive Habitats
- 3.3.2-2—Environmentally Sensitive Habitats
- 3.3.2-4—Environmentally Sensitive Habitats
- 3.3.2-9—Environmentally Sensitive Habitats
- 3.3.3-A.3—Terrestrial Plant, Riparian, and Wildlife Habitats
- 3.3.3-A.7—Terrestrial Plant, Riparian, and Wildlife Habitats
- 3.3.3-A.10—Terrestrial Plant, Riparian, and Wildlife Habitats

- 3.3.3-B.1—Marine Habitats
- 3.3.3-B.2—Marine Habitats
- 3.9.1-3—Wetlands; Dredging, Filling, and Shoreline Structures
- 3.9.1-4—Wetlands; Dredging, Filling, and Shoreline Structures

Consistency Analysis

Because of a lack of suitable habitat and/or no observations during appropriately timed floristic surveys, the Federally Endangered Section 7 effects determination is that the project will not affect special-status plant species.

The Federal Endangered Species Act Section 7 effects determination is that the project may affect and is likely to adversely affect the California red-legged frog. The basis for this determination is that the presence of California red-legged frogs has been inferred, and there would be a low but possible potential for take of the species during any dewatering activities and construction. Currently, it is assumed that this project would qualify for the Programmatic Biological Opinion for the California red-legged frog between Caltrans and the U.S. Fish and Wildlife Service. The Federal Endangered Species Act Section 7 effects determination is that the project may affect and is likely to adversely affect the California red-legged frog critical habitat. At Location 7 (post mile 54.46), it is expected that a very small amount (0.105 acre) of California red-legged frog critical habitat would be temporarily impacted, and an even smaller amount (0.0024 acre) permanently impacted. While the project could temporarily disrupt upland habitat for California red-legged frogs at this location, the extent and effects of this are estimated to be minor and restricted to a single construction season. Location 7 does not transport enough water to support aquatic habitat for the California red-legged frog, and encountering individuals is not expected.

The Federal Endangered Species Act Section 7 effects determination is the project may affect and is likely to adversely affect Smith's blue butterfly. Currently, it is assumed that this project would qualify for the Programmatic Biological Opinion for Smith's blue butterfly between Caltrans and the U.S. Fish and Wildlife Service. Botanical surveys revealed the presence of seacliff buckwheat, which is a host plant for Smith's blue butterfly, within the Biological Study Area at locations 1, 4, and 7. All of these individuals are growing on steep, rocky, unstable, west-facing slopes along the northbound lanes of State Route 1. Because of the substrate they are attached to, most are small and offer no duff or collection of material beneath the plants. All the individuals identified within the project area are within the 10-foot maintenance buffer described in the Programmatic Biological Opinion for Smith's blue butterfly between Caltrans and the U.S. Fish and Wildlife Service. Due to their proximity to disturbance and maintenance of State Route 1, if these individuals were to be impacted, they would be relocated

along with any collectible duff material to nearby seacliff buckwheat out of harm's way, as described in the Programmatic Biological Opinion. It is expected at this time that due to the steep hillsides the individual plants are present on, no impacts will occur to these seacliff buckwheats. Individuals will be flagged for avoidance, and construction crews will be made aware of their presence and avoidance needs.

With the implementation of the measures included in the Biological Opinions provided by the U.S. Fish and Wildlife Service for California red-legged frog and Smith's blue butterfly, along with other avoidance, minimization, and/or mitigation measures outlined in Section 2.1.4 Biological Resources, impacts to any special-status species would be reduced to a less than significant level, and the project would be consistent with related coastal policies.

Estimates of permanent and temporary impacts to potential jurisdictional wetlands, other waters, riparian habitats, and other upland habitats are presented in Table 2.1. These impacts were determined by overlaying the project's Biological Study Area with the jurisdictional determination mapping prepared by Caltrans for the Jurisdictional Waters Assessment. Permanent impacts to jurisdictional areas are presented as net impacts between all of the project locations. Permanent impacts to jurisdictional areas would occur as the result of expanded or new placement of rock slope protection or a headwall. Temporary impacts to jurisdictional areas would occur as the result of vegetation trimming, excavation, equipment access, and foot traffic.

Onsite restoration and reestablishment are proposed at a 1-to-1 ratio (acreage) for temporary impacts and at a 3-to-1 ratio (acreage) for permanent impacts. Restoration efforts are expected to be onsite and in kind and consist of the same native species impacted and other associated native species known to occur within the project limits. Table 2.2 summarizes the expected types of mitigation at each project location. With the incorporation of this proposed onsite mitigation, the project is not expected to substantially degrade the ecological function and productivity of the environmentally sensitive habitat areas, and the project would be consistent with coastal policies.

Overall, with the incorporation of avoidance, minimization, and/or mitigation measures, the project would be consistent with coastal policies related to wetlands and coastal environmentally sensitive habitat areas, and biological resources. See Section 2.1.4, Biological Resources, for more information.

Land Use

Relevant Policies

Big Sur Land Use Plan

- 5.4.2-2—Development Policies

Consistency Analysis

As described in more detail in the land use and planning section (Section 2.1.11), the project would not change the location, function, or capacity of State Route 1, and would not physically divide an established community. The project would not conflict with the Monterey County General Plan, the Big Sur Land Use Plan, or any other policy or regulation meant to avoid or mitigate an environmental effect. Therefore, in relation to land use, no coastal policy inconsistencies are expected for this project.

Appendix C Avoidance, Minimization, and/or Mitigation Summary

2.1.1 Aesthetics

Avoidance and Minimization Measures

The following measures would avoid or minimize impacts to the visual environment.

VIS-1: Preserve as much existing vegetation as possible. Prescriptive clearing and grubbing and grading techniques that save the most existing vegetation should be used.

VIS-2: 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-3: Following construction, regrade and recontour any new construction access roads, staging areas, and other temporary uses as necessary to match the surrounding natural topography along State Route 1, avoiding unnatural-appearing remnant landforms.

VIS-4: All metal components related to visible down drains and inlets, including but not limited to corrugated metal pipes, flared end section connectors, anchorage systems, and cable barriers, should be darkened or colored to blend with the surroundings and reduce reflectivity. The Caltrans District 5 Landscape Architecture Program shall determine the specific color.

VIS-5: All concrete components related to headwalls, drain inlet aprons, flared end sections, and other concrete elements should be colored to blend with the surroundings and reduce reflectivity. The Caltrans District 5 Landscape Architecture Program shall determine the specific color.

VIS-6: The posts and beams of all new or replaced guardrails should be colored and/or darkened to blend with the surroundings and reduce reflectivity. The Caltrans District 5 Landscape Architecture Program shall determine the color.

VIS-7: All rock slope protection should be placed in natural-appearing shapes rather than geometric patterns to the greatest extent possible to reduce its engineered appearance.

VIS-8: Following the placement of rock slope protection, the rock should be colored to blend with the surroundings and reduce reflectivity. The Caltrans District 5 Landscape Architecture Program shall determine the specific color.

2.1.3 Air Quality

Avoidance, Minimization, and/or Mitigation Measures

The following measure would avoid or minimize impacts on air quality.

AIR-1: To minimize dust emissions from the project, Section 14-9.02 (Air Pollution Control) of the 2018 Standard Specifications states that the contractor is responsible for complying with all local air pollution control rules, regulations, ordinances, and statutes that apply to work performed under the contract, including those provided in Government Code Section 11017 (Public Contract Code Section 10231). By incorporating appropriate engineering design and stormwater Best Management Practices during construction, minimal, short-term air quality impacts are expected.

2.1.4 Biological Resources

Avoidance, Minimization, and/or Mitigation Measures

The measures listed below would reduce potential impacts on biological resources. Mitigation measures are labeled as such, and the remaining measures are avoidance or minimization measures.

The measures have been organized by the primary resource or species they are designed to protect but may apply to several biological resources.

It should also be noted that the Water Pollution Control Program and many of the Best Management Practices and standard specifications outlined in Section 1.6 would avoid and minimize impacts on biological resources.

California Red-Legged Frog and Critical Habitat

Along with the measures below, it should also be noted that Mitigation Measure BIO-15, discussed later under *Wetlands, Other Waters, and Riparian Areas,* would also provide mitigation for California red-legged frogs and their critical habitat.

BIO-1: Applicable measures from the Programmatic Biological Opinion between Caltrans and the U.S. Fish and Wildlife Service for California red-legged frog shall be implemented. The Programmatic Biological Opinion contains an extensive list of measures for each phase of the construction period. Some of the notable measures are summarized below:

- Only U.S. Fish and Wildlife Service-approved biologists shall participate in activities associated with the capture, handling, and monitoring of California red-legged frogs.

- Ground disturbance shall not begin until written approval is received from the U.S. Fish and Wildlife Service that the biologist is qualified to conduct the work.
- Preconstruction surveys must be completed 48 hours before any construction work starts. The surveys shall include identification and appropriate treatment and relocation of California red-legged frogs.
- Biologists to conduct worker environmental awareness training for construction personnel.
- Biological monitor shall be onsite until all disturbance of the habitat area is completed.
- Minimize the project footprint and locate access routes outside of potential habitat areas.
- Follow appropriate Caltrans Standard Specifications and Best Management Practices relevant to working near waterways, refueling, and trash storage.
- Caltrans shall attempt to schedule work for times of the year when impacts to the California red-legged frog would be minimal.
- Unless approved by the U.S. Fish and Wildlife Service, water shall not be impounded in a manner that may attract California red-legged frogs.
- A U.S. Fish and Wildlife Service-approved biologist shall permanently remove any individuals of exotic species, such as bullfrogs.
- The fieldwork code of practice developed by the Declining Amphibian Task Force shall be followed at all times to prevent the introduction of diseases.
- Restore the site to natural contours and revegetate it with native plants suitable for the habitats within the project area.
- Avoid using herbicides and follow appropriate protocols if herbicides must be used.

Mitigation Measure BIO-2: Temporary impacts to California red-legged frog habitat will be restored at a proposed 1-to-1 ratio (acreage), and habitat conditions will be enhanced with native plantings.

Smith's Blue Butterfly

BIO-3: Applicable measures from the Programmatic Biological Opinion between Caltrans and the U.S. Fish and Wildlife Service for the Smith's Blue Butterfly shall be implemented. The Programmatic Biological Opinion contains an extensive list of measures for each phase of the construction period. Some of the notable measures are summarized below:

- Caltrans will ensure that all construction activities follow well-defined procedures to avoid the effects on the Smith's blue butterfly.

- Avoid using herbicides and follow appropriate protocols if herbicides must be used.
- 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 of its life stages and the handling of buckwheat plants.
- Caltrans will ensure that ground disturbance for maintenance or project activities will not begin within stands of buckwheat until a U.S. Fish and Wildlife Service-approved biologist is on site.
- U.S. Fish and Wildlife Service-approved biologists will verify that the proposed work activity within stands of buckwheat meets all criteria established for use of this biological opinion.
- For maintenance work or project activity within stands of buckwheat, 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 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.
- A biological monitor shall be onsite until all disturbance of the habitat area is completed.
- Restore the site to natural contours and revegetate it with native plants suitable for the habitats within the project area.
- Minimize the project footprint and locate access routes outside of any potential habitat areas.
- 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. Weed-free hay and straw bales would be used for erosion control measures when they become available.

Mitigation Measure BIO-4: In the event of impacts to seacliff buckwheat removal outside of the maintenance buffer, buckwheat shall be replanted from seed or individual seedlings at the discretion of a U.S. Fish and Wildlife Service-approved biologist. If seedlings are used, replace them at a 2-to-1 ratio. The establishment is defined as survival to the end of a five-year monitoring period. If buckwheat is replanted from seed, the total area occupied by buckwheat at the end of the five-year monitoring period will be the same as the area of buckwheat plants removed (1-to-1 replacement ratio by area).

Invasive Species

BIO-5: Only clean fill shall be imported. When practicable, invasive exotic plants in the project site shall be removed and properly disposed of. All vegetation removed from the construction site shall be taken to a landfill to prevent the spread of invasive species. If the soil from weedy areas must be removed offsite, the top 6 inches containing the seed layer in areas with weedy species shall be disposed of at a landfill.

BIO-6: Invasive species listed in the California Invasive Plant Council's Invasive Plant Inventory shall not be included in the Caltrans erosion control seed mix, erosion control plans, or planting plans.

BIO-7: The contract specifications for permanent erosion control will require using regionally appropriate California native forb and grass species that occur in the same general geographic area as the project site.

BIO-8: Mulches used on the project will be from source materials that will not introduce exotic species.

Wetlands, Other Waters, and Riparian Areas

A variety of avoidance and minimization measures will be implemented for potential impacts to jurisdictional areas resulting from the project:

BIO-9: Before construction, Caltrans shall obtain a Section 404 Nationwide Permit from the U.S. Army Corps of Engineers, a Section 401 Water Quality Certification from the Regional Water Quality Control Board, a Section 1602 Streambed Alteration Agreement from California Department of Fish and Wildlife, and a Coastal Development Permit (or Waiver) from the California Coastal Commission.

BIO-10: Before construction, Caltrans shall prepare a Mitigation and Monitoring Plan to mitigate impacts to vegetation and natural habitats. The Mitigation Monitoring Plan shall be consistent with federal and state regulatory requirements and will be amended with any regulatory permit conditions, as required. Caltrans shall implement the Mitigation Monitoring Plan as necessary during construction and immediately following project completion.

BIO-11: Before any ground-disturbing activities, Environmentally Sensitive Areas fencing shall be installed around jurisdictional waters, coastal zone Environmentally Sensitive Habitat Areas, and the dripline of trees to be protected within project limits. Caltrans-defined Environmentally Sensitive Areas shall be noted on design plans and delineated in the field before the start of construction activities.

BIO-12: During construction, all project-related hazardous materials spills within the project site shall be cleaned up immediately. Readily accessible

spill prevention and cleanup materials shall be kept by the contractor onsite at all times during construction.

BIO-13: During construction, erosion control measures shall be implemented. Fiber rolls and barriers shall be installed as needed between the project site and jurisdictional other waters, wetlands, and riparian habitats. At a minimum, erosion controls shall be maintained by the contractor daily throughout the construction period.

BIO-14: During construction, the cleaning and refueling of equipment and vehicles shall occur only within a designated staging area. This area shall either be a minimum of 100 feet from aquatic areas or, if the area is less than 100 feet from aquatic areas, the area must be surrounded by barriers (for example, fiber rolls or equivalent). The staging areas shall conform to Best Management Practices applicable to attaining zero discharge of stormwater runoff. At a minimum, all equipment and vehicles shall be checked and maintained by the contractor daily to ensure proper operation and avoid potential leaks or spills.

Mitigation Measure BIO-15: The goal of compensatory mitigation is to prevent a net loss of wetlands or another aquatic resource acreage, function, and value. Several types of compensatory mitigation are available to offset impacts on the waters of the U.S., including the creation, restoration, enhancement, and preservation of either onsite or offsite wetlands and/or other waters.

Onsite restoration and reestablishment are proposed at a 1-to-1 ratio (acreage) for temporary impacts and a 3-to-1 ratio (acreage) for permanent impacts.

Revegetation efforts will be detailed in Caltrans' Landscape Architecture Plans and/or Erosion Control Plans and the final Mitigation Monitoring Plan. The Mitigation Monitoring Plan will be developed in coordination with a Caltrans District 5 biologist and will include specifications to ensure the reestablishment of natural habitats impacted. The final Mitigation Monitoring Plan will detail mitigation commitments and be consistent with standards and mitigation requirements from the applicable regulatory agencies. The Mitigation Monitoring Plan will be prepared when full construction plans are prepared and will be finalized through the permit review process with regulatory agencies. It is expected that restoration efforts will be onsite and in kind and consist of the same native species impacted and other associated native species known to occur within the project limits. Table 2.2 summarizes the expected types of mitigation at each project location.

Table 2.2 Summary of Mitigation

Project Location	Mitigation Anticipated
Location 1 at Post Mile 27.76	No jurisdictional waters are present, and no compensatory mitigation is proposed. Upland habitats impacted to accommodate temporary access will be restored with relevant vegetation and will not require wetland plant species to be restored.
Location 2 at Post Mile 29.63	Contains a three-parameter wetland in a coastal seep, along with a coastal environmentally sensitive habitat area (willow shrubland) that will be subject to temporary impacts for culvert replacement work. Regeneration/restoration/reestablishment of wetland species will occur in kind.
Location 3 at Post Mile 30.10	Contains a three-parameter wetland (and coastal environmentally sensitive habitat area) in a coastal seep that will be subject to temporary impacts. Regeneration/restoration/reestablishment of wetland species will occur in kind.
Location 4 at Post Mile 30.86	Contains a channel that has an *ordinary high water mark* and a narrow strip of nearby riparian vegetation. Temporary impacts will occur to the channel up and downstream of the culvert. Temporary impacts to the channel and riparian zone will be replaced in kind.
Location 5 at Post Mile 31.73	No jurisdictional waters are present, and no compensatory mitigation is proposed. Upland habitats impacted to accommodate temporary access will be restored with relevant vegetation and will not require wetland plant species to be restored.
Location 6 at Post Mile 33.87	No jurisdictional waters are present, and no compensatory mitigation is proposed. Upland habitats impacted to accommodate temporary access will be restored with relevant vegetation and will not require wetland plant species to be restored.
Location 7 at Post Mile 54.46	Contains jurisdictional other waters as well as a coastal environmentally sensitive habitat area (willow shrubland). Permanent impacts will be mitigated at a 3-to-1 ratio, and temporary impacts will be replanted and replaced in kind.
Location 8 at Post Mile 70.87	Contains jurisdictional other waters as well as a three-parameter wetland. All impacts will be temporary and replaced in kind.

Natural Communities and Habitats of Concern

BIO-16: Environmentally Sensitive Area fencing will be installed along the maximum disturbance limits to minimize disturbance to habitats/vegetation. Caltrans Standard Special Provisions for installing Environmentally Sensitive Area fencing will be included in the construction contract and will be identified in the project plans. Before the start of construction activities, environmentally sensitive areas will be delineated in the field and will be approved by the Caltrans environmental division.

BIO-17: Areas of temporary disturbance to natural habitats will be stabilized and replanted; these include areas supporting central (Lucian) coastal scrub, willow woodland, seaside woolly sunflower patches, horsetail meadow, and blue blossom chaparral.

2.1.8 Greenhouse Gas Emissions

Avoidance, Minimization, and/or Mitigation Measures

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

GHG-1: Limit idling to five minutes for delivery and dump trucks and other diesel-powered equipment (with some exceptions).

GHG-2: Schedule truck trips outside of peak morning and evening commute hours.

GHG-3: For improved fuel efficiency from construction equipment:

- Maintain equipment in proper tune and working condition
- Use the right size equipment for the job
- Use equipment with new technologies

GHG-4: Earthwork balance; reduce the need for transport of earthen materials by balancing cut and fill quantities.

GHG-5: Supplement existing construction environmental training with information on methods to reduce greenhouse gas emissions related to construction.

GHG-6: Recycle existing project features onsite. This may include salvaging rebar from demolished concrete, processing waste to create usable fill, and maximizing the use of recycled materials that meet Caltrans' specifications for incorporation into new work.

2.1.13 Noise

Avoidance, Minimization, and/or Noise Abatement Measures

The following avoidance and minimization measures would further reduce the potential for impacts on local noise levels:

NOISE-1: Notify the public in advance of the construction schedule when construction noise and upcoming construction activities likely to produce an adverse noise environment are expected. This notice shall be given two weeks in advance. A notice should be published in local news media of the dates and duration of the proposed construction activity. The District 5 Public Information

Office would post a notice of the proposed construction and potential community impacts after receiving information from the resident engineer.

NOISE-2: Shield loud pieces of stationary construction equipment if complaints are received.

NOISE-3: Locate portable generators, air compressors, and other loud equipment away from sensitive noise receptors as feasible.

NOISE-4: Limit grouping major pieces of equipment operating in one area to the greatest extent feasible.

NOISE-5: Use newer equipment that is quieter and ensure that all equipment items have the manufacturers' recommended noise abatement measures, such as mufflers, engine covers, and engine vibration isolators, intact and operational. Internal combustion engines used for any purpose on or related to the job shall be equipped with a muffler or baffle of a type recommended by the manufacturer.

NOISE-6: Consult district noise staff if complaints are received during the construction process.

The following Caltrans Standard Specification for noise control will also be implemented:

NOISE-7: To minimize impacts on residents' normal nighttime sleep activities, it is recommended that, whenever possible, construction work be done during the day. If nighttime construction is necessary, the noisiest construction activities will be done as early in the evening as possible. Caltrans Standard Specifications Section 14-8.02 Noise Control will be implemented. This standard specification requires the contractor to control and monitor noise resulting from work activities and not to exceed 86 A-weighted decibels maximum sound level at 50 feet from the job site from 9:00 p.m. to 6:00 a.m.

2.1.17 Transportation

Avoidance, Minimization, and/or Mitigation Measures

The following avoidance and minimization measure would further reduce the potential for impacts on transportation.

TRAFFIC-1: A Traffic Management Plan will be prepared to address any potential traffic delays on State Route 1 that may occur during project construction due to temporary closures on either side of the highway. This would ensure that coastal access via State Route 1 would be maintained at all times throughout the construction period and would account for emergency access and limit delays.

List of Technical Studies Bound Separately (Volume 2)

Climate Change Technical Report, October 2022

Historic Property Survey Report, January 2022

Historic Resource Evaluation Report, January 2022

Finding of No Adverse Effect, January 2022

Geologic Hazards Report, May 2022

Air Quality, Greenhouse Gas, Noise, and Water Quality Memorandum, August 2021

Floodplain Evaluation, March 2022

Visual Impact Assessment, February 2022

Natural Environment Study, June 2022

Paleontology Review Memorandum, February 2021

Hazardous Waste Memorandum, February 2021

Cumulative Impact Assessment, July 2022

The following was also prepared for the project to document cultural resources; however, this information is confidential and not available to the public:

- Archaeological Survey Report, January 2022
- Figure 4 of the Historic Property Survey Report

To obtain a copy of one or more of these technical studies/reports or the Initial Study, please send your request to:

Lara Bertaina
District 5 Environmental Division
California Department of Transportation
50 Higuera Street, San Luis Obispo, California 93401

Or send your request via email to: lara.bertaina@dot.ca.gov
Or call: 805-779-0792

Please provide the following information in your request:

Project title: Big Creek to Carmel Drainage Restoration

General location information: On State Route 1 in Monterey County

District number-county code-route-post mile: 05-MON-1-PM 27.76-70.87

Project ID number: 0521000006