

Prunedale Drainage Improvements

U.S. Route 101 in Monterey County
from just north of the Crazy Horse Canyon Road/Echo Valley Road
overcrossing to the northernmost intersection with Dunbarton Road

05-MON-101-PM98.8-100.3

Project ID Number 05-2100-0065/EA 05-1H691

Initial Study with Proposed Mitigated Negative Declaration

Volume 1 of 2



Prepared by the
State of California Department of Transportation

June 2022



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. The document is available online at <https://dot.ca.gov/caltrans-near-me/district-5/>. The document (Volume 1) and the related technical studies (Volume 2) are available upon request. If you would like to receive a printed version of this document, please contact Matt Fowler at 805-779-0793 or by email at: Matt.C.Fowler@dot.ca.gov
- Tell us what you think. If you have any comments regarding the proposed project, please send your written comments and/or requests for public meetings to Caltrans by the deadline. Submit comments via U.S. mail to: Matt C. Fowler, Environmental Branch Chief, District 5 Environmental Division, California Department of Transportation, 50 Higuera Street, San Luis Obispo, California 93401. Submit comments via email to: Matt.C.Fowler@dot.ca.gov
- Submit comments by the deadline: July 26, 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: Matt C, Fowler, Environmental Branch Chief, District 5 Environmental Division, 50 Higuera Street, San Luis Obispo, California 93401; phone number 805-779-0793 (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.

Rehabilitate drainage systems on U.S. Route 101
from post miles 98.8 to 100.3 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

Responsible Agency: California Transportation Commission



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

June 10, 2022

Date

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DRAFT
Proposed Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

State Clearinghouse Number: pending

District-County-Route-Post Mile: 05-MON-101-PM 98.8/100.3

EA/Project ID Number: 05-1H691/05-2100-0065

Project Description

The California Department of Transportation (Caltrans) proposes to rehabilitate multiple drainage systems within a 1.5-mile-long section of U.S. Route 101 in Monterey County from just north of the Crazy Horse Canyon Road/Echo Valley Road overcrossing to the northernmost intersection with Dunbarton Road. Improvements would be made through various ways, including joint repair and/or a complete replacement, depending on the conditions at each location.

Determination

This proposed Mitigated Negative Declaration is included to give notice to interested agencies and the public that it is Caltrans' intent to adopt a Mitigated Negative Declaration for this project. This does not mean that Caltrans' decision regarding the project is final. This Mitigated Negative Declaration is subject to change based on comments received by interested agencies and the public.

Caltrans has prepared an Initial Study for this project and, pending public review, expects to determine from this study that the proposed project would not have a significant effect on the environment for the following reasons:

The proposed project would have no effect on cultural resources, energy, land use and planning, mineral resources, population and housing, public services, recreation, and tribal cultural resources.

In addition, the proposed project would have less than significant effects to aesthetics/visual resources, agriculture and forest resources, air quality, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, noise, transportation, utilities and service systems, and wildfire risk.

With the following mitigation measures incorporated, the proposed project would have less than significant effects to biological resources:

- Restoration (reestablishment) of impacted jurisdictional waters is proposed at a 1-to-1 ratio (acreage) for temporary impacts. Compensatory mitigation is proposed at a 3-to-1 ratio (acreage) for permanent impacts and a 1.5-to-1 ratio (acreage) for degradation impacts (installation of rock slope protection over gravel filter). Replacement plantings would include appropriate native tree and understory species; they would also include developed planting specifications and grading plans to ensure the survival of planted vegetation and reestablishment of functions and values.
- In accordance with the Federal Endangered Species Act Incidental Take Coverage under the Programmatic Biological Opinion for Projects Funded or Approved under the Federal Highway Administration's Federal Aid Program, the project would include all applicable measures from the Programmatic Biological Opinion designed to avoid or minimize impacts to California red-legged frogs. Compensatory mitigation that is prescribed for project impacts to jurisdictional wetlands and other waters would also compensate for impacts to this species.
- The project will also implement measures required by the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and the California Department of Fish and Wildlife as part of the project permitting process. An appropriate plant establishment period, monitoring, semiannual (twice per year) inspections, weeding and plant replacement as necessary will be implemented for impacted jurisdictional areas.

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

Date

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Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans) proposes the Prunedale Drainage Improvements project to replace or rehabilitate culverts in 15 existing drainage systems on U.S. Route 101 in Monterey County. The project is included in the adopted Association of Monterey Bay Area Governments Metropolitan Transportation Improvement Program for Federal Fiscal Year 2020-2021 to Federal Fiscal Year 2023-2024. The project is proposed for funding under Drainage System Restoration (201.151) and programmed in the State Highway Operation and Protection Program. The current estimated cost of the project, not escalated, is \$5,839,700. This includes \$131,600 for right-of-way costs and utility verification. Start of construction is expected in August 2024 and would occur in stages over the course of one year. Completion is anticipated in August 2025.

Caltrans is the lead agency under the California Environmental Quality Act (known as CEQA). As the lead agency, Caltrans has prepared this Initial Study with Proposed Mitigated Negative Declaration for the project.

1.2 Purpose and Need

1.2.1 Purpose

The purpose of this project is to replace or rehabilitate existing culverts in poor or fair condition to maintain the functionality of the culverts and protect the embankments and the roadway from potential slope or pavement failure.

1.2.2 Need

As documented in the Drainage System Reports from the Culvert Inventory, culverts within the project limits show varying degrees of damage caused by corrosion, deformation, perforation, damaged inverts, shape loss, joint separation, undermined backfill, and overall deterioration. If culverts are allowed to deteriorate any further, future roadway failure is possible.

1.3 Project Description

Caltrans proposes multiple drainage improvements within a 1.5-mile-long section of U.S. Route 101 in Monterey County from just north of the Crazy Horse Canyon Road/Echo Valley Road overcrossing (at post mile 98.8) to the northernmost intersection with Dunbarton Road (at post mile 100.3).

Improvements would be implemented through various ways, including joint repair and/or a complete replacement, depending on the conditions at each location. Figure 1-1 shows the project vicinity map, and Figure 1-2 shows the project location map. Preliminary project plans are included in Appendix B, and detailed descriptions of the proposed culvert improvements at each location are provided in Table 1.1 in Section 1.4.1, Build Alternative.

The federal Functional Classification of U.S. Route 101 is Other Freeway or Expressway, and it is a Federal Aid Primary Route. Within the project limits, the route functions as an expressway. This classification recognizes trip lengths and travel densities indicative of substantial statewide and interstate travel. The U.S. Department of Defense, in cooperation with the U.S. Department of Transportation, has identified U.S. Route 101 as part of the National Highway System as a Strategic Highway Corridor Network route. This is a network of linked highways deemed essential to national defense for facilitating the movement of troops and equipment to airports, ports, rail lines and military bases.

Along the West Coast, U.S. Route 101 serves as the main travel corridor between Los Angeles and San Francisco. Within the project area, the corridor provides access between the coastal communities of Monterey County and the inland communities of San Benito County as it crosses over the northern foothills of the Gabilan Range. Project site elevations range from 280 feet to 460 feet above mean sea level. The corridor is constrained by steep slopes.

Within the project limits, U.S. Route 101 aligns with State Route 156 from post mile 95.5 in Monterey County to post mile 3.0 in San Benito County and is Eligible as a State Scenic Highway. Outside of the project limits but nearby, State Route 156 is an Officially Designated State Scenic Highway (from 1 mile east of Castroville to U.S. Route 101 near Prunedale, post mile R1.0-T5.3).

U.S. Route 101 is a four-lane divided highway with 12-foot-wide travel lanes within the project limits. The terrain and highway profile pass through rolling hills throughout the project area. The posted speed limit is 65 miles per hour. The State Highway right-of-way width varies from 132 feet to 383 feet within the project limits. The existing median is paved within the project limits. Typical median width varies from 13 feet to 20 feet. Within the project limits, paved inside shoulder widths vary between 5 feet and 13 feet, and outside shoulder widths generally vary between 4 feet and 10 feet. However, most of the outside shoulder width is 8 feet within the project limits. Concrete median barrier exists along the entire stretch of the route within the project limits. Existing metal beam guardrail is also present along the mainline and ramps.

Figure 1-1 Project Vicinity Map

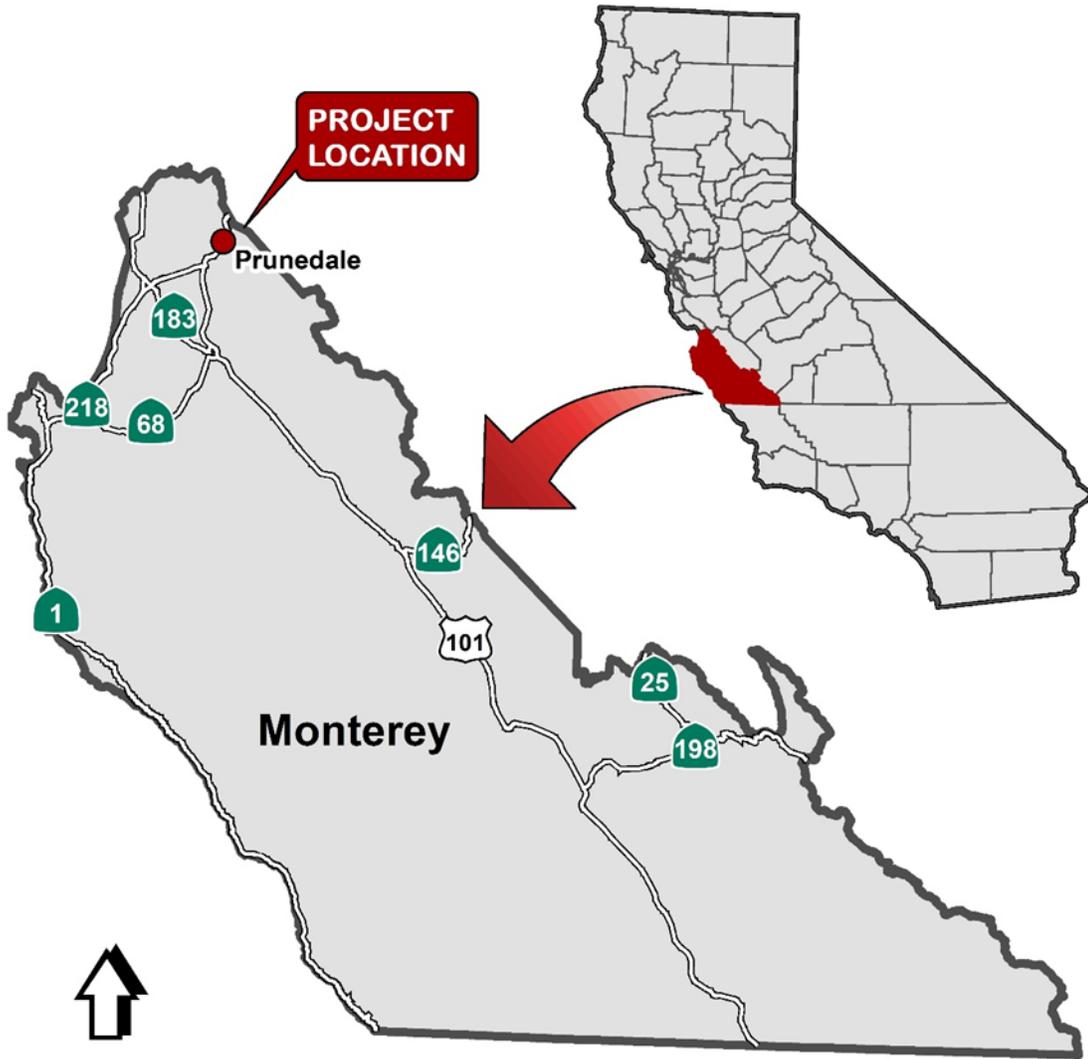
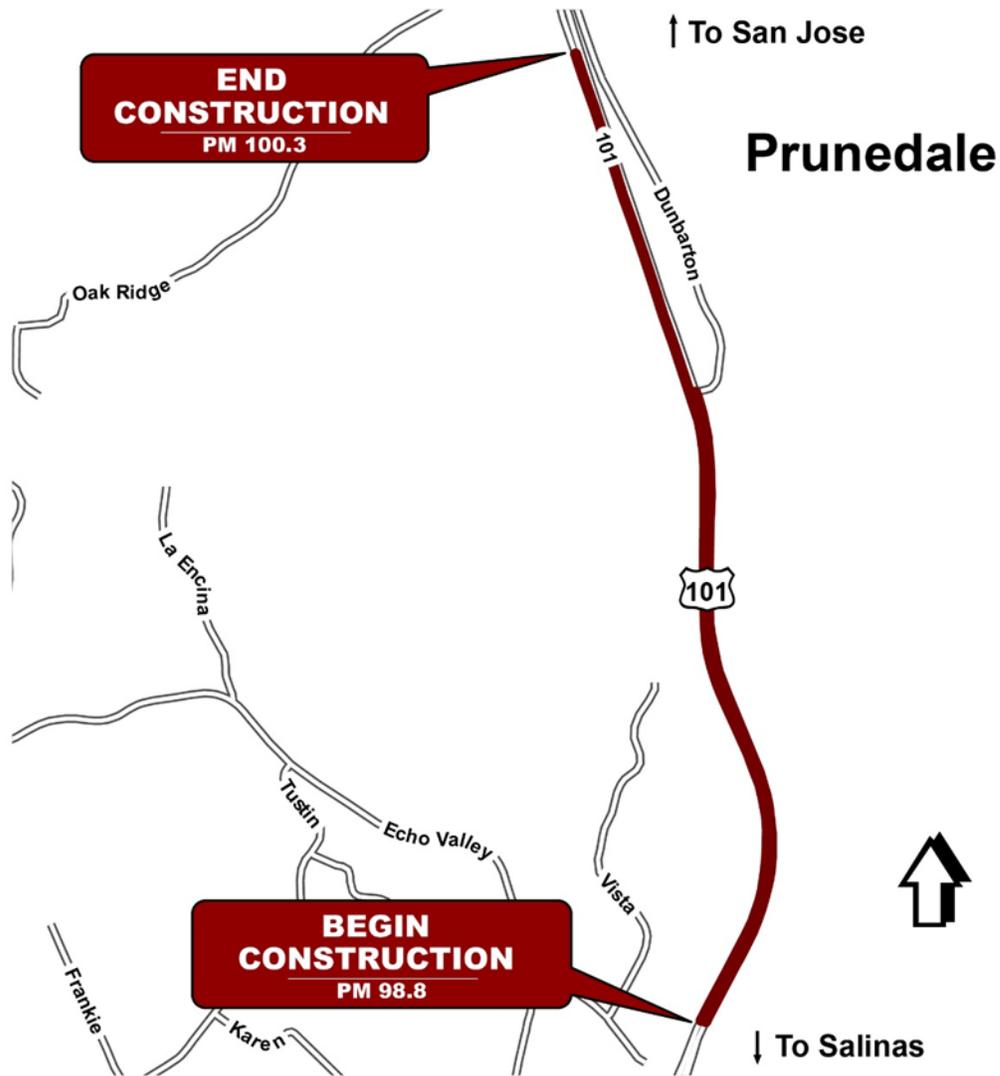


Figure 1-2 Project Location Map



The existing drainage facilities proposed for rehabilitation within the project limits include various types of materials and designs, including corrugated metal pipe with concrete drainage inlet systems, trunk lines and slotted pipe drains in the median at various locations, and an existing reinforced concrete box culvert that crosses the highway.

Side slopes in cut sections show erosion at several locations due to their steep gradient. The existing fill slopes generally remain stable with erosion control provided by natural vegetation growth and trees. However, some embankment slope erosion is occurring at post miles 99.06 and 99.21.

Existing drainage systems within the project limits ultimately drain into Carneros Creek. Starting at post mile 99.52, Carneros Creek enters the

project area and crosses the route, flowing from the southbound side. Carneros Creek parallels the route on the northbound side until it crosses back over to the southbound side at post mile 100.31. The creek leaves the project area and flows to the north until it turns to the west to empty into Elkhorn Slough and ultimately into Monterey Bay.

The following utilities exist within the project limits: aerial electric, telephone, television lines, and underground natural gas pipes and fiber optic cable.

Existing planting consists of both native and non-native plants that are maintained by Caltrans. The planting is consistent with the rest of the existing planting in the corridor. There are no existing irrigation facilities within the project limits.

No sidewalks exist near the local road intersections. There is no pedestrian plan or comprehensive planning study for this corridor. Bicycles are permitted to access the northbound and southbound direction of the expressway portion of U.S. Route 101, from post miles 92.4 to 101.3. There are no designated bikeways in this section, and there is no record of local interest to provide a bicycle designation within this area. Temporary bicycle access routes used during construction will be developed during the design phase. Monterey-Salinas Transit Bus Route 29 uses U.S. Route 101 between Prunedale and Salinas. Monterey-Salinas Transit Routes 55 and 86 use U.S. Route 101 between Prunedale and the northern limit of this project.

1.4 Project Alternatives

The alternatives developed to meet the purpose and need of the project while avoiding or minimizing environmental impacts are the Build Alternative and the No-Build Alternative.

1.4.1 Build Alternative

The Build Alternative would rehabilitate or replace culverts in 15 existing drainage systems using various methods within the 1.5-mile-long project limits along U.S. Route 101. Existing culverts proposed for removal would be replaced with reinforced concrete pipes. This type of pipe is typically made from a mix of water and stone coarse sand Portland cement, which is a blend of clay and limestone. For reinforcement, this mix is poured and set around a skeleton of steel mesh.

For most of the project culvert locations, the scope of work includes upgrading the size of the culverts to a minimum of 24 inches in diameter to increase the discharge capacity and reduce the velocity of water flow. One 24-inch-diameter culvert would be replaced with a 30-inch-diameter culvert, and two others would be replaced with 36-inch-diameter culverts. The upgraded sizes would

result in reduced bedload and suspended load transport, the elimination of roadway embankment and shoulder erosion, and prevention of woody debris entrapment and the subsequent build-up of sediment.

Sediment transport (also known as sediment load) is the movement of organic and inorganic material by water. In general, the greater the flow, the more sediment will be carried by the water. Bedload transport is a specific form of sediment transport involving coarse matter (like sand, gravel, or larger rocks) creeping or skipping along the streambed. Suspended load refers to sediment transport that is held in suspension by flowing water for considerable periods of time without contact with the streambed.

Culvert replacements would use either the cut and cover method or the trenchless pipe jacking method. The cut and cover method (also known as the open-cut method) is a traditional form of tunneling that involves opening up the ground surface and excavating to the required depth. Once the construction is complete, the excavation is backfilled. Pipe jacking (also known as pipe ramming or jack and bore) is a trenchless method of installing pipes, conduits, and utility corridors by applying a force that pushes the pipe through the ground while controlled excavation takes place at the face.

Existing drainage inlets would be replaced with new drainage inlets that meet current design standards. Drainage inlets in the outside shoulders would follow the recommendations of the Federal Highway Administration and have openings that are not in the direction of travel. Bicycle-friendly drainage inlet designs typically incorporate bars that are perpendicular to the direction of travel or have crossbars up to 6 inches apart to keep wheels from getting caught. There are also designs with small shapes like a hexagon that achieve the same effect.

New flared end sections would be installed on the inlets and outlets of culverts as needed throughout the project limits to prevent erosion. Flared end sections provide a transition from the pipe or culvert to the environment upstream and downstream. They improve the flow capacity of the culvert and create an aesthetically pleasing appearance that blends into the embankment.

Concrete headwalls would be removed and replaced as needed. A headwall is a retaining wall placed at the inlet or outlet of a culvert to improve hydraulic efficiency, retain embankments, reduce slope erosions, provide structural stability, and serve as counterweight to offset uplift forces. A nonstandard design feature is proposed to allow the project to match the existing nonstandard 2-to-1 and 3-to-1 ratio side slopes within the project limits where typically slopes should be a ratio of 4-to-1 or flatter. This design standard variation would avoid excessive costs and minimize disturbance near environmentally sensitive areas.

Concrete spall repair would occur at the reinforced concrete box joints in one culvert (post mile 99.732). Concrete spalling is the deterioration of concrete into small fragments or chips. Repair would be accomplished through saw cutting, removal, and replacement of the damaged areas with rapid setting concrete. Standard Special Provisions Section 41-4, Spall Repair, would be implemented.

The repair of shoulder embankment slopes that have been damaged by erosion would occur at the outlets of two culverts (post miles 99.06 and 99.21). Slope repair would occur through the placement and compaction of fill soil, as needed. Native topsoil and vegetation would be restored to eroded areas. Two drainage channels would be graded to remove excess silt and vegetation at post miles 99.42 and 99.73.

Table 1.1 (Drainage System Locations and Construction Activities) lists the 15 drainage system locations and proposed construction activities at each site. Figure 1.3 (Drainage System Locations) shows the location of each project work site. Preliminary project plans for each drainage system location are provided in Appendix B. The distances and lengths provided in the table have been estimated based on the preliminary design plans. Field confirmation and refinement of design plans during the project's Plans, Specifications and Estimates phase may result in minor adjustments to these measurements.

Environmentally Sensitive Area fencing would be installed throughout areas of the project to contain construction activities and protect habitats of concern, individual trees, and sensitive species. Environmentally Sensitive Area fencing would be identified on the project plans during the Plans, Specifications and Estimates phase of the project. Environmentally Sensitive Areas would also be delineated in the field and approved by the project biologist prior to beginning any construction activities, including equipment storage.

Table 1.1 Drainage System Locations and Construction Activities

Drainage System Number	Post Mile Location on U.S. Route 101	Proposed Construction Activities (Distances Estimated)
1	98.8 to 98.98	<p>Using the cut and cover method, remove 971.5 feet of existing 18-inch-diameter slotted drainpipe in the median from post miles 98.8 to 98.98. Replace with 24-inch-diameter reinforced concrete pipe culvert and 6 drainage inlets (where none were before).</p> <p>Using the cut and cover method, remove 49.6 feet of existing 24-inch-diameter corrugated metal pipe culvert under the northbound lanes and shoulder. Replace with 24-inch-diameter reinforced concrete pipe culvert.</p> <p>Construct a 24-inch-diameter flared end section and stabilize the northbound shoulder embankment with rock slope protection at the culvert outlet.</p> <p>Connect both replacement culverts to each other in the median at post mile 99.98.</p> <p>At the connection of the new culverts, remove the existing drainage inlet in the median at post mile 98.98 and replace it in kind with a drainage inlet.</p>
2	99.06	<p>Using the cut and cover method, remove 83.8 feet of existing 18-inch-diameter slotted drainpipe in the median. Replace with 24-inch diameter reinforced concrete pipe culvert and 2 drainage inlets (where none were before).</p> <p>Using the cut and cover method, remove 46.5 feet of existing 24-inch-diameter corrugated metal pipe culvert under the northbound lanes and shoulder. Replace with 24-inch-diameter reinforced concrete pipe culvert.</p> <p>Construct a 24-inch-diameter flared end section and stabilize the northbound shoulder embankment with rock slope protection at the culvert outlet.</p> <p>Connect both replacement culverts to each other in the median.</p> <p>At the connection of the new culverts, remove the existing drainage inlet in the median and replace it in kind with a drainage inlet.</p> <p>Remove the existing manhole at the northbound shoulder embankment.</p> <p>Within State right-of-way, place fill soils, native soils, and native vegetation to repair 1,100 square feet of slope erosion downstream of the culvert outlet.</p>

Drainage System Number	Post Mile Location on U.S. Route 101	Proposed Construction Activities (Distances Estimated)
3	99.16	<p>Using the cut and cover method, remove 71.4 feet of existing 18-inch-diameter slotted drainpipe in the median and replace with 24-inch diameter reinforced concrete pipe culvert and a drainage inlet (where none was before).</p> <p>Using the cut and cover method, remove 55.8 feet of existing 18-inch-diameter corrugated metal pipe under the northbound lanes and shoulder. Replace with 24-inch-diameter reinforced concrete pipe culvert.</p> <p>Construct a 24-inch-diameter flared end section and stabilize the northbound shoulder embankment with rock slope protection at the culvert outlet.</p> <p>Connect both replacement culverts to each other in the median.</p> <p>At the connection of the replacement culverts, remove the existing drainage inlet in the median and replace it in kind with a drainage inlet.</p>
4	99.21	<p>Extend the existing 24-inch-diameter corrugated metal pipe under the southbound lanes by 2 feet to the toe of the southbound shoulder embankment with 24-inch-diameter corrugated metal pipe.</p> <p>Construct 24-inch-diameter flared end section and stabilize the southbound shoulder embankment with rock slope protection at the extended culvert outlet.</p> <p>Within State right-of-way, place fill soils, native soils, and native vegetation to repair 320 square feet of slope erosion downstream of the culvert outlet.</p>

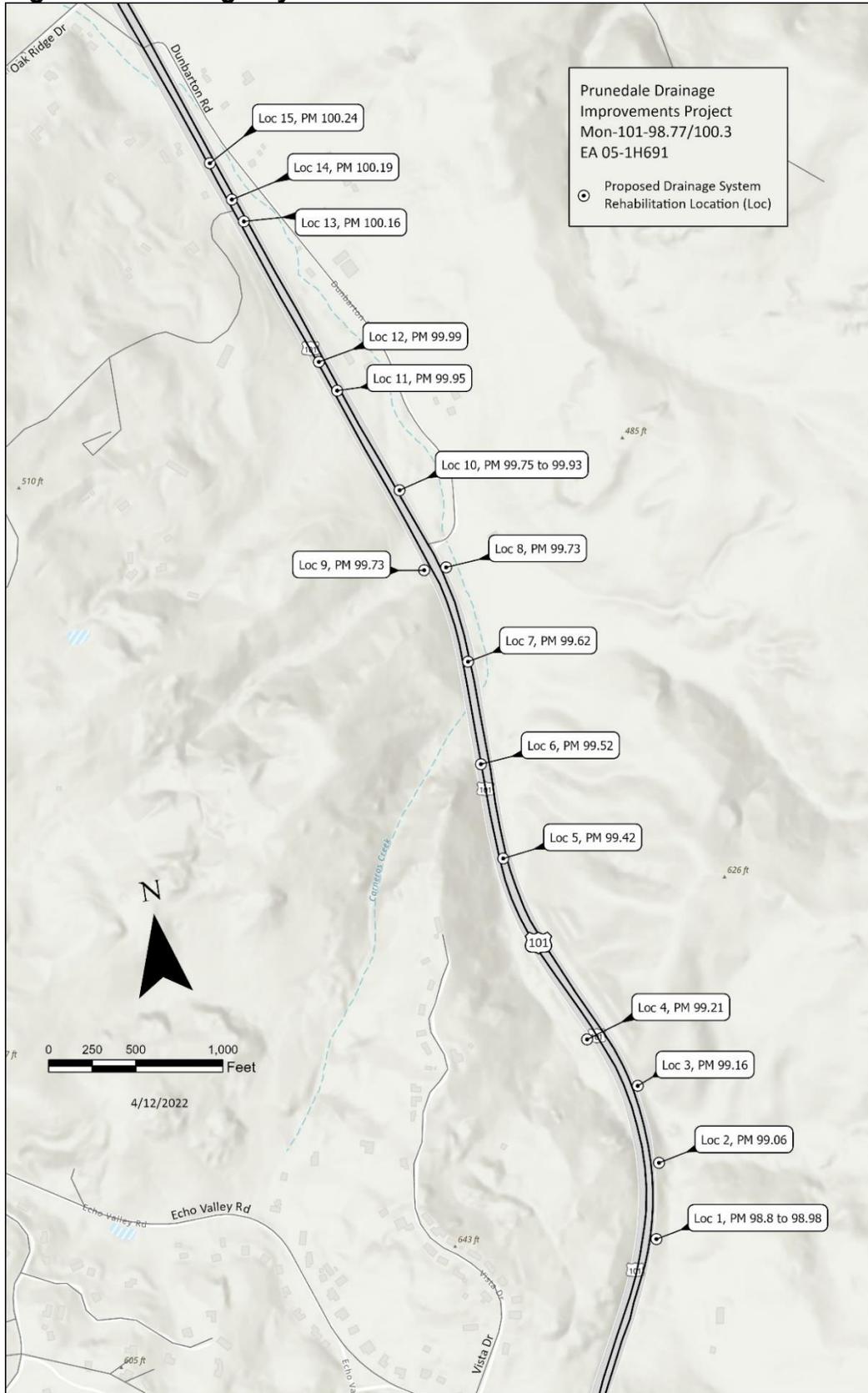
Drainage System Number	Post Mile Location on U.S. Route 101	Proposed Construction Activities (Distances Estimated)
5	99.42	<p>Using the cut and cover method, remove 99.5 feet of existing 18-inch-diameter slotted drainpipe in the median. Replace with 24-inch diameter reinforced concrete pipe culvert and a drainage inlet (where none was before).</p> <p>Using the cut and cover method, remove 102.7 feet of existing 24-inch-diameter corrugated metal pipe culvert crossing under the route travel lanes and shoulders and replace with 30-inch-diameter reinforced concrete pipe culvert. Remove and replace in kind the drainage inlet in the median. Remove and replace the drainage inlet in the northbound outside shoulder with a bicycle-friendly drainage inlet.</p> <p>Construct 30-inch-diameter flared end sections at the culvert inlet on the southbound shoulder embankment and the outlet on the northbound shoulder embankment. Stabilize the shoulder embankments at the culvert inlet and outlet with rock slope protection.</p> <p>Connect both replacement culverts to each other in the median.</p> <p>Within State right-of-way, grade 180 square feet of drainage channel downstream of the culvert outlet to remove excess silt and vegetation.</p>
6	99.52	<p>Using the cut and cover method, remove 130 feet of existing 18-inch-diameter corrugated steel pipe culvert crossing under the route travel lanes and shoulders. Replace with 134.5 feet of 24-inch-diameter reinforced concrete pipe culvert.</p> <p>Construct 24-inch-diameter flared end sections at the culvert inlet on the southbound shoulder embankment and the outlet on the northbound shoulder embankment. Stabilize the shoulder embankments at the culvert inlet and outlet with rock slope protection.</p>
7	99.62	<p>Using the cut and cover method, remove 48 feet of existing 18-inch-diameter slotted drainpipe and a drainage inlet in the median and replace with 24-inch diameter reinforced concrete pipe culvert and a drainage inlet, in kind.</p> <p>Using the cut and cover method, remove 87.6 feet of existing 24-inch-diameter corrugated steel pipe crossing under the route travel lanes and shoulders. Replace with 24-inch-diameter reinforced concrete pipe culvert.</p> <p>Construct a 24-inch-diameter flared end section and stabilize the northbound shoulder embankments with rock slope protection at the culvert outlet.</p> <p>Connect both replacement culverts to each other in the median.</p> <p>Install 2 new drainage inlets, one in the southbound outside shoulder and the other in the median on the northbound side.</p>

Drainage System Number	Post Mile Location on U.S. Route 101	Proposed Construction Activities (Distances Estimated)
8	99.73	<p>Using the cut and cover method, remove 78.7 feet of existing 18-inch-diameter slotted drainpipe in the median and replace with 24-inch-diameter reinforced concrete pipe culvert and a drainage inlet (where none was before).</p> <p>Using the cut and cover method, remove 62.8 feet of existing 18-inch-diameter corrugated metal pipe culvert crossing under the northbound travel lanes and shoulder and remove 2 drainage inlets. Replace with 24-inch-diameter reinforced concrete pipe culvert and 2 drainage inlets, in kind.</p> <p>Construct a 24-inch-diameter flared end section and stabilize the northbound shoulder embankment with rock slope protection at the culvert outlet.</p> <p>Connect both replacement culverts to each other in the median.</p>
9	99.73	<p>Within State right-of-way, grade 600 square feet of drainage channel upstream of the culvert inlet and repair spall inside the 7-foot-by-5-foot reinforced concrete box culvert.</p>
10	99.75 to 99.93	<p>Using the cut and cover method, remove the existing 744.7 feet of 18-inch-diameter plastic pipe culvert in median from post miles 99.75 to 99.93 and replace with 24-inch-diameter reinforced concrete pipe culvert.</p> <p>Remove 5 drainage inlets in the median from post miles 99.75 to 99.93 and replace in kind with 5 drainage inlets in the same locations.</p> <p>Using the trenchless pipe jacking method, remove 50.3 feet of existing 18-inch-diameter corrugated steel pipe culvert crossing under the northbound travel lanes and shoulder at post mile 99.82. Replace with 24-inch-diameter reinforced concrete pipe culvert.</p> <p>Construct 24-inch-diameter flared end section and stabilize the northbound shoulder embankment with rock slope protection at the culvert outlet at post mile 99.82.</p> <p>Connect both replacement culverts to each other in the median at post mile 99.82.</p>

Drainage System Number	Post Mile Location on U.S. Route 101	Proposed Construction Activities (Distances Estimated)
11	99.95	<p>Using the cut and cover method, remove 108.5 feet of existing double 30-inch-diameter corrugated steel pipe culvert crossing under the route travel lanes and shoulders. Replace with double 30-inch-diameter reinforced concrete pipe culvert.</p> <p>Remove the existing drainage inlet in the southbound median and replace in kind with a drainage inlet.</p> <p>Construct double 30-inch-diameter flared end sections at the inlets on the southbound shoulder embankment and the outlets on the northbound shoulder embankment. Remove and replace the existing headwall at the culvert inlets with a new concrete headwall. Stabilize the shoulder embankments at the culvert inlets and outlets with rock slope protection.</p>
12	99.99	<p>Using the trenchless pipe jacking method, remove 100 feet of existing 18-inch-diameter corrugated metal pipe culvert crossing under the route travel lanes and shoulders.</p> <p>Install 100.1 feet of 36-inch-diameter reinforced concrete pipe culvert 10 feet south of the existing 18-inch-diameter corrugated metal pipe culvert proposed for removal. This replacement pipe would be placed at an angle directed to the north so the new pipe would end under the northbound shoulder embankment at the same place as the existing 18-inch-diameter corrugated metal pipe proposed for removal.</p> <p>Remove the existing concrete headwall at the culvert inlet under the southbound shoulder embankment and replace with a new concrete headwall.</p> <p>Construct 36-inch-diameter flared end sections at the culvert inlet on the southbound shoulder embankment and the outlet on the northbound shoulder embankment. Stabilize the shoulder embankments at the culvert inlet and outlet with rock slope protection.</p>
13	100.16	<p>Using the cut and cover method, remove 102.7 feet of existing 24-inch-diameter corrugated steel pipe culvert crossing under the route travel lanes and shoulders. Replace with 36-inch-diameter reinforced concrete pipe culvert.</p> <p>Remove and replace in kind both drainage inlets in the northbound and southbound median. Remove and replace the drainage inlet in the southbound outside shoulder with a bicycle-friendly drainage inlet.</p> <p>Construct 36-inch-diameter flared end sections at the culvert inlet on the southbound shoulder embankment and the outlet on the northbound shoulder embankment. Stabilize the southbound and northbound shoulder embankments with rock slope protection at culvert outlets.</p>

Drainage System Number	Post Mile Location on U.S. Route 101	Proposed Construction Activities (Distances Estimated)
14	100.19	<p>Using the trenchless pipe jacking method, remove 107 feet of existing 24-inch-diameter corrugated steel pipe under the southbound and northbound lanes.</p> <p>Install 106.9 feet of 36-inch-diameter reinforced concrete pipe culvert 5 feet to the north of the existing 24-inch-diameter corrugated steel pipe proposed for removal.</p> <p>Install drainage inlets (where none were before) in the northbound and southbound medians.</p> <p>Construct 36-inch-diameter flared end sections at the culvert inlet on the southbound shoulder embankment and the outlet on the northbound shoulder embankment. Stabilize the southbound and northbound shoulder embankments with rock slope protection at culvert outlets.</p>
15	100.24	<p>Install culvert lining for the existing double 30-inch-diameter corrugated steel pipe culvert.</p>

Figure 1.3 Drainage System Locations



Operational and Permanent Effects

Route Operations

The Build Alternative would not provide new routes, route alignments, or additional lanes. The capacity of the existing route would not be increased. The Build Alternative would not involve new or modified features that would facilitate additional development or, consequently, the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities to maintain acceptable service ratios, response times, or other performance objectives for fire and police protection, schools, parks, and other facilities. No change in the existing operation of the route would occur.

Drainage Improvements and Erosion Control

The repair and replacement of culverts, installation of rock slope protection and flared end sections, channel regrading, and silt removal would improve drainage through the area and reduce the potential for flooding and erosion. This would largely reduce the velocity of storm water flow and the potential for bedload and suspended load transport to damage culverts and clog drainage channels. The minimization of flooding would ultimately reduce the need for roadway maintenance and debris removal, ensuring the route remains open to traffic after major storms.

Utility Relocation

At this time, no utility conflicts or relocations are expected. Pot holing during the project's Plans, Specifications, and Estimates phase would determine the potential for conflict. Where utilities would conflict with construction activities and planned improvements, Caltrans would provide for any State share of utility relocation and would work closely with the utility providers to facilitate relocation in stages during construction. Utility surveys would be conducted during the Plans, Specifications, and Estimates phase of this project to identify the exact location of any conflicting utilities.

Temporary Construction Effects

Temporary impacts would result mostly from equipment access, clearing vegetation, staging, stock piling, culvert replacement, and temporary dewatering/diversion, if needed. Sources of impacts would be from the use of construction equipment and associated worker foot-traffic. The project would use trucks, bulldozers, backhoes, compactors, asphalt concrete rollers, clamshells, excavators, compressors, pavers, water trucks, sweepers, concrete/asphalt saws, hydraulic jacks, hand-operated pneumatic jackhammers, drill rigs, hydraulic jacking rigs, micro-tunneling machines, and any other equipment necessary for construction.

Project Construction Phasing

The Build Alternative would involve the phasing (staging) of demolition and construction activities due to the steep topography of the area and high traffic

volumes. Staged construction would attempt to minimize motorist delays, maximize public access to the area, and provide contractors with the basis of the bid. Construction activities for the Build Alternative are expected to take 240 working days over a staged one-year schedule to complete, starting in February 2024.

Construction is anticipated to occur under Standard Temporary Traffic Control Systems. Typical construction staging uses small work areas that are proportionately sized to minimize motorist delays and maximize public access to businesses and residences. Staging would not remain in one location for long but would incrementally progress through the project limits to meet construction needs.

Work areas would be limited to one half of the roadway area at a time and to only the necessary space needed to complete the proposed activities, which may also include an area for access and staging. This would allow room for two-way traffic flow. As discussed further in this section, traffic control measures would be implemented to temporarily divert traffic out of the work area. When possible, activities would be coordinated to complete all proposed construction within the work area simultaneously or shortly thereafter before moving on to another location.

Utility and underground work would be sequenced and would depend on location and impacts. An estimated total of 200 days of nighttime construction work would be required to reduce traffic concerns and to complete the project within the proposed one-year schedule. However, no more than 14 days of nighttime work are expected for each drainage system location. Multiple work areas may be established at the same time through the project limits, as needed, which may decrease the total number of days required for nighttime construction.

In general, demolition and construction would start with the diversion of surface water as needed to facilitate culvert rehabilitation and drainage channel work. When using the cut and cover method for culvert rehabilitation, work would occur after traffic control measures are in place. Traffic control measures would be removed after culvert rehabilitation, roadway restoration, and all construction activities are completed, and full operation of the roadway would then be restored. The pipe jacking method would allow for culvert rehabilitation to occur without roadway excavation and with minimal need for traffic control.

Traffic Control During Construction

During phased construction of the Build Alternative, a temporary closure of lanes on U.S. Route 101 would result. However, the two-way (bidirectional) flow would remain open throughout construction with the implementation of Standard Specifications 12-1 through 12-7 and Standard Special Provisions pertaining to traffic management and control and the implementation of a Transportation Management Plan prepared specifically for the project route

and setting conditions (see Section 1.5, Standard Measures and Best Management Practices).

Traffic management would include the effective application of traditional traffic handling practices and various strategies implemented during project construction to maintain traffic access within the project area while keeping the traveling public separated from construction activities. These strategies typically include actions such as reduction and modification of travel lanes to allow for construction to occur and traffic to continue at the same time, reduction of the speed limit to reduce the potential for traffic incidents, and installation of construction warning signs to inform the public.

Lane modification is a practice that is commonly done by Caltrans for a variety of needs. When including center medians, shoulders, turn lanes, and on-street parking areas, U.S. Route 101 has sufficient width to allow for construction activities to occur on one side of the highway centerline while the two-way flow of traffic occurs in the remaining roadway space. The scope of lane modification would vary with each phase of construction based on the ongoing activities and their needs.

No local roadway or driveway closures would occur. Temporary detours would not be necessary because all traffic would remain on the existing alignment during construction. Any effects would be localized and temporary for as short a period as feasible. Temporary pedestrian and bicycle pathways would be provided through or around work areas as needed during construction. Community and agency input would be sought on maintaining pedestrian, bicycle, and transit bus stop access during project construction.

Surface Water Diversion

Most tributary drainages within the project limits are not flowing during the dry season; however, Carneros Creek can hold water late into the season and may require stream diversion and dewatering to isolate construction sites from flowing or standing water. Since work activities would be conducted during seasonal low flows, it is anticipated that an in-stream diversion—through pipe or screened pump and hose—would be sufficient to remove most surface water from the channel within the work areas.

Culvert Rehabilitation

As previously noted, culvert rehabilitation would occur using either the cut and cover method or the trenchless pipe jacking method. For the cut and cover method, the roadway would be excavated to the required depth to access and/or remove existing culverts and to place new or replacement culverts into position. Once the culvert rehabilitation is complete, the excavated areas would be backfilled. The cut and cover method would require traffic diversion and traffic control measures as discussed below. The roadway pavement would then be restored and restriped.

The trenchless pipe jacking method would begin with excavation of relatively small entry and exit pits at the beginning and end of each pipe installation. Exploratory hole positions would be chosen to provide information on the nature of the ground that would be encountered by the tunnel. Boreholes would be sunk adjacent to shaft locations. All boreholes would be properly backfilled and sealed. Boreholes would extend to the tunnel horizon and sufficiently far below the invert level to identify changes in the soil below that could affect the tunnel's construction. The pits would be just large enough to accommodate the tunneling equipment and construction personnel. Once the pits are excavated, a hydraulic jacking rig and micro-tunneling machine would be put into position. The hydraulic jacking rig would then apply a force that pushes the micro-tunneling machine through the wall of the entrance pit and into the ground. Once the machine reaches a predetermined position in the soil, a segment of pipe would be lowered into the entrance pit behind the jacking rig and the micro-tunneling machine. An adaptor ring may then be used to link the pipe segment and the micro-tunneling machine. Next, the hydraulic jacking rig would, once again, apply a force to push both the pipe and machine forward on their way to the exit pit. This process would continue, with several pipe segments being jacked in sequence, until the cutter head reaches the exit pit.

Equipment and Material Access and Staging

The staging and maneuvering of equipment and materials would require areas that are adequately separated from traffic. This would be accomplished by closing the lane immediately leading to and from the work area. For most of the construction, lane closures and/or modifications would be relatively close to the actual workplace.

Staging would occur in closed lanes behind a temporary concrete protective barrier or along ruderal/disturbed edges of U.S. Route 101. As detailed in Table 1.2 (Temporary Construction Easements Required), some staging and access would occur within temporary construction easements on adjacent private property. Project work areas would avoid Environmentally Sensitive Areas delineated on project plans and in the field, as approved by the Caltrans Environmental Division. No vegetation clearing on public or private land would be allowed for the creation of storage sites without first being cleared through the Caltrans Environmental Division and any applicable agency permits, as needed.

Table 1.2 Temporary Construction Easements Required

Assessor Parcel Number/Site Address	Purpose for Easement	Estimated Easement Area in Square Feet (in Acres)	Total Parcel Area in Square Feet (in Acres)	Percent of Total Parcel Area
125-251-002 / None Listed	Access to replace culvert and regrade channel	7,354.2 (0.17)	2,731,212.0 (62.70)	0.27
125-261-007 / None Listed	Access to replace culvert	2613.6 (0.06)	4,704,480.0 (108.00)	0.06
125-261-002 / 1923 Highway 101 Aromas, CA 95004	Access to regrade channel	4,356 (0.10)	4,179,146.4 (95.94)	0.10
125-261-010 / 1940 Dunbarton Road Aromas, CA 95004	Access to replace culvert	2,178 (0.05)	214,750.8 (4.93)	0.10
125-261-024 / 1931 Highway 101 Aromas, CA 95004	Access to replace culvert	3,049.2 (0.07)	880,783.2 (20.22)	0.35
125-261-023 / 1935 Highway 101 Aromas, CA 95004	Access to replace culvert	5,662.8 (0.13)	786,258.0 (18.05)	0.72
125-261-009 / 276 Dunbarton Road Aromas, CA 95004	Access to replace culvert	1,306.8 (0.03)	100,188.0 (2.30)	1.30
125-261-016 / 1943 Highway 101 Aromas, CA 95004	Access to replace culvert	6,534.8 (0.15)	829,382.4 (19.04)	0.79
141-011-001 / 1949 Highway 101 Aromas, CA 95004	Access to replace culvert	871.2 (0.02)	1,311,156.0 (30.10)	0.07

Replacement Planting and Landscaping

Ground disturbance and removal of vegetation in conflict with the project would occur at multiple locations within the project limits. Tree removal is anticipated where it cannot be avoided within the project work, access, and staging areas. Specific plans for tree removal and replacement would be developed for the project during the Plans, Specifications, and Estimates phase. Replacement planting may include wetland, riparian, and upland habitat. Areas of temporary impacts to Waters of the United States and State would be re-contoured to approximate pre-construction conditions.

Replacement planting associated with stabilizing drainages would be constructed and may include bioengineering techniques such as willow cuttings and pole plantings, willow planting in rock slope protection, and brush layering. Container stock plantings of other wetland and riparian species may also occur. Planting may include temporary irrigation with a one-year plant establishment period.

1.4.2 No-Build (No-Action) Alternative

Under the No-Build Alternative, the improvements proposed under the Build Alternative would not occur. No other improvements would be built within the project limits for this project. However, routine maintenance would continue.

Existing damaged culverts in poor or fair condition would not be replaced or rehabilitated. The functionality of the culverts would continue to decline until they eventually fail. Embankments and the roadway would not be protected from potential slope or pavement failure from erosion. Silt deposits would not be removed, and drainage channels would not be regraded, so drainage flow would not be ensured. Drainage channels would eventually become impeded resulting in flooding and potential erosion.

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

Environmentally Sensitive Areas would be delineated on project construction plans to protect and minimize disturbance from construction activities on vegetation and sensitive habitat types within the project's physical impact areas. Temporary fencing, Type Environmentally Sensitive Area, would be installed before construction to mark the sensitive resource areas to be protected. However, removal of shrubs and trees, as well as vegetation trimming, would be necessary at certain culvert construction areas where access/haul roads are necessary for construction vehicles and equipment. Replacement of permanent and temporary impacts to trees and other vegetation would be done as part of the project mitigation requirements addressed in Chapter 2.

Construction activities would include mostly the removal and replacement of portions of the culvert pipes and improvements to culvert inlets and outlets, including slope stabilization and backfilling. Best Management Practices and other Caltrans standard procedures would be implemented for control of stormwater and soil erosion and protection of water quality, both during temporary construction activities and for permanent post-construction conditions. Disturbed areas would be treated with erosion control materials best suited to the project site conditions. Steeper areas exposed to concentrated runoff flows from the highway culverts would receive aggressive erosion control techniques such as netting, fiber rolls, compost socks, and hydroseeding to establish vegetation for long-term minimization of soil erosion.

Caltrans has developed standard measures, standard special provisions, and Best Management Practices that are implemented on all or most Caltrans projects. The following list is relevant to the proposed project:

- **7-1.02A General:** The contractor would comply with laws, regulations, orders, and decrees applicable to the project.
- **7-1.02C Emissions Reductions:** The contractor would submit a certification acknowledging compliance with emissions reduction regulations managed by the California Air Resources Board.
- **7-1.02K(6)(j)(ii) Lead Compliance Plan:** This specification requires the submittal of a plan to document a compliance program to prevent or minimize worker exposure to lead.
- **7-1.02M(2) Fire Protection:** Reserved for development of a fire prevention plan, which would minimize the risk of starting a wildfire during construction.
- **7-1.03 Public Convenience:** The contractor would work to minimize the inconvenience to the public or abutting property owners resulting from construction activities.
- **12-1 through 12-7 Temporary Traffic Control:** This section includes general specifications for providing temporary traffic control.
- **13-3 Storm Water Pollution Prevention Plan:** This section includes specifications for preparing a stormwater pollution prevention plan for projects that will disturb one acre or more of soil.
- **13-4 Job Site Management:** This section includes specifications for performing job site management work such as spill prevention and control, material management, waste management, non-stormwater management, and dewatering activities.
- **13-5 Temporary Soil Stabilization:** This section includes specifications for placing temporary soil stabilization materials on stockpiles or disturbed soil areas.
- **13-6 Temporary Sediment Control:** This section covers specifications for installing temporary sediment controls, such as check dams and drainage inlet protections.
- **13-9 Temporary Concrete Washouts:** This section covers specifications for installing temporary concrete washouts to receive and dispose of concrete waste.
- **13-10 Temporary Linear Sediment Barriers:** This section covers specifications for installing temporary linear barriers to control sediment.
- **14-1.02 Environmentally Sensitive Area:** Caltrans would mark areas that are environmentally sensitive. These areas cannot be entered unless authorized. If an Environmentally Sensitive Area is breached, work near the area would stop immediately, and the Resident Engineer would be notified.

- **14-2.03 Archaeological Resources:** If archaeological resources are discovered within or near the construction limits, the resources would not be further disturbed, and all work near the discovery would stop immediately. The area would be secured, and the Resident Engineer notified.
- **14-6.03 Species Protection:** This specification includes instructions for the protection of regulated species and their associated habitat, including migratory and nongame birds. If a protected species is discovered, work would stop near the discovery, and the engineer would be notified so that Caltrans biologists could investigate the discovery and take appropriate action.
- **14-7.03 Discovery of Unanticipated Paleontological Resources:** If unanticipated paleontological resources are discovered, the resources would not be further disturbed, and all work near the discovery would stop immediately. The area would be secured, and the Resident Engineer notified.
- **14-8.02 Noise Control:** Noise from work activities would be controlled and monitored. Noise would not exceed 86 decibels at 50 feet from the job site from 9:00 p.m. to 6:00 a.m.
- **14-9.02 Air Pollution Control:** The project would comply with applicable air pollution control rules, regulations, ordinances, and statutes.
- **14-10.02: Solid Waste Disposal and Recycling Report:** The types and amounts of solid waste taken to or diverted from landfills or reused on the project would be tracked and reported on each calendar year.
- **14-11.03 Hazardous Waste Management:** This specification outlines the procedures for the handling, storage, transport, and disposal of hazardous waste, which would comply with 22 California Code of Regulations Division 4.5.
- **14-11.04 Dust Control:** Excavation, transportation, and handling of material containing hazardous waste or contamination must result in no visible dust migration. When clearing, grubbing, and performing earthwork operations in areas containing hazardous waste or contamination, a water truck or tank would be provided on the job site.
- **14-11-06: Contractor-Generated Hazardous Waste:** This specification provides instructions to the contractor for the management of hazardous wastes that may be generated during construction, such as petroleum materials, paints, stains, and wood preservatives. Instructions for the management of contaminated soils that may be created due to accidental leaks or spills are also included.
- **14-11.08 For Regulated Material Containing Aerially Deposited Lead:** This specification provides instructions to the contractor for the handling, management, and disposal of regulated material containing aerially deposited lead.

- **14-11.09 For Minimal Disturbance of Regulated Material Containing Aerially Deposited Lead:** This specification reserved for providing instructions to the contractor for the minimal disturbance of regulated material containing aerially deposited lead.
- **14-11.14 Treated Wood Waste:** Includes specifications for handling, storing, transporting, and disposing of treated wood waste.
- **36-4 Residue Containing Lead from Paint and Thermoplastic:** For work involving residue from grinding and cold-planing that contains lead from paint and thermoplastic.
- **84-9.03C Remove Traffic Stripes and Pavement Markings Containing Lead:** This specification includes instructions for the removal of yellow traffic stripe if the stripe would be removed using a cold plane or grinding operation.
- **Transportation Management Plan:** A standard measure implemented on every Caltrans project that prescribes specific lane closures, detour routes, public information programs, and other procedures to manage traffic flow through project work areas during construction periods. See also Section 1.4.1, Build Alternative, for additional information.

1.6 National Environmental Policy Act

This document contains information regarding compliance with the California Environmental Quality Act and other state laws and regulations. Separate environmental documentation, supporting a Categorical Exclusion determination, would be prepared in accordance with the National Environmental Policy Act. When needed for clarity, or as required by the California Environmental Quality Act, this document may contain references to federal laws and/or regulations (for example, the California Environmental Quality Act 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 1.3 Permits and Approvals Needed

Agency	Permit/Approval	Status
U.S. Army Corps of Engineers	Clean Water Act, Section 404 Nationwide Permit	A notification would be submitted during the Plans, Specifications, and Estimates phase.
Regional Water Quality Control Board	Clean Water Act, Section 401 Water Quality Certification	An application would be submitted during the Plans, Specifications, and Estimates phase.
U.S. Fish and Wildlife Service	Federal Endangered Species Act Section 7 Consultation and Programmatic Biological Opinion for the California Red-Legged Frog	Section 7 consultation has been completed, and a Programmatic Biological Opinion was issued on April 29, 2021.
California Department of Fish and Wildlife	Section 1602 Streambed Alteration Agreement	A notification would be submitted during the Plans, Specifications, and Estimates phase.
Local Landowners	Temporary Construction Easements	Formal agreements to be drafted during the Plans, Specifications, and Estimates phase.

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

Considering the information in the Chapter 1 of this Initial Study, the Draft Project Report for this project (dated April 2022), the project’s Visual Impact Assessment (dated August 2021), and the Prunedale Drainage Improvements Project Natural Environment Study (dated March 2021), 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

The project is within a segment of U.S. Route 101 that is shared by State Route 156 before State Route 156 splits off as an expressway east toward San Juan Bautista. Within the project limits, State Route 156 is not an Officially Designated State Scenic Highway but is Eligible as a State Scenic Highway. However, State Route 156 (from post mile R1.0 to post mile T5.3) is an Officially Designated State Scenic Highway near the project limits.

The existing visual character of the project area is based mostly on its generally well-vegetated roadsides, agricultural character, and hilly topography. Within view of the project limits, the four-lane highway has at-grade and separated crossings with frontage roads, bridge structures, ramps, and retaining walls that all contribute to create a more built visual environment. The developed community of Prunedale as well as the highway itself also contributes to the overall rural character of the site and its surroundings. The State Scenic Highway program places a high degree of importance on visual character as seen from roadways and other public places. As an eligible scenic route, the project limits offer publicly accessible viewpoints that provide expansive views of a highly valued landscape, which should be protected to maintain eligibility status. Scenic vistas in the vicinity of U.S. Route 101 include views of open space, combined with rolling topography and natural vegetative patterns. Distant oak-covered hills and tall eucalyptus and cypress stands add to the horizon as seen from much of the area.

Despite the more developed appearance, views from U.S. Route 101 retain a somewhat rural look, due in part to the densely vegetated hillsides and the patterns of the residential and farm development visible throughout the area. Vegetation in the area is described as mostly coast live oak woodland, willow woodland (along riparian areas), coastal scrub (chaparral), wetland (in low-lying drainage areas), and ruderal grassland with stands of eucalyptus and cypress. The topography ranges from gently sloping to steep hills cut by narrow canyons with riparian areas.

Environmental Consequences

The proposed drainage structures would be mostly below the elevation of the highway and would not block views of the surrounding hillsides and vegetation. The distant hills and trees would remain visible and would continue to contribute to the scenic vista. Therefore, the project would not have a substantial adverse effect on the scenic vistas in the project area.

Implementation of the project would result in visual changes as seen from public viewpoints along U.S. Route 101 which, where shared with State Route 156, is Eligible as State Scenic Highway within the project limits. Although most of the project elements would not be uncharacteristic for the setting, viewer sensitivity may also be heightened because of the project's location near a segment of State Route 156 that is an Officially Designated State Scenic Highway.

An increased visual scale of the highway facility would be the result mostly of the introduction of drainage structures and their associated roadway elements. While they would not be unexpected elements in the roadway environment, their increased size and contrasting appearance would make these otherwise visually neutral features potentially more noticeable and would contribute somewhat to the increased visual scale of the highway facility.

The proposed trenchless and cut-and-cover construction methods for replacing and repairing aging and degraded pipes and other infrastructure would necessitate the removal of individual trees and other vegetation at selected culvert locations. The areas of vegetation removal are generally in densely vegetated locations. With the removal of only the minimum amount of vegetation required and protection of vegetation next to the work areas, as well as revegetation of the project work areas after construction, the project would not substantially damage scenic resources in the project area as viewed from the project route.

Proposed project elements such as structures related to culvert improvements may be visible from the roadway. By themselves, these types of elements are not uncommon and would not be seen as unexpected visual elements in a highway setting. Much of the area in the vicinity of the culverts is vegetated, either with native shrubs and/or trees. The construction of access roads for construction vehicles and equipment would cause the removal of trees and

vegetation in the immediate area. As a result, these visual changes would cause a minor temporary reduction of rural character and visual quality to the immediate project area.

Project features specifically addressing visual changes would minimize the noticeability of the individual project elements and would reduce potential effects on the existing visual character. These features would preserve as much existing vegetation as possible and visibly treat concrete drainage elements, metal components related to down drains and inlets, and rock slope protection to blend with the surrounding environment and reduce reflectivity and noticeability. The specific details and methods of treatment would be determined by Caltrans District 5 Landscape Architecture. Replacement planting would include aesthetic considerations as well as the inherent biological restoration goals. Revegetation would include native trees and plants, occur at the maximum extent horticulturally viable, and be maintained until established. Following construction, all new construction staging areas and other temporary uses would be graded and contoured as necessary to match the surrounding pre-project topography. Therefore, the potential for project impacts that would substantially degrade the existing visual character or quality of public views of the site and its surroundings would be less than significant.

The project would not construct or install any infrastructure that would create a new source of light or glare that would adversely affect daytime views in the area. Lighting used for nighttime construction work would be temporary and focused on the immediate work areas. Up to 14 days of nighttime work may be required for each drainage system location. In total, nighttime work for this project is not expected to exceed 200 days, and lighting would be relocated as work progressed through the 1.5-mile-long project limits. All lighting would be shielded to prevent light spillage into the travel way or residential areas. Therefore, less than significant impacts to nighttime views due to new sources of light or glare would result from the project.

Avoidance, Minimization, and/or Mitigation Measures

Although the proposed improvements would not cause significant aesthetic impacts to the project environment, the following avoidance and minimization measures would reduce the project's effects on aesthetic and visual resources along U.S. Route 101:

- **Vegetation Preservation**—As much existing vegetation as possible will be preserved. Prescriptive clearing and grubbing and grading techniques that save the most existing vegetation possible will be used.
- **Visible Concrete Drainage Elements**—All visible concrete drainage elements (like headwalls, drain inlet aprons, and other similar elements) will be colored to blend with the surroundings and reduce reflectivity. The

specific colors of these concrete elements will be determined by the Caltrans District 5 Landscape Architecture Branch.

- **Visible Metal Components**—All visible metal components related to down drains and inlets (flared end sections, connectors, anchorage systems, safety cable systems, and other similar elements) will be darkened or colored to blend with the surrounding environment and reduce reflectivity. The specific color will be determined by the Caltrans District 5 Landscape Architecture Branch.
- **Rock Slope Protection**—All visible rock slope protection will be placed in natural-appearing shapes rather than in geometric patterns to the greatest extent possible to reduce its engineered appearance. Following placement of rock slope protection, the visible rock will be colored to blend with the surroundings and reduce reflectivity. The specific color will be determined by Caltrans District 5 Landscape Architecture.
- **Replacement Planting and Revegetation**—Replacement planting will include aesthetic considerations as well as the inherent biological goals. Revegetation will include native trees and plants as determined by the Caltrans Biologist and Caltrans District 5 Landscape Architecture Branch. Revegetation will occur at the maximum extent horticulturally viable and be maintained until established.
- **Grading and Contouring**—Following construction, all new construction staging areas and other temporary uses will be graded and contoured as necessary to match the surrounding pre-project topography.

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.

Considering the information in the California Department of Conservation's Farmland Mapping and Monitoring Program (dated 2016), the Farmland Map of Northern Monterey County, the Monterey County Williamson Act Lands Map,

the 2010 Monterey County General Plan, and Title 21 (Zoning) of the Monterey County Code, 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 non-agricultural 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 non-agricultural use or conversion of forest land to non-forest use?	Less Than Significant Impact

Affected Environment

There are no lands designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the project limits. Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. Unique Farmland is land other than Prime Farmland that is used for the production of specific high-value food and fiber crops, such as citrus, tree nuts, olives, cranberries, and other fruits and vegetables. Farmland of Statewide Importance under the Farmland Protection Policy Act is land that meets specific criteria based on the physical and chemical properties of the soils, and the climatic environment of soil occurrence. It has the soil quality, growing season, and moisture supply needed to economically produce

sustained yields of crops when treated and managed, including water management (irrigation and drainage), according to acceptable farming methods. Surrounding soils do not meet the physical and chemical criteria for Prime Farmland, Unique Farmland, or Farmland of Statewide Importance as determined by the U.S. Department of Agriculture Natural Resources Conservation Service.

Within the project limits, properties suitable for and locally zoned as Rural Grazing sit just east of the U.S. Route 101 right-of-way. The purpose of the Rural Grazing zone district is to preserve and enhance the use of productive grazing lands in the county of Monterey while also providing the opportunity to establish support facilities for grazing uses and clustered residential uses. There is no 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)) within the project limits.

Environmental Consequences

The project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use, since these types of properties are not within the project limits.

As listed in Table 2.1 (Temporary Easements on Grazing Lands), the project would require up to seven temporary construction easements on a total of five properties zoned as Rural Grazing and ranging in size from 2.3 acres up to 108 acres. These easements would be needed for access to create entry and exit pits for pipe jacking, remove silt, and regrade drainage channels. The temporary construction easements would be minimal and limited to the required work area and duration of construction. Entry and exit pits for pipe jacking would be filled once the work is complete.

The temporary easements would occur at the edge of the properties and would not occupy more than 1.3 percent of any affected property. Because the use of these properties would be minimal in area and temporary (for a short duration), the potential for impacts to result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use would be less than significant. None of the affected properties is subject to a Williamson Act contract. The project would not change the existing uses or introduce new land uses to properties with existing zoning for agricultural use.

The project would not conflict with existing zoning of, 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)) because these types of properties are not within the project

limits. For the same reason, the project would not result in the loss of forest land or conversion of forest land to non-forest use.

Table 2.1 Temporary Easements on Grazing Lands

Assessor Parcel Number/Site Address	Purpose for Easement	Estimated Easement Area in Square Feet (in Acres)	Total Parcel Area in Square Feet (in Acres)	Percent of Total Parcel Area
125-251-002 / None Listed	Access to replace culvert and regrade channel	7,354.2 (0.17)	2,731,212.0 (62.70)	0.27
125-261-007 / None Listed	Access to replace culvert	2613.6 (0.06)	4,704,480.0 (108.00)	0.06
125-261-002 / 1923 Highway 101 Aromas, CA 95004	Access to regrade channel	4,356 (0.10)	4,179,146.4 (95.94)	0.10
125-261-009 / 276 Dunbarton Road Aromas, CA 95004	Access to replace culvert	1,306.8 (0.03)	100,188.0 (2.30)	1.30
125-261-016 / 1943 Highway 101 Aromas, CA 95004	Access to replace culvert	6,534.8 (0.15)	829,382.4 (19.04)	0.79

Avoidance, Minimization, and/or Mitigation Measures

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

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 on to make the following determinations.

Considering the information in Chapter 1 of this Initial Study, the Draft Project Report for this project (dated April 29, 2022), the project’s Air Quality, Greenhouse Gas, Noise Technical Assessment Memo (dated August 9, 2021), and the Monterey Bay Air Resources District’s Guidelines for Implementing the California Environmental Quality Act (2015), 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?	Less Than Significant Impact

Question—Would the project:	CEQA Significance Determinations for Air Quality
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?	Less Than Significant 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?	Less Than Significant Impact

Affected Environment

The project is in the North Central Coast Air Basin, which includes Monterey County, Santa Cruz County, and San Benito County. The Monterey Bay Air Resources District regulates air quality in the North Central Coast Air Basin. This region is considered in attainment for all National Ambient Air Quality Standards, non-attainment transitional for state ambient air quality standards for ozone, and non-attainment for airborne particulate matter less than 10 microns in diameter. Ozone is a molecule made up of three oxygen atoms and is formed by the interaction of sunlight with emissions of nitrogen oxides, carbon monoxide, volatile organic compounds, and methane. Particulate matter (also called particle pollution) is the term for a mix of solid particles and liquid droplets found in the air. Some particles, such as dust, dirt, soot, or smoke, are large or dark enough to be seen with the naked eye. Others are so small they can be detected using only an electron microscope.

Environmental Consequences

The project’s improvements to existing drainage systems would not increase vehicle capacity, increase the number of lanes, or change the alignment of the highway. Therefore, there would be no change in long-term air emissions as a result of the improvements to the project route. Projects that do not further degrade air quality in the North Central Coast Air Basin are consistent with the Monterey Bay Air Resources District’s adopted state air quality attainment goals, as stated in its 2012-15 Air Quality Management Plan (adopted March 15, 2017).

With almost every construction project, there would be a short-term, temporary increase in air emissions and fugitive dust during the construction period. 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 the culvert replacement. Little to no dust generation would be expected from the earthwork component of this project. Section 14-9.02 (Air Pollution Control) of the Standard Specifications states that the construction contractor is responsible for complying with all local air pollution control rules, regulations, ordinances, and statutes that apply to work performed under the project's contract, in accordance with Government Code Section 11017 (Public Contract Code Section 10231). By incorporating appropriate engineering design and storm water Best Management Practices during construction, minimal short-term air quality impacts would be anticipated.

While the Monterey Bay Air Resources District does have established daily construction emission thresholds for many types of projects, small highway projects like this one do not fit into the district's typical purview of jurisdiction, which typically includes residential, commercial, and industrial projects. Due to use of standard construction dust and emission minimization practices and procedures specified in Section 1.5, Standard Measures and Best Management Practices, it is anticipated that project emissions of particulate matter (dust) and equipment emissions would be well within the Monterey Bay Air Resources District's daily thresholds.

According to the Monterey Bay Air Resources District's Guidelines for Implementing the California Environmental Quality Act (2015), a proposed project would not have a significant air quality effect on the environment if construction of the project will emit from all sources, including exhaust and fugitive dust, less than:

- 137 pounds per day of oxides of nitrogen
- 137 pounds per day of reactive organic gases
- 82 pounds per day of respirable particulate matter (less than 10 microns)
- 55 pounds per day of fine particulate matter (less than 2.5 microns)
- 550 pounds per day carbon monoxide

The project's construction emissions were estimated using the Caltrans Construction Emissions Tool (2020) and are listed in Table 2.2 (Estimated Project Construction Emissions).

Table 2.2 Estimated Project Construction Emissions

Types of Emissions	Oxides of Nitrogen	Reactive Organic Gases	Particulate Matter, less than 10 microns	Particulate Matter, less than 2.5 microns	Carbon Monoxide
Daily Average	11.932 pounds	1.802 pounds	3.185 pounds	1.121 pounds	5.525 pounds
Maximum Daily Average	13.476 pounds	2.040 pounds	60.624 pounds	6.172 pounds	5.945 pounds
Annual Average	0.716 tons	0.108 tons	0.191 tons	0.067 tons	0.331 tons

Therefore, the project would not conflict with or obstruct the Monterey Bay Air Resources District’s air quality plan, and impacts would be less than significant. Impacts that would 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 would be less than significant.

The project’s improvements to existing drainage systems would not result in the emissions of any long-term pollutant concentrations. There would be no long-term operational air quality impacts because the project would not increase vehicle capacity within the project limits. Project emissions and fugitive dust would be generated during construction activities but would be temporary. Construction is estimated to take 240 working days over a staged, one-year construction schedule and is expected to progress quickly once the construction contract is awarded. Standard provisions included for all Caltrans projects would address potential emissions generated by construction equipment, grading activities, and various construction materials. Due to the small scope of work and its location, impacts associated with the exposure of sensitive receptors to substantial pollutant concentrations would be less than significant.

The project’s improvements to existing drainage systems along U.S. Route 101 would not result in permanent, long-term local or regional air quality impacts due to ongoing emissions from traffic along the project route (such as those leading to odors). However, certain construction activities, such as demolition, excavation, grading, construction, and paving, could generate temporary odors. Standard provisions included for all Caltrans projects would address potential emissions generated by construction equipment, grading activities, and various construction materials. Due to the small scope of work, its location, and limited duration, impacts potentially resulting in other emissions (such as those leading to odors) adversely affecting a substantial number of people would be less than significant.

Avoidance, Minimization, and/or Mitigation Measures

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

2.1.4 Biological Resources

Considering the information in the Natural Environment Study (dated December 2021) and Jurisdictional Delineation (dated March 2021), 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
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 with Mitigation Incorporated
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?	Less Than Significant Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Less Than Significant 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

Biological Study Areas were determined for each of the proposed drainage system locations. The Biological Study Areas include the proposed construction work areas, any associated access roads and staging areas, and nearby potential habitat areas. Therefore, the Biological Study Areas are somewhat larger than the anticipated construction footprint to ensure evaluation of all potential effects on the biological resources at those locations. The collective study areas within the entire project limits along U.S. Route 101 are referred to as the Biological Study Area of the project.

Special-status species include those that are 1) federally or state listed as endangered, threatened, or rare; 2) candidates for federal or state listing as endangered, threatened or rare; 3) proposed for federal or state listing as endangered, threatened, or rare; or, 4) considered special concern species by the federal government (that is, former U.S. Fish and Wildlife Federal Species of Concern) and the California Department of Fish and Wildlife (that is, California Species of Special Concern), or those that appear on the California Natural Diversity Database (2021) Special Animals List. Sensitive species also include those afforded protection or considered sensitive under various laws (for example, National Environmental Policy Act, California Environmental Quality Act, Migratory Bird Treaty Act) or under sections of the California Fish and Game Code (for example, nesting birds), and those species recognized as locally important or sensitive by the California Native Plant Society or the scientific community.

Sensitive natural communities/habitats include those that are regulated or considered sensitive by federal, state, and/or local agencies or the National Environmental Policy Act and California Environmental Quality Act. The known occurrences of sensitive species have been inventoried and mapped, to varying degrees of accuracy, by the California Natural Diversity Database (2021). The search area for this project includes the following U.S. Geological Survey 7.5-Minute Quadrangles: Watsonville East, Chittenden, Prunedale, San Juan Bautista, Salinas, and Natividad.

Natural Communities

Nine land cover types and vegetation communities occur in the Biological Study Area of the project: developed, landscaped/residential, agriculture, ruderal, coast live oak woodland, coastal scrub, willow woodland, freshwater wetland, and stream.

Much of the Biological Study Area of the project is developed, including paved highway, gravel shoulders, streets, and urban areas totaling approximately 19.425 acres. Areas within the Biological Study Area of the project mapped as landscaped/residential occur in areas where medians or interchange spaces were planted for landscaping or residential properties with ornamental planted species and homes. Landscaped/residential accounts for

approximately 0.507 acre of the project's Biological Study Area. Portions of the Biological Study Area of the project extend into agricultural areas, including orchard, fallow fields, and pasture totaling approximately 0.222 acre.

The coast live oak woodland within the Biological Study Area of the project is dominated by coast live oak (*Quercus agrifolia*), which grows in varying densities and typically has an understory of poison oak (*Toxicodendron diversilobum*), California blackberry (*Rubus ursinus*), Italian thistle (*Carduus pycnocephalus*) and non-native annual grasses such as ripgut brome (*Bromus diandrus*) and foxtail barley (*Hordeum murinum*). It occurs throughout the project's Biological Study Area. Coast live oak woodland within the Biological Study Area of the project totals approximately 2.657 acres. All areas of the project's Biological Study Area are immediately adjacent to the highway and therefore do not support high quality habitat for most wildlife species. Although present, birds were observed in low density, and species diversity was low, presumably due to highway noise. The most common bird species observed in coast live oak woodland was the California scrub jay (*Aphelocoma californica*).

In some areas of the project's Biological Study Area, the willow woodland habitat resembles more of a willow thicket community and in other areas Pacific willow (*Salix lasiandra*), red willow (*Salix laevigata*), and black cottonwood (*Populus trichocarpa*) are mixed with arroyo willow (*Salix lasiolepis*) at lower densities and form a forest/woodland alliance. Also, some areas mapped as willow woodland are associated with a stream and therefore riparian, whereas other mapped areas do not have an associated stream, but conditions are moist enough to support willows. In moister areas, understory species of the willow woodland community included nutsedge (*Cyperus eragrostis*), slender willow herb (*Epilobium ciliata*), and water parsley (*Oenanthe sarmentosa*). In drier areas, understory species typically included poison oak and California blackberry. Willow woodland within the project's Biological Study Area totals 4.821 acres. Carneros Creek crosses through the Biological Study Area of the project multiple times between post miles 99.0 to 100.4. Willow woodland habitat along the creek provides higher quality wildlife habitat than other areas of the project's Biological Study Area, especially in those areas that are not periodically cleared of vegetation. Wildlife observed in willow woodland habitat includes Pacific-slope flycatcher (*Empidonax difficilis*), song sparrow (*Melospinza melodia*), oak titmouse (*Baeolophus inornatus*), and black-headed grosbeak (*Pheucticus melanocephalus*).

Coastal scrub habitat within the Biological Study Area of the project is dominated by poison oak (*Toxicodendron diversilobum*) and includes coyote brush (*Baccharis pilularis*) and poison hemlock (*Conium maculatum*). Coastal scrub within the Biological Study Area of the project totals 0.608 acre. Coastal scrub habitat supports moderate quality habitat for various wildlife species such as California towhee (*Melospiza crissalis*), spotted towhee (*Pipilo maculatus*), and wrentit (*Chamaea fasciata*).

Ruderal/disturbed vegetation flanks the edges of U.S. Route 101 throughout the entire Biological Study Area. This habitat is dominated by weedy species such as ripgut brome (*Bromus diandrus*), wild radish (*Raphanus sativus*), mustard (*Brassica nigra*), Italian thistle (*Carduus pycnocephalus*), wild oat (*Avena barbata*), dove's foot geranium (*Geranium molle*) and French broom (*Genista monspessulana*). Ruderal habitat within the Biological Study Area of the project totals 0.878 acre. These areas are subjected to routine disturbance from maintenance and vehicle traffic and have minimal potential to support habitat for sensitive species.

Potential Jurisdictional Areas

Wetlands, Other Waters, and Riparian

Jurisdictional U.S. Army Corps of Engineers wetlands include areas 1) where all three wetland parameters (that is, hydrophytic vegetation, hydric soil, and wetland hydrology) are present, and 2) are either confined within the Ordinary High Water Mark of a drainage feature or exhibit a nexus/connectivity to jurisdictional waters. For the purposes of this evaluation, Regional Water Quality Control Board jurisdiction is treated as equivalent to U.S. Army Corps of Engineers jurisdiction for Clean Water Act Section 401/404 permitting purposes. California Department of Fish and Wildlife jurisdiction encompasses rivers, streams, and lakes extending from the lowest bed elevation to the top of the surrounding banks and/or outer edge of adjacent riparian vegetation, whichever is greater.

Agency jurisdictional areas are listed separately in Table 2.3 (U.S. Army Corps of Engineers Jurisdictional Areas), Table 2.4 (Regional Water Quality Control Board Jurisdictional Areas), and Table 2.5 (California Department Fish and Wildlife Jurisdictional Areas).

Table 2.3 U.S. Army Corps of Engineers Jurisdictional Areas

Jurisdictional Area in the Project's Biological Study Area	Area in Square Feet	Area in Acres
Clean Water Act Wetlands	10,220	0.237
Stream (Other Waters)	18,315	0.420
Total Jurisdiction Area	28,535	0.655

Table 2.4 Regional Water Quality Control Board Jurisdictional Areas

Jurisdictional Area in the Project's Biological Study Area	Area in Square Feet	Area in Acres
Clean Water Act Wetlands	10,220	0.237
Stream	18,315	0.420
Vegetated Riparian	210,358	4.829
Unvegetated Riparian/Streambank	4,190	0.096
Total Jurisdiction Area	243,083	5.580

Table 2.5 California Department Fish and Wildlife Jurisdictional Areas

Jurisdictional Area in the Project's Biological Study Area	Area in Square Feet	Area in Acres
Wetlands	7,736	0.18
Stream	18,315	0.420
Vegetated Riparian	210,358	4.829
Unvegetated Riparian/Streambank	4,190	0.096
Total Jurisdiction Area	240,599	5.523

Caltrans mapped nine freshwater wetlands within the project's Biological Study Area. Most of the wetlands are riverine emergent wetlands associated with a waterway, but there are also palustrine emergent wetlands in low depressions and swales along U.S. Route 101 within the Biological Study Area of the project. Freshwater wetlands within the project's Biological Study Area total 0.237 acre. Common plant species observed within freshwater wetlands in the project's Biological Study Area include slender willow herb, common horsetail (*Equisetum arvense*), Harding grass (*Phalaris aquatica*), tall flatsedge, poison hemlock (*Conium maculatum*), water parsley, American dogwood (*Cornus sericea*), and arroyo willow. Some freshwater wetlands are highly degraded, dominated by weedy species or non-natives such as poison hemlock, calla lily (*Zantedeschia aethiopica*), and curly dock (*Rumex crispus*) and support minimal habitat value due to their proximity to the highway and roadside runoff. Other wetlands, especially those surrounded by a well-developed riparian woodland, contained more native vegetation and have overall higher hydrologic and habitat values. Wildlife observed within the

freshwater wetlands included the Sierran tree frog (*Pseudacris sierra*) and song sparrow (*Melospinza melodia*).

The project's Jurisdictional Delineation Report mapped 20 other waters within the project's 1.5-mile-long Biological Study Area. Generally, these areas are unvegetated waterways distinguished by the presence of an Ordinary High Water Mark. All other waters delineated display evidence of a bed, with gravel sorting, and bank, with some combination of topographic break, change in particle size distribution, and a transition in vegetation density and hydric tolerance. Together, these features display evidence of flow within the channel. Several locations are highly modified ephemeral or intermittent drainages. Streams within the project's Biological Study Area total 0.409 acre. Carneros Creek supports more stable riparian conditions that provide habitat for aquatic species such as Coast Range newt (*Taricha torosa*). Some of the mapped other waters/streams have associated jurisdictional riparian vegetation.

Special-Status Plant Species

Botanical surveys were conducted within the project's Biological Study Area during 2020 on February 4 and 25, March 30, April 22 and 28, May 5, 11 and 28, June 18, and July 9. The California Natural Diversity Database (2021) documents 36 special-status plant species (federally listed, state listed, and/or California Native Plant Species California Rare Plant Rank of 1B, 2, or 4) as occurring within the search area. The official federal species list for the vicinity of the project area received from U.S. Fish and Wildlife Service included one additional federally listed species (see Table 2.6). Several other plant species were added to Table 2.6 (Plant Species Potentially within the Biological Study Areas) based on results of a California Native Plant Species Rare Plant Inventory search of the same quadrangles listed.

The names and legal status of each of the special-status plant species considered are included in Table 2.6, with a general description of the habitat requirements for each. Also included is a determination whether suitable habitat is present or absent, whether the species is present, and/or whether the project's Biological Study Area is located within a federally designated critical habitat unit. The rationale section summarizes the potential for each species to occur in the project's Biological Study Area or be affected by the project. Where suitable habitat is absent, it is assumed that the species does not occur within the project's Biological Study Area. Where suitable habitat is present, but species were not detected during appropriately timed floristic surveys, it is assumed that the species does not occur within the Biological Study Area of the project.

Table 2.6 Special-Status Plant Species within the Biological Study Areas

Species Common Name (Latin Name)	Status	Species and Habitat Presence in the Biological Study Area - Determination Rationale
Vernal pool bent grass (<i>Agrostis lacunavernalis</i>)	California Rare Plant Rank 1B.1	Absent - Suitable vernal pool habitat is not present.
Hickman's onion (<i>Allium hickmanii</i>)	California Rare Plant Rank 1B.2	Habitat Present - Marginally suitable habitat is present. Hickman's onion was not detected during appropriately timed botanical surveys.
Anderson's manzanita (<i>Arctostaphylos andersonii</i>)	California Rare Plant Rank 1B.2	Absent - Suitable redwood habitat is not present.
Hooker's manzanita (<i>Arctostaphylos hookeri subspecies hookeri</i>)	California Rare Plant Rank 1B.2	Habitat Present - Suitable habitat is present. Hooker's manzanita was not detected during appropriately timed botanical surveys.
Monterey/Toro manzanita (<i>Arctostaphylos montereyensis</i>)	California Rare Plant Rank 1B.2	Habitat Present - Suitable habitat is present. Monterey manzanita was not detected during appropriately timed botanical surveys.
Pajaro manzanita (<i>Arctostaphylos pajaroensis</i>)	California Rare Plant Rank 1B.1	Absent - Suitable chaparral habitat is not present.
Sandmat manzanita (<i>Arctostaphylos pumila</i>)	California Rare Plant Rank 1B.2	Habitat Present - Suitable habitat is present. Sandmat manzanita was not detected during appropriately timed botanical surveys.
King's Mountain manzanita (<i>Arctostaphylos regismontana</i>)	California Rare Plant Rank 1B.2	Absent - Suitable habitat and granitic or sandstone outcrops are not present.
Marsh sandwort (<i>Arenaria paludicola</i>)	Federal Endangered / State Endangered / California Rare Plant Rank 1B.1	Habitat Present - Marginally suitable habitat may be present in freshwater wetlands. Marsh sandwort was not detected during appropriately timed botanical surveys. The project would have no effect on marsh sandwort and take would not occur.
Alkali milk-vetch (<i>Astragalus tener variety tener</i>)	California Rare Plant Rank 1B.2	Absent - Suitable alkali habitat is not present.
Pink johnny-nip (<i>Castilleja ambigua variety insalutata</i>)	California Rare Plant Rank 1B.1	Absent - Suitable coastal bluff or coastal prairie habitat is not present.

Species Common Name (Latin Name)	Status	Species and Habitat Presence in the Biological Study Area - Determination Rationale
Monterey Indian paintbrush (<i>Castilleja latifolia</i>)	California Rare Plant Rank 4.3	Habitat Present - Suitable habitat is present. Monterey Indian paintbrush was not detected during appropriately timed botanical surveys.
Pink creamsacs (<i>Castilleja rubicundula variety rubicundula</i>)	California Rare Plant Rank 1B.2	Absent - Suitable serpentine sites are not present.
Monterey ceanothus (<i>Ceanothus rigidus</i>)	California Rare Plant Rank 4.2	Habitat Present - Suitable habitat is present. Monterey ceanothus was not detected during appropriately timed botanical surveys.
Congdon's tarplant (<i>Centromadia parryi subspecies congdonii</i>)	California Rare Plant Rank 1B.1	Absent - Suitable alkaline soils are not present.
Purple amole (<i>Chlorogalum purpureum variety purpureum</i>)	Federal Threatened / Critical Habitat / California Rare Plant Rank 1B.1	Habitat Present - Suitable habitat is present. Purple amole was not detected during appropriately timed botanical surveys. The project would have no effect on purple amole.
Douglas' spineflower (<i>Chorizanthe douglasii</i>)	California Rare Plant Rank 4.3	Habitat Present - Suitable habitat is present. Douglas' spineflower was not detected during appropriately timed botanical surveys.
Fort Ord spineflower (<i>Chorizanthe minutiflora</i>)	California Rare Plant Rank 1B.2	Habitat Present - Marginally suitable habitat is present. Fort Ord spineflower was not detected during appropriately timed botanical surveys.
Monterey spineflower (<i>Chorizanthe pungens variety pungens</i>)	Federal Threatened / Critical Habitat / California Rare Plant Rank 1B.2	Habitat Present - Marginally suitable habitat is present. Occurrences are recorded nearby in chaparral habitat along Echo Valley Road. Monterey spineflower was not detected during appropriately timed botanical surveys. The project would have no effect on Monterey spineflower.
Robust spineflower (<i>Chorizanthe robusta var. robusta</i>)	Federal Endangered / Critical Habitat / California Rare Plant Rank 1B.1	Habitat Present - Suitable habitat is present. Robust spineflower was not detected during appropriately timed botanical surveys. The project would have no effect on robust spineflower.
Jolon clarkia (<i>Clarkia jolonensis</i>)	California Rare Plant Rank 1B.2	Habitat Present - Suitable habitat is present. Jolon clarkia was not detected during appropriately timed botanical surveys.

Species Common Name (Latin Name)	Status	Species and Habitat Presence in the Biological Study Area - Determination Rationale
Lewis' clarkia (<i>Clarkia lewisii</i>)	California Rare Plant Rank 4.3	Habitat Present - Suitable habitat is present. Lewis' clarkia was not detected during appropriately timed botanical surveys.
Seaside bird's-beak (<i>Cordylanthus rigidus subspecies</i>)	State Endangered / California Rare Plant Rank 1B.1	Habitat Present - Marginally suitable habitat is present. Seaside bird's-beak was not detected during appropriately timed botanical surveys. The project would not result in take of seaside bird's-beak.
Branching beach aster (<i>Corethrogyne leucophylla</i>)	California Rare Plant Rank 3.2	Absent - Suitable closed-cone coniferous forest or coastal dune habitat is not present. Occurrences of the species are recorded nearby in grassland habitat. Branching beach aster was not detected during appropriately timed botanical surveys.
Hutchinson's larkspur (<i>Delphinium hutchinsoniae</i>)	California Rare Plant Rank 1B.2	Habitat Present - Suitable habitat is present. Hutchinson's larkspur was not detected during appropriately timed botanical surveys.
Virgate eriastrum (<i>Eriastrum virgatum</i>)	California Rare Plant Rank 4.3	Habitat Present - Suitable habitat is present. Virgate eriastrum was not detected during appropriately timed botanical surveys.
Eastwood's goldenbush (<i>Ericameria fasciculata</i>)	California Rare Plant Rank 1B.1	Habitat Present - Marginally suitable habitat is present. Eastwood's goldenbush was not detected during appropriately timed botanical surveys.
Pinnacles buckwheat (<i>Eriogonum nortonii</i>)	California Rare Plant Rank 1B.3	Absent - Suitable chaparral or grassland habitat is not present.
Hoover's button celery (<i>Eryngium aristulatum variety hooveri</i>)	California Rare Plant Rank 1B.1	Absent - Suitable vernal pool habitat or alkaline conditions are not present.
Sand-loving wallflower (<i>Erysimum ammophilum</i>)	California Rare Plant Rank 1B.2	Habitat Present - Suitable habitat is present. Sand-loving wallflower was not detected during appropriately timed botanical surveys.
Fragrant fritillary (<i>Fritillaria liliacea</i>)	California Rare Plant Rank 1B.2	Habitat Present - Suitable habitat is present. Fragrant fritillary was not detected during appropriately timed botanical surveys.
Spreading slender flowered gilia (<i>Gilia tenuiflora subspecies amplifaucalis</i>)	California Rare Plant Rank 4.3	Habitat Present - Suitable habitat is present. Spreading slender flowered gilia was not detected during appropriately timed botanical surveys.

Species Common Name (Latin Name)	Status	Species and Habitat Presence in the Biological Study Area - Determination Rationale
Monterey gilia (<i>Gilia tenuiflora subspecies arenaria</i>)	Federal Endangered / State Threatened / California Rare Plant Rank 1B.2	Absent - Suitable dune habitat is not present.
San Francisco gumplant (<i>Grindelia hirsutula variety maritima</i>)	California Rare Plant Rank 3.2	Habitat Present - Suitable habitat is present. San Francisco gumplant was not detected during appropriately timed botanical surveys.
Gowen cypress (<i>Hesperocyparis goveniana</i>)	Federal Threatened / California Rare Plant Rank 1B.2	Absent - Suitable coastal terrace with closed-cone coniferous forest or maritime chaparral habitat are not present.
Loma Prieta hoita (<i>Hoita strobilina</i>)	California Rare Plant Rank 1B.1	Habitat Present - Suitable habitat is present. Loma Prieta hoita was not detected during appropriately timed botanical surveys.
Santa Cruz tarplant (<i>Holocarpha macradenia</i>)	Federal Threatened / State Endangered / Critical Habitat / California Rare Plant Rank 1B.1	Habitat Present - Suitable habitat is present. Santa Cruz tarplant was not detected during appropriately timed botanical surveys. The project would have no effect on Santa Cruz tarplant, and no take would occur.
Kellogg's horkelia (<i>Horkelia cuneata variety sericea</i>)	California Rare Plant Rank 1B.1	Absent - Suitable dune habitat is not present.
Coast iris (<i>Iris longipetala</i>)	California Rare Plant Rank 4.2	Absent - Suitable coastal prairie habitat is not present.
Contra Costa goldfields (<i>Lasthenia conjugens</i>)	Federal Endangered / California Rare Plant Rank 1B.1	Habitat Present - Suitable habitat is present. Contra Costa goldfields were not detected during appropriately timed botanical surveys. The project would have no effect on Contra Costa goldfields.
Legenere (<i>Legenere limosa</i>)	California Rare Plant Rank 1B.1	Absent - Suitable vernal pool habitat is not present.
Woolly-headed lessingia (<i>Lessingia hololeuca</i>)	California Rare Plant Rank 3	Absent - Suitable habitat and soils are not present.
Small-leaved lomatium (<i>Lomatium parvifolium</i>)	California Rare Plant Rank 4.2	Habitat Present - Suitable habitat is present. Small-leaved lomatium was not detected during appropriately timed botanical surveys.
Indian Valley bush-mallow (<i>Malacothamnus aboriginum</i>)	California Rare Plant Rank 1B.2	Absent - Suitable granitic outcrops and sandy bare soils are not present.

Species Common Name (Latin Name)	Status	Species and Habitat Presence in the Biological Study Area - Determination Rationale
Carmel Valley bush-mallow (<i>Malacothamnus palmeri</i> variety <i>involucratus</i>)	California Rare Plant Rank 1B.2	Absent - Suitable talus hilltops and serpentine soils are not present.
Santa Lucia Bush-mallow (<i>Malacothamnus palmeri</i> var. <i>palmeri</i>)	California Rare Plant Rank 1B.2	Absent - Suitable chaparral habitat is not present.
Carmel Valley cliff aster (<i>Malacothrix saxatilis</i> variety <i>arachnoidea</i>)	California Rare Plant Rank 1B.2	Absent - Suitable chaparral habitat and rocky outcrops are not present.
Mt. Diablo cottonweed (<i>Micropus amphiboles</i>)	California Rare Plant Rank 3.2	Habitat Present - Suitable habitat is present within the Biological Study Area. Mt. Diablo cottonweed was not detected during appropriately timed botanical surveys.
Marsh scorzonella (<i>Microseris paludosa</i>)	California Rare Plant Rank 1B.2	Habitat Present - Suitable habitat is present. Marsh scorzonella was not detected during appropriately timed botanical surveys.
Northern curly-leaved monardella (<i>Monardella sinuata</i> subspecies <i>nigrescens</i>)	California Rare Plant Rank 1B.2	Habitat Present - Suitable habitat is present. Northern curly-leaved monardella was not detected during appropriately timed botanical surveys.
Woodland Monolopia (<i>Monolopia gracilens</i>)	California Rare Plant Rank 1B.2	Absent - Suitable serpentine soils are not present.
Dudley's lousewort (<i>Pedicularis dudleyi</i>)	State Rare / California Rare Plant Rank 1B.2	Absent - Suitable micro-habitat of older coast redwood forest is not present.
Gairdner's yampah (<i>Perideridia gairdneri</i> subspecies <i>gairdneri</i>)	California Rare Plant Rank 4.2	Absent - Suitable vernal mesic habitat is not present.
Monterey pine (<i>Pinus radiata</i>)	California Rare Plant Rank 1B.1	Absent - No native stands are present. Existing trees are ornamental/planted.
Michael's rein orchid (<i>Piperia michaelii</i>)	California Rare Plant Rank 4.2	Habitat Present - Suitable habitat is present. Michael's rein orchid was not detected during appropriately timed botanical surveys.
Yadon's rein orchid (<i>Piperia yadonii</i>)	Federal Endangered / California Rare Plant Rank 1B.1	Habitat Present - Marginally suitable habitat is present. Yadon's rein orchid was not detected during appropriately timed botanical surveys. The project would have no effect on Yadon's rein orchid.

Species Common Name (Latin Name)	Status	Species and Habitat Presence in the Biological Study Area - Determination Rationale
Choris' popcornflower (<i>Plagiobothrys chorisianus variety chorisianus</i>)	California Rare Plant Rank 1B.2	Habitat Present - Suitable habitat is present. Choris' popcornflower was not detected during appropriately timed botanical surveys.
Hickman's popcornflower (<i>Plagiobothrys chorisianus variety hickmanii</i>)	California Rare Plant Rank 4.2	Habitat Present - Marginally suitable habitat is present. Hickman's popcornflower was not detected during appropriately timed botanical surveys.
San Francisco popcornflower (<i>Plagiobothrys diffuses</i>)	State Endangered / California Rare Plant Rank 1B.1	Absent - Suitable marine-influenced grassland habitat is not present.
Hickman's cinquefoil/potentilla (<i>Potentilla hickmanii</i>)	Federal Endangered / State Endangered / California Rare Plant Rank 1B.1	Habitat Present - Suitable habitat is present. Hickman's cinquefoil was not detected during appropriately timed botanical surveys. The project would have no effect on Hickman's cinquefoil, and no take would occur.
California alkali grass (<i>Puccinellia simplex</i>)	California Rare Plant Rank 1B.2	Absent - Suitable alkaline and vernal mesic conditions are not present.
Pine rose (<i>Rosa pinetorum</i>)	California Rare Plant Rank 1B.2	Habitat Present - Suitable habitat is present. Pine rose was not detected during appropriately timed botanical surveys.
Santa Cruz microseris (<i>Stebbinsoseris decipiens</i>)	California Rare Plant Rank 1B.2	Habitat Present - Suitable habitat is present. Santa Cruz microseris was not detected during appropriately timed botanical surveys.
Most beautiful jewelflower (<i>Streptanthus albidus subspecies peramoenus</i>)	California Rare Plant Rank 1B.2	Absent - Suitable serpentine outcrops are not present.
Santa Cruz clover (<i>Trifolium buckwestiorum</i>)	California Rare Plant Rank 1B.1	Absent - Suitable moist grassland habitat is not present.
Saline clover (<i>Trifolium hydrophilum</i>)	California Rare Plant Rank 1B.2	Absent - Suitable alkaline sites are not present.
Pacific Grove clover (<i>Trifolium polyodon</i>)	State Rare / California Rare Plant Rank 1B.1	Absent - Suitable grassy habitat with springs and seeps is not present.

Within the project's Biological Study Area, suitable habitat was present for 36 special-status plant species. However, no special-status plant species or designated Critical Habitat for special-status plant species was found during appropriately timed floristic and botanical surveys.

Special-Status Animal Species

Wildlife surveys of the project’s Biological Study Area were conducted by Caltrans biologists in 2020 on February 4 and 25, March 30, April 22 and 28, May 5, 11 and 28, June 18, July 9, and October 7. The California Natural Diversity Database (2021) documents 35 special-status animal species (federally listed, state-listed, California Fully Protected, Special Species of Concern, California Natural Diversity Database Special Animals, and/or protected by the Migratory Bird Treaty Act and the California Fish and Game Code) occurring in the search area. The official federal species list for the vicinity of the project area, received from the U.S. Fish and Wild Service, included three additional federally listed species.

The names and legal status of each of the special-status animal species are identified in Table 2.7 (Special-Status Animal Species Potentially Found in the Biological Study Areas). Also included is a determination whether suitable habitat is present or absent, whether the species is present, and/or whether the project’s Biological Study Area is within a federally designated critical habitat unit.

Table 2.7 Special-Status Animal Species in the Biological Study Areas

Species Common Name (Latin Name)	Status	Species and Habitat Presence in the Biological Study Area - Determination Rationale
California tiger salamander (<i>Ambystoma californiense</i>)	Federal Threatened / State Threatened / California Natural Diversity Database Special Animal	Absent - No suitable breeding habitat occurs. The project’s Biological Study Area is unlikely to provide dispersal habitat. The project would have no effect on the California tiger salamander, and no take of this species would occur.
Santa Cruz long-toed salamander (<i>Ambystoma macrodactylum croceum</i>)	Federal Endangered / State Endangered / Fully Protected	Absent - The project is outside the known range of the Santa Cruz long-toed salamander. The project would have no effect on the Santa Cruz long-toed salamander, and no take of this species would occur.
Santa Cruz black salamander (<i>Aneides niger</i>)	California Species of Special Concern	Absent - The project is outside the known range of the Santa Cruz black salamander.
California giant salamander (<i>Dicamptodon ensatus</i>)	California Species of Special Concern	Absent - Suitable coastal mountainous stream habitat is not present.
Foothill yellow-legged frog (<i>Rana boylei</i>)	State Threatened / California Species of Special Concern	Absent - Suitable rocky stream habitat is not present. The project would not result in take of the foothill yellow-legged frog.

Species Common Name (Latin Name)	Status	Species and Habitat Presence in the Biological Study Area - Determination Rationale
California red-legged frog (<i>Rana draytonii</i>)	Federal Threatened / California Species of Special Concern, California Natural Diversity Database Special Animal	Habitat Present - Suitable habitat is present. California red-legged frog occurrences are recorded from Carneros Creek near the project's Biological Study Area; therefore, its presence is inferred. The project may affect and is likely to adversely affect the California red-legged frog.
Western spadefoot (<i>Spea hammondi</i>)	California Species of Special Concern	Absent - Suitable grassland habitat with temporary pools is not present.
Coast Range newt (<i>Taricha torosa</i>)	California Species of Special Concern	Habitat Present and Species Present - Suitable habitat is present. The Coast Range newt was observed in Carneros Creek during biological surveys for this project.
Tricolored blackbird (<i>Agelaius tricolor</i>)	Migratory Bird Treaty Act / State Threatened / California Species of Special Concern	Absent - Suitable large marsh habitat for nesting is not present.
Golden eagle (<i>Aquila chrysaetos</i>)	Bald and Golden Eagle Protection Act, Migratory Bird Treaty Act / Fully Protected	Absent - Suitable nesting habitat is not present.
Burrowing owl (<i>Athene cunicularia</i>)	Migratory Bird Treaty Act / California Species of Special Concern	Absent - Suitable dry open grassland habitat is not present.
Yellow rail (<i>Coturnicops noveboracensis</i>)	California Species of Special Concern	Absent - Suitable densely vegetated marshlands are not present.
White-tailed kite (<i>Elanus leucurus</i>)	Migratory Bird Treaty Act / Fully Protected, California Natural Diversity Database Special Animal	Absent - Suitable open grassland, meadows, and marshes are not present.
Southwestern willow flycatcher (<i>Empidonax traillii extimus</i>)	Federal Endangered, Migratory Bird Treaty Act / State Endangered / California Natural Diversity Database Special Animal	Absent - The project is outside the known range of the southwestern willow flycatcher. The project would have no effect on the southwestern willow flycatcher, and no take of this species would occur.

Species Common Name (Latin Name)	Status	Species and Habitat Presence in the Biological Study Area - Determination Rationale
California condor (<i>Gymnogyps californianus</i>)	Federal Endangered, Migratory Bird Treaty Act / State Endangered / Fully Protected, California Natural Diversity Database Special Animal	Absent - Suitable vast expanses of open habitat are not present. The project would have no effect on the California condor, and no take of this species would occur.
California Ridgeway's rail (<i>Rallus obsoletus obsoletus</i>)	Federal Endangered, Migratory Bird Treaty Act / State Endangered / Fully Protected, California Natural Diversity Database Special Animal	Absent - Suitable saltwater and brackish marshes are not present. The project would have no effect on the California Ridgeway's rail, and no take of this species would occur.
Bank swallow (<i>Riparia riparia</i>)	Migratory Bird Treaty Act / State Threatened / California Natural Diversity Database Special Animal	Absent - Suitable vertical banks and cliff habitat are not present. The project would not result in take of this species.
Least Bell's vireo (<i>Vireo bellii pusillus</i>)	Federal Endangered, Migratory Bird Treaty Act / State Endangered / California Natural Diversity Database Special Animal	Absent - Protocol surveys were not done for this species because all proposed work areas are immediately adjacent to the highway and presumed unsuitable habitat for the least Bell's vireo. Least Bell's vireo protocol surveys done in 2002 of an overlapping area for the Prunedale Freeway Project/Prunedale Improvement Project were negative. The least Bell's vireo is not expected to occupy the project's Biological Study Area. The project is determined to have no effect on the least Bell's vireo and would result in no take of the species.
Pajaro/Salinas hitch (<i>Lavinia exilicauda harengus</i>)	California Species of Special Concern	Absent - Suitable habitat is not present in the intermittent streams and drainages.
South-Central California Coast steelhead, Distinct Population Segment (<i>Oncorhynchus mykiss irideus</i>)	Federal Threatened / State Candidate / California Natural Diversity Database Special Animal	Absent - Suitable habitat is not present. As an intermittent tributary without a larger contributing watershed that might sustain flows over the summer, Cameros Creek is not known to support a steelhead trout population. The project would have no effect on the South-Central California Coast steelhead.

Species Common Name (Latin Name)	Status	Species and Habitat Presence in the Biological Study Area - Determination Rationale
Western bumble bee (<i>Bombus occidentalis</i>)	State Candidate / California Natural Diversity Database Special Animal	Habitat Present - Although marginally suitable foraging habitat may be present for this species, its presence would be transient. Impacts to food plants for this species would be minimal and temporary in nature. The project would not result in take of the western bumble bee.
Vernal pool fairy shrimp (<i>Branchinecta lynchi</i>)	Federal Threatened / California Natural Diversity Database Special Animal	Absent - Suitable grassland habitat is not present. The project would have no effect on the vernal pool fairy shrimp.
Pallid bat (<i>Antrozous pallidus</i>)	California Species of Special Concern	Absent - Suitable roosting habitat is not present.
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	California Species of Special Concern	Absent - Suitable roosting habitat is not present.
Monterey dusky-footed woodrat (<i>Neotoma macrotis Luciana</i>)	California Species of Special Concern	Habitat Present - Suitable habitat is present in woodland areas.
American badger (<i>Taxidea taxus</i>)	California Species of Special Concern	Absent - Although marginally suitable habitat may be present, the species is unlikely to occur because of proximity to the highway with its severe barriers as well as the surrounding urban development.
Northern California legless lizard (<i>Anniella pulchra</i>)	California Species of Special Concern	Habitat Present - Suitable habitat is present in coast live oak woodlands.
Western pond turtle (<i>Emys marmorata</i>)	California Species of Special Concern	Habitat Present - Suitable habitat is present in some stream and riparian habitats.

Suitable habitat for six special-status animal species was found during wildlife surveys. However, Coast Range newt was the only special-status animal species found in the project's Biological Study Area during appropriately timed wildlife reconnaissance surveys. No designated Critical Habitat for special-status animal species was found. Special-status animal species with the potential to be found within the Biological Study Areas during construction are discussed below.

California Red-Legged Frog

Protocol surveys were not conducted for the California red-legged frog, and the species was not observed during general wildlife surveys. The project's Biological Study Area is not within critical habitat for the species. However,

the project's Biological Study Area provides suitable breeding and upland habitat for California red-legged frogs. There are also known occurrence records for the California red-legged frog within the project's Biological Study Area, and thus, presence of the species is inferred.

Coast Range Newt and Western Pond Turtle

A Coast Range newt was observed during biological surveys within Carneros Creek near post mile 99.08. Suitable breeding habitat is found within streams that have well-developed riparian and emergent wetland vegetation, and marginally suitable upland dispersal habitat may be present in some surrounding upland areas throughout the project's Biological Study Area. Although no western pond turtles were detected in the project's Biological Study Area during 2020 surveys, there are California Natural Diversity Database records in the area so their presence is inferred, particularly along Carneros Creek, which supports deep pool habitat that could be used by western pond turtles.

Northern California Legless Lizard

The Northern California legless lizard was not observed during surveys, but loamy soils with leaf litter and moisture under coast live oak canopy provide suitable habitat for this species. Therefore, the potential exists for Northern California legless lizards to be found in the project's Biological Study Area.

Monterey Dusky-Footed Woodrats

The Monterey dusky-footed woodrat was not observed during surveys, though the project's Biological Study Area has suitable habitat and the species has been detected in adjacent areas in past surveys of the area. The potential exists for dusky-footed woodrats to use the coast live oak woodland and willow woodland habitats in the project's Biological Study Area.

Nesting and Migratory Birds and Roosting Bats

Numerous nesting bird species are expected to use a variety of habitats within and adjacent to the project's Biological Study Area. Nesting birds are protected by both the federally adopted Migratory Bird Treaty Act and the California Fish and Game Code. Common birds observed within the project's Biological Study Area included species such as the California scrub jay (*Aphelocoma californica*), Steller's jay (*Cyanocitta stelleri*), Acorn woodpecker (*Melanerpes formicivorus*), Pacific slope flycatcher (*Empidonax difficilis*), song sparrow (*Melospiza melodia*), and house finch (*Haemorhous mexicanus*). Potential nesting habitat for bird species occurs in shrubs and trees throughout the project's Biological Study Area.

Roosting bat species may also be found in the project's Biological Study Area. Large willows and black cottonwood trees, especially snags, within willow woodland were assessed as the most likely areas within the project's Biological Study Area capable of providing habitat for roosting bats. Trees

and snags that may provide suitable roosting habitat are located mostly along Carneros Creek between post miles 99.08 and 99.35.

Migratory Fish and Wildlife Corridors

Wildlife connectivity is very limited throughout the project’s Biological Study Area due to the existing land uses, the presence of a concrete barrier in the highway median, and the existing old, damaged and plugged culverts that do not allow optimal wildlife movement under the highway. The California Department of Fish and Wildlife’s Areas of Conservation Emphasis Terrestrial Connectivity dataset assigns most of the Biological Survey Area where Carneros Creek crosses U.S. Route 101 at multiple points a Connectivity Rank of 4. Rank 4 (conservation planning linkages) includes habitat connectivity linkages mapped in the California Essential Habitat Connectivity and fine-scale regional connectivity studies that are based on species-specific models and represent the best connections between core natural areas. Birds, mammals, and amphibians may use portions of Carneros Creek’s riparian habitat for migration and foraging.

Regional Habitats of Concern

The California Natural Diversity Database (2021) documents three regional habitats of concern that are considered sensitive as occurring within the search area: Central Maritime Chaparral, Coastal Brackish Marsh, and Northern Coastal Salt Marsh. However, none of these habitats were observed in the project’s Biological Study Areas during seasonally timed botanical surveys.

Invasive Species

A total of 44 invasive plant species as identified by the online California Invasive Plant Council (Cal-IPC) Database (2020) were observed within the Biological Study Area for the project. Table 2.8 (Invasive Plants within the Biological Study Areas) lists the invasive species found within the Biological Study Areas and their Cal-IPC invasiveness rating. The distribution of invasive plant species is scattered throughout the Biological Study Areas and is most common in ruderal/disturbed areas along the edges of U.S. Route 101.

Table 2.8 Invasive Plants within the Biological Study Areas

Common Name	Scientific Name	Cal-IPC Status ¹
Silver wattle	<i>Acacia dealbata</i>	Moderate
Slender wild oat	<i>Avena barbata</i>	Moderate
Wild oat	<i>Avena fatua</i>	Moderate
Black mustard	<i>Brassica nigra</i>	Moderate
Common mustard	<i>Brassica rapa</i>	Limited

Common Name	Scientific Name	Cal-IPC Status1
Big quaking grass	<i>Briza maxima</i>	Limited
Ripgut grass	<i>Bromus diandrus</i>	Moderate
Soft chess brome	<i>Bromus hordeaceus</i>	Limited
Italian thistle	<i>Carduus pycnocephalus</i>	Moderate
Iceplant	<i>Carpobrotus edulis</i>	High
Bull thistle	<i>Cirsium vulgare</i>	Moderate
Poison hemlock	<i>Conium maculatum</i>	Moderate
Pampas grass	<i>Cortaderia jubata</i>	High
Cape Ivy	<i>Delairea odorata</i>	High
Veldt grass	<i>Ehrharta calycina</i>	High
Panic veldt grass	<i>Ehrharta erecta</i>	Moderate
Bluegum	<i>Eucalyptus globulus</i>	Limited
Rattail sixweeks grass	<i>Festuca myuros</i>	Moderate
Rye grass	<i>Festuca perennis</i>	Moderate
Fennel	<i>Foeniculum vulgare</i>	High
French broom	<i>Genista monspessulana</i>	High
Cut-leaf geranium	<i>Geranium dissectum</i>	Limited
English ivy	<i>Hedera helix</i>	High
Bristly ox-tongue	<i>Helminthotheca echioides</i>	Limited
Perennial mustard	<i>Hirschfeldia incana</i>	Moderate
Common velvetgrass	<i>Holcus lanatus</i>	Moderate
Wall barley	<i>Hordeum murinum</i>	Moderate
Smooth cat's-ear	<i>Hypochaeris glabra</i>	Limited
Rough cat's-ear	<i>Hypochaeris radicata</i>	Moderate
Hyssop loosestrife	<i>Lythrum hyssopifolia</i>	Limited
California burclover	<i>Medicago polymorpha</i>	Limited
Ngaio tree	<i>Myoporum laetum</i>	Moderate
Bermuda buttercup	<i>Oxalis pes-caprae</i>	Moderate
Kikuyu grass	<i>Pennisetum clandestinum</i>	Limited
Harding grass	<i>Phalaris aquatica</i>	Moderate
English plantain	<i>Plantago lanceolata</i>	Limited
Rabbitsfoot grass	<i>Polypogon monspeliensis</i>	Limited
Radish	<i>Raphanus sativus</i>	Limited
Himalayan blackberry	<i>Rubus armeniacus</i>	High

Common Name	Scientific Name	Cal-IPC Status ¹
Sheep sorrel	<i>Rumex acetosella</i>	Moderate
Curly dock	<i>Rumex crispus</i>	Limited
Milk thistle	<i>Silybum marianum</i>	Limited
Greater periwinkle	<i>Vinca major</i>	Moderate
Calla lily	<i>Zantedeschia aethiopica</i>	Limited

Environmental Consequences

Potential project impact areas were determined from the preliminary design plans during the Project Approval and Environmental Document phase of project development. A subset area, referred to as the Area of Potential Impacts, within the larger Biological Study Area of the entire project was estimated for each of the drainage system locations. The Areas of Potential Impacts were used to determine potential direct and indirect (proximate) physical effects on biological resources.

The project would cause permanent impacts to biological resources in the Area of Potential Impacts from the rehabilitation of drainage systems with culvert infrastructure (pipes, boxes, other types) that are longer than the existing pipes, the addition of flared end sections to inlets and outlets at various locations, drainage inlets, headwalls, placement of new rock slope protection, slope repair, and drainage channel grading.

Temporary impacts would occur from the creation and use of construction equipment, vehicle staging areas, dirt access roads to work sites, and vegetation trimming and removal. Impacts would also occur from temporary stream diversion and dewatering to minimize water quality impacts while replacing culverts and constructing rock slope protection. Sources of impacts would be from construction equipment activities and worker foot traffic. The following discussions address potential impacts of the project upon specific categories of biological resources in the project’s Biological Study Area.

Natural Communities and Habitats

Estimated permanent and temporary impacts to habitats and natural communities of concerns are quantified in Table 2.9 (Impacts to Natural Communities/Habitats of Concern).

U.S. Army Corps of Engineers jurisdictional other waters of the U.S. lack one or more of the three wetland indicators (that is, wetland vegetation, hydric soils, and/or wetland hydrology) and extend from the thalweg (the lowest point of a channel) up to the Ordinary High Water Mark. For the purposes of the Natural Environment Study, U.S. Army Corps of Engineers jurisdictional other waters are equivalent to the areas characterized as all areas below the Ordinary High Water Mark (like ephemeral streams, intermittent streams, and

lakes). Three-parameter wetlands are also subject to U.S. Army Corps of Engineers jurisdiction.

Table 2.9 Impacts to Natural Communities/Habitats

Natural Community/Habitat	Permanent Impacts in Square Feet (Acre)	Temporary Impacts in Square Feet (Acre)
Coast Live Oak Woodland	2,730 (0.063)	30,188 (0.693)
Coastal Scrub	256 (0.006)	8,749 (0.201)
Ruderal	1,396 (0.032)	23,651 (0.543)
Willow Woodland	0 (0.000)	24 (0.001)
Freshwater Wetland (Clean Water Act Wetlands)	535 (0.012)	1,599 (0.037)
California Department of Fish and Wildlife Jurisdictional Wetlands	212 (0.005)	395 (0.009)
Stream/Other Waters	507 (0.012)	2,572 (0.059)
Vegetated Riparian	2,148 (0.049)	16,449 (0.378)
Unvegetated Riparian/Streambank	0 (0.000)	1,001 (0.023)

Regional Water Quality Control Board jurisdiction includes U.S. Army Corps of Engineers jurisdictional other waters of the United States and the area above the Ordinary High Water Mark to the top of the bank or to the edge of riparian vegetation. Woody riparian areas are distinguished from herbaceous bank areas.

California Department of Fish and Wildlife jurisdiction extends from the channel bed to the top of banks or outer edge of riparian canopy (whichever is greater). It includes or overlaps areas of U.S. Army Corps of Engineers jurisdictional other waters and extends above the Ordinary High Water Mark to the top of the bank or outer edge of riparian vegetation, whichever is greater. California Department of Fish and Wildlife jurisdiction includes wetlands when they are within lakes, streams, and riparian areas.

Impacts have been quantified based on estimated ground disturbance and disturbed vegetation. Permanent impacts would result from slope repair, culvert infrastructure installation, rock slope protection, and drainage channel grading. Areas of excavation are conservatively assumed to be permanent impacts. This would likely result in a slight overestimation of permanent impacts because some of the excavation areas would be restored.

Tree removal is anticipated for culvert replacement and drainage improvement activities but has not been quantified yet. The scope of tree removal would be determined during the project's Plans, Specifications, and

Estimates phase. All trees and other sensitive vegetation removed by the project would be replaced at appropriate ratios as prescribed in the Avoidance, Minimization, and/or Mitigation Measures section below.

Temporary impacts would result mostly from equipment access, clearing vegetation, staging, stock piling, and temporary dewatering/diversion, if needed. Sources of impacts would be mostly from the use of construction equipment and associated worker foot-traffic. Trucks, bulldozers, backhoes, compactors, asphalt concrete rollers, clamshells, excavators, compressors, pavers, water trucks, sweepers, and any other equipment necessary during construction would be used. Staging may occur in closed lanes behind a temporary concrete protective barrier or along ruderal/disturbed edges of U.S. Route 101. Prior to the start of construction activities, Environmentally Sensitive Areas would be marked in the field and would be approved by the Caltrans Environmental Branch.

Ruderal/disturbed areas and ornamental vegetation are not considered sensitive natural communities and are not discussed further in this document. Certain special-status species may have the potential to occur in one or more of the habitats described, and these species are discussed later in this document. Wildlife connectivity is expected to improve due to the proposed drainage improvements, which would allow safe passages under this portion of the four-lane highway with median barriers.

With implementation of the mitigation, avoidance, and minimization measures stated in this document, the project would not have substantial adverse effects on riparian habitat or other sensitive habitat communities identified on regional plans or regulations or as recognized by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service. In addition, by implementing mitigation, minimization, and avoidance measures, the project would not substantially adversely affect any state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means.

Potential Jurisdictional Areas

Estimates of impacts to potential jurisdictional areas are quantified in Table 2.10 (U.S. Army Corps of Engineers Jurisdictional Area Impacts), Table 2.11 (Regional Water Quality Control Board Jurisdictional Area Impacts), and Table 2.12 (California Department of Fish and Wildlife Jurisdictional Area Impacts). These impacts were determined by overlaying the project's impact areas with the preliminary jurisdictional determination.

Table 2.10 U.S. Army Corps of Engineers Jurisdictional Area Impacts

Jurisdictional Area	Permanent Impacts in Square Feet (Acres)	Temporary Impacts in Square Feet (Acres)
Clean Water Act Wetlands	535 (0.012)	1,599 (0.037)
Stream (Other Waters)	507 (0.012)	2,572 (0.059)
Total Area:	1,042 (0.024)	4,171 (0.096)

Table 2.11 Regional Water Quality Control Board Jurisdictional Area Impacts

Jurisdictional Area	Permanent Impacts in Square Feet (Acres)	Temporary Impacts in Square Feet (Acres)
Clean Water Act Wetlands	535 (0.012)	1,599 (0.037)
Stream	507 (0.012)	2,572 (0.059)
Vegetated Riparian	2,148 (0.049)	16,449 (0.378)
Total Area:	3,190 (0.073)	20,620 (0.473)

Table 2.12 California Department of Fish and Wildlife Jurisdictional Area Impacts

Jurisdictional Area	Permanent Impacts in Square Feet (Acres)	Temporary Impacts in Square Feet (Acres)
Wetlands	212 (0.005)	395 (0.009)
Stream	507 (0.012)	2,572 (0.059)
Vegetated Riparian	2,148 (0.049)	16,449 (0.378)
Total Area:	2,867 (0.066)	19,416 (0.446)

Permanent impacts to jurisdictional features would occur from replacement of multiple culverts, channel grading, and installation of associated rock slope protection. A total of 507 square feet (0.012 acre) of U.S. Army Corps of Engineers/Regional Water Quality Control Board jurisdictional other waters of the United States and California Department of Fish and Wildlife streambed may be permanently impacted. A total of 535 square feet (0.012 acre) of U.S. Army Corps of Engineers/Regional Water Quality Control Board wetlands and 212 square feet (0.005 acre) of California Department of Fish and Wildlife jurisdictional wetlands may be permanently impacted. A total of 2,148 square feet (0.049 acre) of California Department of Fish and Wildlife and U.S. Army Corps of Engineers/Regional Water Quality Control Board jurisdictional vegetated riparian habitat may be permanently impacted.

Temporary impacts to jurisdictional features would occur due to temporary access, staging areas, and temporary stream diversion/dewatering, if needed. A total of 2,572 square feet (0.059 acre) of U.S. Army Corps of Engineers/Regional Water Quality Control Board jurisdictional other waters of the United States and California Department of Fish and Wildlife streambed may be temporarily impacted. A total of 1,599 square feet (0.036 acre) of U.S. Army Corps of Engineers/Regional Water Quality Control Board wetlands and 395 square feet (0.009 acre) of California Department of Fish and Wildlife jurisdictional wetlands may be temporarily impacted. A total of 16,449 square feet (0.378 acre) of California Department of Fish and Wildlife/Regional Water Quality Control Board jurisdictional vegetated riparian habitat may be temporarily impacted.

The project would require 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, and a Section 1602 Streambed Alternation Agreement from the California Department of Fish and Wildlife. A Mitigation Monitoring Program would be prepared to mitigate impacts to jurisdictional areas.

The goal of compensatory mitigation is to prevent a net loss of wetlands or other aquatic resource acreage, function, and value. Onsite restoration is likely for this project. The impacts to jurisdictional waters would consist of temporary stream diversions if needed, removal of vegetation in the construction area, and installation of rock slope protection to prevent erosion. Temporary impacts would be restored at a 1-to-1 ratio (acreage). Compensatory mitigation is proposed at a 3-to-1 ratio (acreage) for permanent impacts. A total of 507 square feet (0.012 acre) of U.S. Army Corps of Engineers/Regional Water Quality Control Board jurisdictional other waters of the U.S. and California Department of Fish and Wildlife streambed may be permanently impacted. A total of 535 square feet (0.012 acre) of U.S. Army Corps of Engineers/Regional Water Quality Control Board wetlands and approximately 212 square feet (0.005 acre) of California Department of Fish and Wildlife jurisdictional wetlands may be permanently impacted. A total of 2,148 square feet (0.049 acre) of riparian vegetation may need to be permanently removed.

Replacement plantings would include appropriate native tree and understory species. To ensure success, monitoring and an appropriate plant establishment period would be required, which would include semi-annual (twice a year) inspections, weeding, and replacement.

Replacement plantings would be detailed in the Caltrans Landscape Architecture Landscape Planting Plan and the final Mitigation and Monitoring Plan. The Mitigation and Monitoring Plan would be developed in coordination with a biologist and would include developed planting specifications and grading plans to ensure survival of planted vegetation and re-establishment of

functions and values. The final Mitigation and Monitoring Plan would detail mitigation commitments and be consistent with standards and mitigation commitments from the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Wildlife. The Mitigation and Monitoring Plan would be prepared when full construction plans are prepared and be finalized through the permit review process with regulatory agencies. It is anticipated that restoration plantings would consist mainly of native riparian species and associated riparian understory and bank species.

Special-Status Animal Species

California Red-Legged Frog

Construction work that involves replacement or repair of culverts or other drainage improvements has the potential to impact the California red-legged frog, especially those areas that are associated with other waters/streams and wetlands. The potential need to capture and relocate California red-legged frogs would subject these animals to stresses that could result in adverse effects. Injury or mortality could occur via accidental crushing by worker foot-traffic or construction equipment.

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 California red-legged frog presence has been inferred because of prior observances in the project area and there would be potential for take of the species during construction. The Biological Study Area of the project is not within critical habitat for the California red-legged frog.

Caltrans expects that the project would qualify for Federal Endangered Species Act Incidental Take Coverage under the Programmatic Biological Opinion for Projects Funded or Approved under the Federal Highway Administration's Federal Aid Program (U.S. Fish and Wildlife Service 2011). The Programmatic Biological Opinion measures designed to avoid or minimize impacts to California red-legged frogs are included as avoidance and minimization measures for this project. The measures would require monitoring and action by a U.S. Fish and Wildlife Service-approved biologist. Requirements related to the handling of California red-legged frogs, ground disturbance, reporting, dewatering, sedimentation and pollution control, and worker training are included in the Programmatic Biological Opinion measures. Compensatory mitigation that is prescribed for project impacts to jurisdictional wetlands and other waters would also compensate for impacts to this species.

Coast Range Newt and Western Pond Turtle

Potential impacts to the Coast Range newt and western pond turtle are the same as the potential impacts to the California red-legged frog. Compensatory mitigation that is prescribed for project impacts to jurisdictional wetlands and other waters would also compensate for these species. Implementation of

compensatory mitigation for vegetation and tree replacement (**Jurisdictional Area Restoration and Jurisdictional Area Mitigation**) as prescribed in the Avoidance, Minimization, and/or Mitigation Measures below, as well as additional measures to avoid or minimize potential impacts, would reduce potential adverse impacts to the Coast Range newt and western pond turtle. These additional measures would require worker training and pre-construction surveys. Protocol measures for the proper handling and relocation of these species, if found within the project work area, are included.

Northern California Legless Lizard

Potential impacts to the Northern California legless lizard could occur during ground-disturbing activities within coast live oak woodlands with suitable soil and during tree removal, if the species is present. Implementation of avoidance and minimization measures specific to the needs of this species and its potential locations within the project study areas would reduce potential adverse impacts to the species. These measures require pre-construction surveys and provide protocol for the proper detection and relocation of the Northern California legless lizard.

Monterey Dusky-Footed Woodrats

If Monterey dusky-footed woodrat nests are discovered during pre-construction surveys, direct mortality could occur to the species as a result of vegetation removal. Indirect impacts would occur to the habitat during proposed vegetation clearing of willow woodland habitat within suitable trees within the project's impact area. Implementation of avoidance and minimization measures specific to the needs of the Monterey dusky-footed woodrat and its potential locations within the project study areas would reduce potential adverse impacts to this species. These measures require pre-construction surveys for nests and provide protocol for protective buffers for nests during the breeding season and the proper dismantling of nests.

Migratory and Nesting Birds and Roosting Bats

The project would remove trees and other vegetation as part of the construction work for some of the culvert locations. Direct impacts to active bird nests and eggs or young birds could occur, as well as indirect impacts to nesting, foraging, or perching behaviors from construction noise and disturbance from equipment and workers. Measures would be implemented to avoid and minimize potential impacts to nesting and migratory bird species. These measures would require surveys prior to vegetation removal and grubbing during the nesting bird season. Steps for the establishment of protective buffers and monitoring are also provided in these measures.

Direct impacts to bats could result during removal of the trees if bats are found to be roosting. These direct effects would result in the injury or mortality of bats or harassment that could alter roosting behaviors. Indirect impacts could also result from noise and disturbance associated with construction,

which could also alter roosting behaviors. The implementation of pre-activity survey and exclusion zone (if necessary) measures would avoid and minimize the potential for adverse impacts to roosting bats.

Invasive Plant Species

Ground disturbance and other aspects of project construction could potentially spread or introduce invasive species within the Biological Study Area of the project. The distribution of invasive plant species is scattered throughout the project's Biological Study Area and most common in ruderal/disturbed areas along the edges of U.S. Route 101. The project has the potential to cause an increase in invasive species into communities and areas not currently dominated by them. However, the project also has an opportunity to reduce the abundance and spread of invasive species through avoidance and minimization efforts and restoration plantings.

Regulatory Consultations

A Caltrans biologist requested and received Official Species Lists from the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, and the California Natural Diversity Database to analyze project impacts. Section 7 consultation has been completed, and a Programmatic Biological Opinion for California red-legged frog was issued by the U.S. Fish and Wildlife Service on April 29, 2021.

There is no Essential Fish Habitat for federally managed species present at any of the project locations, and consultation with the National Marine Fisheries Service is not required. The project would require a Clean Water Act Section 404 permit from the U.S. Army Corps of Engineers, a Clean Water Act Section 401 Water Quality Certification from the Regional Water Quality Control Board, and a California Fish and Game Code Section 1602 Streambed Alteration Agreement from the California Department of Fish and Wildlife. The measures and conditions included in these permits would be implemented accordingly.

Cumulative Impacts

The project would cause temporary habitat disturbance in spot locations in the project limits that could adversely affect the California red-legged frog, Coast Range newt, and western pond turtle. The potential for adverse cumulative impacts to these three species and their habitats is estimated to be very low considering the relatively small amount of potential habitat of each that would be affected in relation to the total amount of habitat that occurs in the region. A relatively small amount of habitat take would likely occur. The proposed Prunedale Drainage Improvements project may permanently impact 0.073 acre and temporarily impact 0.496 acre of California red-legged frog habitat (other waters/streams, wetlands, and riparian habitat). Most of these features are highly degraded due to the presence of invasive species, channelization of stream habitats, and disruption by regular maintenance and mowing.

The Resource Study Area identified for California red-legged frog, Coast Range newt, and western pond turtle cumulative impact analysis is the Alisal-Elkhorn Sloughs watershed. The Resource Study Area has experienced a high level of agricultural conversion and urban development since the early settlement of this area in the 19th and 20th centuries. Agricultural conversion has caused the landscape to be graded, soils to be amended, groundwater to be pumped, and natural freshwater systems to be piped and channeled in order to supply crops with irrigation water and drainage. These alterations have degraded much of the natural landscape within the Resource Study Area. Current threats to potential California red-legged frog, Coast Range newt, and western pond turtle habitat within the Resource Study Area stem mostly from agricultural practices and urban development. As the project will require temporary and permanent impacts to jurisdictional wetlands, waters and riparian habitat which provide potential California red-legged frog, Coast Range newt, and western pond turtle habitat, the project is contributing to a cumulative impact to this resource in the Resource Study Area.

Reasonably foreseeable projects within the Resource Study Area that could contribute to direct or indirect cumulative impacts to the California red-legged frog, Coast Range newt, and western pond turtle are the Castroville Boulevard Interchange Project and future segments of the State Route 156 Corridor Improvement Project. Both projects are proposed by Caltrans. The Castroville Boulevard Interchange Project proposes to improve the State Route 156 and U.S. Route 101 interchange, while the State Route 156 Corridor Improvement Project proposes to increase State Route 156 from two lanes to four lanes. The Castroville Boulevard Interchange Project is expected to permanently impact over a half-acre and temporarily impact over three-quarters of an acre of wetlands, streams, and other waters suitable as California red-legged frog, Coast Range newt, and western pond turtle habitat; construction is estimated to begin in Fiscal Year 2023/2024. Future segments of the State Route 156 Corridor Improvement Project are not yet funded; therefore, the impacts to jurisdictional waters and/or riparian habitat associated with the project have not been quantified.

Another reasonably foreseeable Caltrans project proposed within the Resource Study Area is the Prunedale Capital Preventative Maintenance Project funded by the State Highway Operation and Protection Program. This project proposes to preserve and extend the life of the existing pavement and roadway and integrate feasible asset management components. The project, however, will have no impacts to aquatic habitat or riparian areas suitable for California red-legged frog and will therefore not contribute to direct or indirect cumulative impacts to this species within the Resource Study Area.

Caltrans is aware of the R&Q Mall Properties (Casa Boronda Agricultural Employee Housing Project), a recently completed project that contributed to the removal of marginal upland habitat for California red-legged frog habitat.

The project constructed a 75-unit Agricultural Employee Housing complex in the Boronda community of Salinas.

Because the Clean Water Act “No Net Loss” policy requires compensatory mitigation, and these projects will implement mitigation to offset any impacts to jurisdictional features, the project is not anticipated to substantially contribute to cumulative impacts in the Resource Study Area.

The Prunedale Drainage Improvements Project, when considered in a cumulative effects context, is not anticipated to substantially contribute to adverse cumulative impacts to the California red-legged frog, Coast Range newt, or western pond turtle in the Resource Study Area because the project will fully mitigate for impacts to the jurisdictional features that provide potential California red-legged frog, Coast Range newt, and western pond turtle habitat.

Compensatory mitigation for impacts to jurisdictional areas as noted below would offset potential impacts to the California red-legged frog, Coast Range newt, and western pond turtle and their habitats.

The project may permanently impact 0.012 acre and temporarily impact 0.059 acre of other waters/streams, wetlands, and riparian habitat. Most of these features are highly degraded. Invasive species are present. Stream habitats have been channelized. Disruption occurs from regular maintenance and mowing. The project is not expected to substantially contribute to adverse cumulative impacts to jurisdictional waters/streams, wetlands, and riparian habitat because the project would implement replacement habitat onsite to mitigate in accordance with regulatory permits for loss of jurisdictional waters and riparian habitat.

No cumulatively considerable contributions to impacts from the project would occur to the Northern California legless lizard, Monterey dusky-footed woodrat, migratory and nesting bird species, or roosting bats. No adverse cumulative impacts involving invasive species are expected because the introduction or spread of invasive, non-native plant species would be avoided to the maximum extent feasible.

In addition to the measures in the section below, the Water Pollution Control Program and many of Caltrans’ Best Management Practices and standard specifications outlined in Section 1.5, Standard Measures and Best Management Practices, would avoid and minimize impacts to biological resources.

Avoidance, Minimization, and/or Mitigation Measures

The measures listed below would reduce potential impacts to biological resources. Compensatory mitigation measures are labeled as such, and the remaining measures are avoidance and/or minimization measures. The measures have been organized by the primary resource or species they are designed to protect.

Potential Jurisdictional Areas

The following avoidance and minimization measures would be implemented to reduce potential impacts to these jurisdictional areas resulting from the project:

- **Jurisdictional Areas 1**—Prior to construction, Caltrans will 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, and a Section 1602 Streambed Alteration Agreement from the California Department of Fish and Wildlife. All permit terms and conditions will be incorporated into construction plans and implemented.
- **Jurisdictional Areas 2**—Prior to any ground-disturbing activities, Environmentally Sensitive Area fencing will be installed around jurisdictional features and the dripline of trees to be protected within the project limits. Caltrans-defined Environmentally Sensitive Areas will be noted on design plans and delineated in the field prior to the start of construction activities, in accordance with Standard Special Provision 14-1.02.
- **Jurisdictional Areas 3**—Construction activities in jurisdictional waters and for temporary stream diversion, if needed, will be timed to occur between June 1 and October 31 in any given year, or as otherwise directed by the regulatory agencies, when the surface water is likely to be dry or at a seasonal minimum. Deviations from this work window will be made only with permission from the relevant regulatory agencies.
- **Jurisdictional Areas 4**—During construction, all project-related hazardous materials spills within the project site will be cleaned up immediately. Readily accessible spill prevention and cleanup materials will be kept by the contractor onsite at all times during construction.
- **Jurisdictional Areas 5**—During construction, erosion control measures will be implemented. Fiber rolls and Large Sediment Barriers will be installed as needed between the project site and jurisdictional other waters and riparian habitat. At a minimum, erosion controls will be maintained by the contractor on a daily basis throughout the construction period.
- **Jurisdictional Areas 6**—During construction, the staging areas will conform to Best Management Practices. At a minimum, all equipment and vehicles will be checked and maintained by the contractor on a daily basis to ensure proper operation and avoid potential leaks or spills.
- **Jurisdictional Areas 7**—Stream contours will be restored as close as possible to their original condition.

The following compensatory mitigation and onsite restoration would prevent a net loss of wetlands or other aquatic resource acreage, function, and value:

- **Jurisdictional Area Restoration**—Temporary impacts will be restored at a 1:1 ratio (acreage). Replacement plantings will include appropriate native tree and understory species. To ensure success, monitoring and an appropriate plant establishment period will be required, which will include semi-annual (twice a year) inspections, weeding, and replacement.
- **Jurisdictional Area Mitigation**—Permanent impacts will be restored at a 3:1 ratio (acreage). Replacement plantings will include appropriate native tree and understory species. To ensure success, monitoring and an appropriate plant establishment period will be required, which will include semi-annual (twice a year) inspections, weeding, and replacement.
- **Mitigation and Monitoring Plan**—Replacement plantings will be detailed in Caltrans' Landscape Architecture Landscape Planting Plan and the final Mitigation and Monitoring Plan. The Mitigation and Monitoring Plan will be developed in coordination with a biologist and will include developed planting specifications and grading plans to ensure survival of planted vegetation and re-establishment of functions and values. The final Mitigation and Monitoring Plan will detail mitigation commitments and will be consistent with standards and mitigation commitments from the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Wildlife. The Mitigation and 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 anticipated that restoration plantings will consist mostly of native riparian species and associated riparian understory and bank species.

California Red-Legged Frog

Caltrans anticipates that the project would qualify for Federal Endangered Species Act incidental take coverage under the Programmatic Biological Opinion for Projects Funded or Approved under the Federal Highway Administration's Federal Aid Program (U.S. Fish and Wildlife Service 2011). The following measures are the applicable measures from the Programmatic Biological Opinion that would be implemented for this project:

- **California Red-Legged Frog 1**—Only a U.S. Fish and Wildlife Service-approved biologist shall participate in activities associated with the capture, handling, and monitoring of California red-legged frogs. Biologists authorized under the Programmatic Biological Opinion do not need to re-submit their qualifications for subsequent projects conducted pursuant to this Programmatic Biological Opinion, unless the U.S. Fish and Wildlife Service has revoked their approval at any time during the life of this Programmatic Biological Opinion.
- **California Red-Legged Frog 2**—Ground disturbance will not begin until written approval is received from the U.S. Fish and Wildlife Service that the

biologist is qualified to conduct the work, unless the individual(s) has/have been approved previously and the Service has not revoked that approval.

- **California Red-Legged Frog 3**—A U.S. Fish and Wildlife Service-approved biologist shall survey the project site no more than 48 hours before the onset of work activities. If found, the U.S. Fish and Wildlife Service-approved biologist shall relocate the California red-legged frogs the shortest distance possible to a location that contains suitable habitat and will not be affected by the activities associated with the project. The relocation site shall be in the same drainage to the extent practicable.
- **California Red-Legged Frog 4**—Before any activities begin on a project, a U.S. Fish and Wildlife Service-approved biologist shall conduct a training session for all construction personnel. At a minimum, the training shall include a description of the California red-legged frog and its habitat, the specific measures that are being implemented to conserve the California red-legged frog for the current project, and the boundaries within which the project may be accomplished.
- **California Red-Legged Frog 5**—A U.S. Fish and Wildlife Service-approved biologist shall be present at the project site until all California red-legged frogs have been removed, workers have been instructed, and initial disturbance of habitat has been completed. If work is stopped because California red-legged frogs would be affected in a manner not anticipated by Caltrans and the U.S. Fish and Wildlife Service during review of the proposed action, they shall notify the Resident Engineer immediately. When work is stopped, the U.S. Fish and Wildlife Service shall be notified as soon as possible.
- **California Red-Legged Frog 6**—During project activities, all trash that may attract predators or scavengers shall be properly contained, removed from the work site, and disposed of at the end of each work week. Following construction, all trash and debris shall be removed from work areas.
- **California Red-Legged Frog 7**—All refueling, maintenance and staging of non-stationary equipment and vehicles shall occur at least 60 feet from riparian habitat or water bodies and not in a location from where a spill would drain directly toward aquatic habitat. If stationary equipment must be refueled within 60 feet of riparian habitat or water bodies, secondary containment Best Management Practices shall be implemented. The Caltrans biologist shall ensure contamination of habitat does not occur during such operations. Prior to the onset of work, Caltrans shall ensure that a plan is in place for prompt and effective response to any accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

- **California Red-Legged Frog 8**—Habitat contours shall be returned to a natural configuration at the end of the project activities. This measure shall be implemented in all areas disturbed by activities associated with culvert repair/replacement and drainage improvements, unless U.S. Fish and Wildlife Service and Caltrans determine that it is not feasible, or modification of original contours would benefit the California red-legged frog.
- **California Red-Legged Frog 8**—The number of access routes, size of staging areas, and the total area of activity shall be limited to the minimum necessary to achieve the project. Environmentally Sensitive Areas shall be established to confine access routes and construction areas to the minimum area necessary to complete construction and minimize the impact to California red-legged frog habitat; this goal includes locating access routes and construction areas outside of wetlands and riparian areas to the maximum extent practicable.
- **California Red-Legged Frog 9**—Caltrans shall attempt to schedule work for times of the year when impacts to the California red-legged frog would be minimal. For example, work that would affect large pools that may support breeding would be avoided, to the maximum degree practicable, during the breeding season (November through May).
- **California Red-Legged Frog 10**—To control sedimentation during and after project completion, Caltrans shall implement Best Management Practices outlined in any authorizations or permits issued under the authorities of the Clean Water Act received for the project.
- **California Red-Legged Frog 11**—If a work site is to be temporarily dewatered by pumping, intakes shall be completely screened with wire mesh not larger than 0.2 inch to prevent California red-legged frogs from entering the pump system. Water shall be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. Upon completion of construction activities, any diversions or barriers to flow shall be removed in a manner that would allow flow to resume with the least disturbance to the substrate. Alteration of the streambed shall be minimized to the maximum extent possible; any imported material shall be removed from the streambed upon completion of the project.
- **California Red-Legged Frog 12**—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.
- **California Red-Legged Frog 13**—Project sites shall be revegetated with an assemblage of native riparian, wetland, and upland vegetation suitable for the area. Locally collected plant materials shall be used to the extent practicable. Invasive, exotic plants shall be controlled to the maximum extent practicable.

- **California Red-Legged Frog 14**—Caltrans shall not use herbicides as the primary method to control invasive, exotic plants.
- **California Red-Legged Frog 15**—Upon completion of the project, Caltrans shall ensure that a Project Completion Report is completed and provided to the U.S. Fish and Wildlife Service, following the template provided with the Programmatic Biological Opinion.

No compensatory mitigation is required for the California red-legged frog, but implementation of mitigation described for jurisdictional areas would benefit the California red-legged frog and ensure any suitable habitat onsite that is temporarily impacted would be restored.

Coast Range Newt and Western Pond Turtle/

Avoidance and minimization measures prescribed for the California red-legged frog would also minimize impacts to the Coast Range newt and western pond turtle. In addition to those measures, the following avoidance and minimizations measures would be implemented:

- **Coast Range Newt and Western Pond Turtle 1**—A Caltrans-approved biologist shall survey the project site no more than 48 hours before the onset of work activities in drainages for the Coast Range newt and western pond turtle. If found, the biologist shall relocate the species the shortest distance possible to a location that contains suitable habitat and will not be affected by the activities associated with the project. The relocation site shall be in the same drainage to the extent practicable.
- **Coast Range Newt and Western Pond Turtle 2**—Before any project activities begin, a Caltrans-approved biologist shall conduct a training session for all construction personnel. At a minimum, the training shall include a description of the Coast Range newt and western pond turtle and their habitat, the specific measures that are being implemented to conserve these species for the current project, and the boundaries within which the project may be accomplished.

No additional compensatory mitigation is required for the Coast Range newt and western pond turtle, but implementation of compensatory mitigation described for jurisdictional areas would benefit these species and ensure any suitable habitat onsite that is temporarily impacted would be restored.

Northern California Legless Lizard

The following avoidance and minimization measures would be implemented for the Northern California legless lizard:

- **Northern California Legless Lizard 1**—A qualified biologist shall conduct pre-construction surveys for legless lizards no more than 48 hours before initial ground disturbance proposed within coast live oak woodlands and/or

prior to tree removal. Where feasible, this survey shall include systematic subsurface searching (raking suitable habitat) because legless lizards are fossorial.

- **Northern California Legless Lizard 2**—If any legless lizards are discovered during pre-construction surveys, they will be relocated to a nearby area with suitable habitat similar to where they were discovered. Also, if the species were discovered during pre-construction surveys, a qualified biologist will be present during oak tree removal to safely relocate any legless lizards that could be uncovered during tree removal.

With the above avoidance and minimization measures implemented, no impacts to the Northern California legless lizard are anticipated, and no compensatory mitigation is required.

Monterey Dusky-Footed Woodrat

The following avoidance and minimization measures are recommended for the Monterey dusky-footed woodrat and are applicable to project activities occurring within the project's Area of Potential Impacts:

- **Monterey Dusky-Footed Woodrat 1**—Prior to implementation of proposed project activities, a pre-construction visual survey will be conducted within suitable woodrat habitat in the project's Area of Potential Impacts to determine the presence or absence of woodrat nests.
- **Monterey Dusky-Footed Woodrat 2**—If woodrat nests are located during this survey, an Environmentally Sensitive Area should be established with a 25-foot buffer around each active nest.
- **Monterey Dusky-Footed Woodrat 3**—To the extent feasible, project activities requiring grading or vegetation removal within the 25-foot protective buffer should occur only during the non-breeding season (October 1-December 31) to avoid noise impacts to any breeding woodrats that may occupy the nest from January through September.
- **Monterey Dusky-Footed Woodrat 4**—If project activities cannot avoid impacting or removing the nest, then it should be dismantled by hand prior to grading or vegetation removal activities. The dismantling shall occur during the non-breeding season (October 1-December 31) and shall be conducted so that the nest material is removed starting on the side where most impacts will occur and ending on the side where the most habitat will be undisturbed, which will allow for any woodrats in the nest to escape into adjacent undisturbed habitat.
- **Monterey Dusky-Footed Woodrat 5**—If young are encountered during nest dismantling, the dismantling activity should be stopped and the material replaced back on the nest and the nest should be left alone and

rechecked in 2-3 weeks to see if the young are out of the nest or capable of being out on their own (as determined by a qualified biologist); once the young can fend for themselves, the nest dismantling can continue.

No compensatory mitigation is required for Monterey dusky-footed woodrat.

Migratory and Nesting Birds and Roosting Bats

The following measures apply to all birds protected by the Migratory Bird Treaty Act and California Fish and Game Code. The list of birds protected by these regulatory laws is extensive, and not all birds protected by these laws are included in Table 2.7 (Special-Status Animal Species in the Biological Study Areas). There are no formal survey protocols for most of these bird species, but the California Department of Fish and Wildlife typically requires pre-construction nesting bird surveys and avoidance of impacts to active bird nests.

- **Migratory and Nesting Birds 1**—Prior to construction, vegetation removal shall be scheduled to occur from September 2 to January 31, outside of the typical nesting bird season, if possible, to avoid potential impacts to nesting birds. If tree removal or other construction activities are proposed to occur within 100 feet of potential habitat during the nesting season (February 1 to September 1), a nesting bird survey shall be conducted by a biologist determined qualified by Caltrans no more than ten (10) calendar days prior to construction. If an active nest is found, Caltrans shall implement an appropriate buffer based on the habits and needs of the species. The buffer area shall be implemented until a qualified biologist has determined that juveniles have fledged, or nesting activity has otherwise ceased.
- **Migratory and Nesting Birds 2**—During construction, active bird nests shall not be disturbed and eggs or young of birds covered by the Migratory Bird Treaty Act and California Fish and Game Code shall not be killed, destroyed, injured, or harassed at any time.
- **Migratory and Nesting Birds 3**—Prior to any ground-disturbing activities, Environmentally Sensitive Area fencing shall be installed around the dripline of trees to be protected within project limits.
- **Migratory and Nesting Birds 4**—All clearing/grubbing and vegetation removal shall be monitored and documented by the biological monitor(s) regardless of time of year.

As previously discussed, impacts to vegetation would be offset by replacement plantings within the project limits, which would also replace in-kind bird nesting habitat. No additional compensatory mitigation is proposed.

The following measures apply to roosting bats:

- **Roosting Bats 1**—Tree removal shall be scheduled to occur from September 2 to January 31, outside of the typical bat maternity roosting season, if possible, to avoid potential impacts to roosting bats. If tree removal or other construction activities are proposed to occur within 100 feet of potential habitat during the bat maternity roosting season (February 1 to September 1), a bat roost survey shall be conducted by a biologist determined qualified by Caltrans within 14 days prior to construction. The biologist(s) conducting the pre-construction surveys will also identify the nature of the bat utilization (i.e., no roosting, night roost, day roost, maternity roost) and determine if passive bat exclusion will be necessary and feasible. If an active day roost is found, a qualified Caltrans biologist shall determine an appropriate buffer based on the habits and needs of the species. The buffer area shall be avoided until a qualified biologist has determined that roosting activity has ceased or exclusionary methods have successfully evicted roosting bats.
- **Roosting Bats 2**—If bats are found by a qualified biologist to be maternity roosting, active bat maternity roosts shall not be disturbed or destroyed at any time.
- **Roosting Bats 3**—Readily visible exclusion zones shall be established in areas where roosts must be avoided using Environmentally Sensitive Area fencing. The size/radius of the exclusion zone(s) shall be determined by a qualified biologist.

As previously discussed, impacts to vegetation would be offset by replacement plantings within the project limits, which would also replace in-kind bat roosting habitat. No additional compensatory mitigation is proposed.

Invasive Species

The following avoidance and minimization measures are recommended for invasive species:

- **Invasive Species 1**—During construction, Caltrans will ensure that the spread or introduction of invasive exotic plant species will be avoided to the maximum extent possible.
- **Invasive Species 2**—Only clean fill shall be imported. When practicable, invasive exotic plants in the project site shall be removed and properly disposed. Any plant species rated as “High” on the Cal-IPC Invasive Plant Inventory that are removed from the construction site shall be taken to a landfill to prevent the spread of invasive species. Inclusion of any species that occurs on the Cal-IPC Invasive Plant Inventory in the Caltrans erosion control seed mix or landscaping plans for the project shall be avoided.
- **Invasive Species 3**—Construction equipment shall be inspected to verify it is clean and weed free by Caltrans before entering the construction site.

If necessary, wash stations onsite shall be established for construction equipment under the guidance of Caltrans in order to avoid/minimize the spread of invasive plants and/or seed within the construction area. If wash stations onsite are infeasible due to the site’s space constraints, construction equipment shall be cleaned offsite and then driven only on paved roads to the site.

No compensatory mitigation for invasive species is proposed.

2.1.5 Cultural Resources

The Cultural Resources Review for the Prunedale Drainage Project (dated August 9, 2021) concluded that no archaeological or historic era resources would be impacted by the project. No human remains are expected to be disturbed. Considering the information in the Cultural Resources Screened Undertaking Memo, 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?	No 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

2.1.6 Energy

Caltrans incorporates energy efficiency, conservation, and climate change measures into transportation planning, project development, design, operations, and maintenance of transportation facilities, fleets, buildings, and equipment to minimize the use of fuel supplies and energy sources and to reduce greenhouse gas emissions.

The project would not increase roadway capacity, so there would be no significant long-term increase in energy consumption. Minor use of fuels and other energy sources would be required during maintenance of the rehabilitated drainage systems. The replacement of new infrastructure would reduce the potential future scheduled and unanticipated maintenance operations and any affiliated energy use for maintenance vehicle access and equipment use.

Energy use would be necessary during construction activities at the project drainage rehabilitation locations. Energy consumption would be minimized

whenever possible through recycling of materials and implementation of greenhouse gas reduction strategies as discussed in Section 2.1.8, Greenhouse Gas Emissions.

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

Geotechnical investigations were done during the Project Approval and Environmental Document phase of the project to gather subsurface information for the trenchless method for some culvert locations. Subsurface drilling was done at multiple locations within the existing highway pavement or shoulder areas of the project limits and within the Area of Potential Impact analyzed for the environmental studies. Separate environmental analyses were conducted for the subsurface investigation, and clearance was approved with Categorical Exemption/Categorical Exclusion documentation in accordance with Caltrans' standard environmental procedures.

Because the entire project site is underlain by recent dune complex to Quaternary alluvium (Aromas Sand), no viable paleontological resources are expected within those soil units due to their younger ages. There are no unique geological features within or near the project limits.

An overview of the geology, soils, and geological hazards for the project area is provided in the discussion sections below the checklist. Available sources referenced for this information include the Geotechnical Report (dated April 12, 2022), the Paleontological Identification Report (dated December 1, 2021), the Jurisdictional Delineation Report included in the Natural Environment Study (dated December 2021), and online information and mapping from the County of Monterey Geographical Information Systems. (<https://www.co.monterey.ca.us/government/departments-a-h/housing-community-development/resources/monterey-county-gis-maps>).

Considering the above information, 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: <ul style="list-style-type: none"> 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. 	Less Than Significant Impact
ii) Strong seismic ground shaking?	Less Than Significant Impact
iii) Seismic-related ground failure, including liquefaction?	Less Than Significant 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 project sits within the north-central region of California’s Coast Ranges Geomorphic Province. According to the Geologic Map of Prunedale and San Juan Bautista Quadrangles, three geologic formations are mapped within the project limits. The geologic map legend describes the formation in the vicinity as the following:

- Surficial Sediments (Qa, Holocene): alluvial pebble gravel, sand, and clay of valley areas.
- Aromas Sand (Qar, Pleistocene): terrestrial sand deposited by prevailing west winds from beach, rusty brown, fine grained, and massive.
- Granitic Rock (grd, late Mesozoic): light gray, medium grained, mostly quartz diorite – granodiorite in composition.

Earth materials encountered during geotechnical subsurface investigations for the project are generally consistent with the geologic map. Based on the soils encountered, the fill sections under the project site range from less than 1 foot thick to 6 feet thick and appear to be local from the existing cuts through the Aromas Sand and overlying colluvium. Although geologic mapping indicates the presence of Granitic Rock, subsurface investigations did not encounter any. Overall, earth materials under this section of U.S. Route 101 consist of roadway fill, alluvium, and Aromas Sand.

The region is characterized by high seismic activity. The San Andreas Fault System, forming the boundary between the North American and Pacific crustal plates, is expressed as a series of northwest-trending faults. These include the San Andreas, San Gregorio, Monterey Bay, Hayward, Calaveras, Sargent, Vergales, and Zayante-Vergeles [note: the mapping records database shows a different spelling for Vergales in the hyphenated Zayante-Vergeles name] faults. Many individual faults of the San Andreas Fault System have produced strong earthquakes in the past and are expected to do so in the future.

U.S. Route 101, within the project limits, crosses a segment of the Zayante-Vergeles fault. The U.S. Geological Survey's interactive Quaternary faults database shows the Zayante-Vergeles fault as poorly mapped late Quaternary (less than 130,000 years before the present) and trending northwesterly crossing Carneros Creek near the south end of Dunbarton Road. The Zayante-Vergeles fault is capable of producing earthquakes of a magnitude of 7.4 on the Richter scale, or an intensity of IX on the modified Mercalli scale. It is assumed that the Vergales fault and the Zayante fault to the northwest are connected by the Zayante-Vergeles fault. Seismic geologists think that the Vergales fault is connected to the San Andreas fault approximately 30 miles south of the project. This fault is implied within the project area, so its exact location has not been mapped.

The San Andreas fault is 4 miles northeast of the project limits and is the next nearest mapped fault. The San Andreas fault is a major northwest-trending, right-lateral, strike-slip fault. The fault extends for about 600 miles from the Gulf of California in the south to Cape Mendocino in the north. The San Andreas is not represented by a single trace, but by a system of active faults that diverge from the main fault south of San Jose. This fault has been

predicted to have a major earthquake with a Richter scale magnitude of 7.0 within a 50- to 100-year interval. The San Andreas fault is the most likely fault to experience a major earthquake that could affect the project site.

Groundwater was encountered and measured during the subsurface investigations and is confined within older alluvium sand interbeds. The average groundwater depth encountered during drilling was 14.13 feet below the surface. During construction, perched groundwater conditions with isolated zones of variable moisture content and/or flowing water within the drainages may be encountered; perched groundwater is unconfined groundwater separated from an underlying body of groundwater by an unsaturated zone. Soil moisture content and surface water level of the adjacent ephemeral Carneros Creek and its tributary drainages will fluctuate throughout the year predominantly due to seasonal changes and precipitation events.

Most of the project site has a high susceptibility to liquefaction. Soil liquefaction is a phenomenon where saturated granular soil substantially loses its strength in response to cyclic loading from ground shaking during an earthquake, and the soil turns to a jellylike state. Potentially liquefiable beds of loose saturated sand underlying the site were encountered during the subsurface investigation.

Due to the steep terrain, the erosion potential is high throughout most of the project site. However, the erosion potential is considered low between post miles 99.7 and 99.8. The project site has a low landslide potential, except on the southbound side of U.S. Route 101 between post miles 100.02 and 100.03 where the potential is moderate. Site soils are well drained and are not considered expansive.

For structural elements, the 2021 Caltrans Corrosion Guidelines (version 3.2) consider a site to be corrosive if one or more of the following conditions exist for the representative soil and/or water samples tested: chloride concentration is 500 parts per million or greater, sulfate concentration is 1,500 parts per million or greater, or the pH is 5.5 or less. Based on the test results, this site's soils are considered non-corrosive.

Environmental Consequences

A risk-free seismic environment does not exist anywhere in California. Generally, shaking is less severe on rock than on alluvium or fill, though other local geologic conditions in a project area may override this generalization. Although the project area would experience strong shaking in the event of an earthquake, the proposed improvements to the highway drainage infrastructure would not add any new structural elements to the project limits of the route that might otherwise increase the potential for seismic hazards to the traveling public in the long-term use of the highway within the project limits. Seismic design standards in the Caltrans Highway Design Manual are implemented to the extent needed for each project's specific geologic and soil setting and to

address the specific elements of design. These design standards would minimize the susceptibility of the project route, the travelers that use the highway, and the nearby buildings and utilities to damage from earthquakes and other seismically induced hazards over the long term. Also, the contractor is responsible per the requirements of the U.S. Department of Labor and the U.S. Department of Occupational Safety and Health administrations to provide employees with a workplace free from recognized hazards likely to cause death or serious physical harm, including during seismic events.

Due to lack of radiometric dating from fault trenches of the Zayante-Vergeles fault, the project limits are not within an Alquist-Priolo Earthquake Fault Zone, and a Holocene-age fault is not located within 1,000 feet or does not trend toward the project limits. Therefore, the potential for surface fault rupture within the project limits is considered unlikely.

All 15 drainage systems proposed for replacement or rehabilitation are within areas with a high potential for liquefaction and a low potential for landslides. All the systems, except Systems 8 and 9, are within areas of high potential for erosion. Drainage systems that are proposed for replacement using the cut-and-cover method would install the new culverts at the same depth below the ground surface as the existing culverts that are being replaced (within 3 to 10 feet below the highway). Trenches cut for the repair work would be laid back into slopes and embankments, which would be required to be shored up at 95 percent compaction to ensure there would be no roadway or embankment slope failures. The three drainage system locations where the trenchless pipe jacking method of replacement is proposed (Systems 10, 12, and 14) are in areas with a high potential for the liquefaction, but the estimated settlement is minor; therefore, the liquefaction potential is not considered a hazard for design. In addition, the culvert repairs would not increase the groundwater levels in the work areas and would, therefore, not increase the liquefiable potential of the soils in the project construction areas.

In addition, standard specifications and Best Management Practices would be implemented during construction at project work locations for control of erosion and sedimentation from the construction work areas, as further discussed in Section 2.1.10, Hydrology and Water Quality. Therefore, it is expected that construction of the project would have less than significant effects related to seismic events, landslides, soil instability, liquefaction, or erosion.

Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures would be required.

2.1.8 Greenhouse Gas Emissions

Considering the information in the Climate Change Technical Report (dated April 29, 2022) and the Air Quality, Greenhouse Gas, and Noise Technical

Assessment Memo (dated August 9, 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

Regulatory agencies take greenhouse gas emissions inventory estimates to track 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 all levels of government jurisdictions to understand how emissions are changing and what actions may be needed to attain emission reduction goals set by the jurisdictions. The U.S. Environmental Protection Agency is responsible for documenting greenhouse gas emissions nationwide, and the California Air Resources Board documents emissions for the state as required by Health and Safety Code Section 39607.4.

The 1990-2019 greenhouse gas inventory for the nation prepared by the U.S. Environmental Protection Agency found that overall greenhouse gas emissions were 6,558 million metric tons in 2019, down 1.7 percent from 2018, but 1.8 percent higher than 1990 levels. The transportation sector accounted for 29 percent of the national greenhouse gas emissions in 2019 (U.S. Environmental Protection Agency, Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2019, EPA 430-R-21-005, <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2019>. Accessed: September 5, 2021).

The California Air Resources Board collects greenhouse gas emissions data for transportation, electricity, commercial/residential, industrial, agricultural, and waste management sectors each year. The data is summarized, and major trends are identified to demonstrate the state’s progress toward meeting its greenhouse gas reduction goals. The 2021 edition of the Greenhouse Gas Inventory 2000-2019, Trends of Emissions and other Indicators Report (California Air Resources Board, July 28, 2021) identified total emissions of 418.2 million metric tons of carbon dioxide equivalent statewide for 2019, a reduction of 7.2 million metric tons of carbon dioxide equivalent since 2018, with the transportation sector responsible for nearly 40 percent of the total greenhouse gases. The inventory also found that overall statewide greenhouse gas emissions declined from 2000 to 2019 despite

growth in population and state economic output (California Air Resources Board 2021, <https://ww2.arb.ca.gov/ghg-inventory-data/>).

The project is within the jurisdiction of the Transportation Agency for Monterey County, which is designated by the State of California as the Regional Transportation Agency for the county. The Association of Monterey Bay Area Governments is the joint power, multi-planning agency for the area, and the federal Metropolitan Planning Organization for the region. The Transportation Agency for Monterey County updates the Regional Transportation Plan every four years in coordination with the Association of Monterey Bay Area Governments, which prepares a Metropolitan Transportation Plan/Sustainable Communities Strategy for the three counties of Monterey, San Benito, and Santa Cruz. The Regional Transportation Plan provides a basis for actions to allocate state and federal funding for transportation improvement projects.

In 2008, the State of California enacted Senate Bill 375, which requires Metropolitan Planning Organizations to prepare a Sustainable Communities Strategy. The strategy integrates land use and transportation planning by coordinating transportation investments with land use patterns to reduce greenhouse gas emission targets set by the state for each region. The California Air Resources Board sets regional targets for California's 18 Metropolitan Planning Organizations to use in their Metropolitan Transportation Plan/Sustainable Communities Strategy to plan future projects that will cumulatively achieve greenhouse gas reduction goals. Targets are set at a percent reduction of passenger vehicle greenhouse gas emissions per person from 2005 levels. The regional reduction target for the Association of Monterey Bay Area Governments is 6 percent by 2035 (Air Resources Board 2019c). The Transportation Agency for Monterey County coordinated with the Association of Monterey Bay Area Governments to develop a Policy Element, a Financial Element, and a list of regional transportation investments that achieve greenhouse gas emissions reduction targets and support the Association of Monterey Bay Area Government's 2040 Metropolitan Transportation Plan-Sustainable Communities Strategy (Transportation Agency for Monterey County Regional Transportation Plan 2018 (ii)).

The 2018 Regional Transportation Plan identifies U.S. Route 101 as an interregional travel route providing north-south access for traffic between Los Angeles and San Francisco. Within Monterey County, the U.S. Route 101 corridor includes the City of Salinas and the southern Monterey County cities of Gonzales, Soledad, Greenfield, and King City. This corridor serves as both a significant county commute corridor and an important interregional corridor for goods movement and Monterey County's agricultural industry. The 1.5-mile portion of U.S. Route 101 in the project limits goes through rural residential and grazing land uses. Most of the project site is in a rural landscape amidst scenic hills and open spaces. Within the project limits (2018), U.S. Route 101 has an

annual average daily traffic volume ranging from 53,800 to 56,800 vehicles (Caltrans State Highway Traffic Census data 2018).

Environmental Consequences

Greenhouse gas emissions from transportation projects can be divided into those produced during the operation of the state highway system and those produced during the construction of highway facility improvements. The main greenhouse gases produced by the transportation sector are carbon dioxide, methane, nitrous oxide, and hydrofluorocarbons. Carbon dioxide emissions are a product of the combustion of petroleum-based products, like gasoline, in internal combustion engines. Relatively small amounts of methane and nitrous oxides are emitted during fuel combustion. Relatively small amounts of hydrofluorocarbon emissions are generated by the transportation sector.

The California Environmental Quality Act Guidelines generally address greenhouse gas emissions as a cumulative impact due to the global nature of climate change (Public Resources Code, Section 21083(b)(2)). To assess the incremental effects that an individual project would contribute to the cumulative impacts of greenhouse gas generation, the project's greenhouse gas emissions must be considered along with the emissions from past, present, and reasonably foreseeable (probable) future projects. Not every individual project that emits greenhouse gases must necessarily be determined to contribute to a significant cumulative impact on the environment.

Operational Emissions

Long-term operational increases in greenhouse gas emissions are not expected because the project would not increase the capacity of U.S. Route 101 (for example, adding travel lanes). Therefore, it would not increase vehicle miles traveled on the route. Non-capacity increasing projects generally cause minimal or no increase in operational greenhouse gas emissions in the long term. The improved condition of the culvert infrastructure with the project and associated bank/slope stabilization where necessary at culvert inlets and outlets would reduce the potential number of maintenance-related operational vehicle trips to the culvert locations in the long term, thereby providing greenhouse gas reduction benefits.

Construction Emissions

Construction greenhouse gas emissions would result from material processing, onsite construction equipment, and traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during the construction phase. In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the greenhouse gas emissions produced

during construction can be offset to some degree by longer intervals between maintenance and rehabilitation activities.

Estimated greenhouse gas emissions from project construction activities were quantified using the Caltrans Construction Emissions Tool, using settings for stormwater and drainage projects. Greenhouse gas emissions are estimated to total about 135 tons of carbon dioxide per year, or 145 tons of carbon dioxide equivalent emissions during the estimated 240 working days of project construction (about one year). Carbon dioxide equivalent is a measure used to compare emissions from a variety of greenhouse gases based on their global warming potential. For the proposed project, the carbon dioxide equivalent calculation considers carbon dioxide and converted amounts of methane, nitrous oxide, and hydrofluorocarbons.

Standard Measures and Project Features

The frequency and occurrence of greenhouse gas emissions during the construction period would be reduced by the implementation of standard measures and Best Management Practices. All construction contracts include Standard Specifications Section 7-1.02A and 7-1.02C, Emissions Reduction, which require 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. All construction contracts also include Standard Specifications Section 14-9.02, Air Pollution Control, which requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. Routine regulations such as equipment idling restrictions that reduce construction vehicle emissions also help reduce the generation of greenhouse gas emissions.

Certain project features would also help reduce greenhouse gas emissions. The Transportation Management Plan described in Section 1.4.1, Build Alternative, would be designed to limit the length of lane closures and minimize traffic delays during construction. The replanting of trees and other native vegetation removed for construction of the project improvements, as minimization measures prescribed in Section 2.1.1, Aesthetics, would sequester carbon. The Revegetation Landscape Plan would include standard practices of compliance with the statewide Model Water Efficient Landscape Ordinance or local agency ordinance for water conservation for project landscape maintenance and inclusion of landscaping components such as mulch and compost application to improve carbon sequestration rates in soils and reduce organic waste.

Greenhouse Gas Reduction Strategies

The project would include greenhouse gas reduction strategies that would further avoid and minimize the emission of greenhouse gases. These strategies would be included as Avoidance and Minimization measures and are fully listed below. The project's greenhouse gas reduction strategies

would use measures to reduce construction waste and water consumption, improve fuel efficiency, minimize earthwork and truck trips, and maintain pedestrian, bicycle, and transit access. Training to educate workers on ways to reduce construction emissions would be provided. Any large trees removed for the project would be salvaged and repurposed for lumber, landscaping, or other onsite beneficial uses, as feasible. Carbon sequestration rates would be improved through use of compost socks in place of straw wattles and the application of compost before seeding and replanting disturbed areas.

Avoidance, Minimization, and/or Mitigation Measures

Although the project would not result in significant greenhouse gas emissions, implementation of the following greenhouse gas reduction strategies would further help offset greenhouse gas emissions during construction:

- **Construction Waste Reduction**—Reduce construction waste and maximize the use of recycled materials, including but not limited to the replaced culvert pipes, joints, and other components, stockpiling pavement grindings for future use, salvaging rebar from demolished concrete, and processing waste to create usable fill.
- **Improved Fuel Efficiency**—Operate construction equipment with improved fuel efficiency by:
 - Properly tuning and maintaining equipment.
 - Limiting idling to 5 minutes for delivery and dump trucks and other diesel-powered equipment.
 - Using the right-sized equipment for the job.
 - Using equipment with newer technologies.
 - Use of alternative fuels such as renewable diesel as feasible.
 - Produce hot mix asphalt with warm mix technology.
- **Balanced Earthwork**—Balance earthwork (cut and fill quantities) to reduce the need for transport of earthen materials.
- **Truck Trips**—Schedule truck trips outside of peak morning and evening commute hours.
- **Reduced Water Consumption**—Reduce water consumption during construction and prioritize the use of recycled water for construction needs.
- **Large Tree Salvage**—Salvage large trees that are removed and repurpose them for lumber, landscaping, or other onsite beneficial uses as feasible.

- **Improved Carbon Sequestration**—Improve carbon sequestration rates through the application of compost before seeding and replanting disturbed areas, and use of compost socks in place of straw wattles.
- **Construction Emissions Reduction Training**—Conduct construction environmental training to provide construction personnel with information regarding methods to reduce greenhouse gas emissions related to construction.
- **Pedestrian, Bicycle, and Transit Access**—Maintain pedestrian, bicycle, and transit access throughout construction.

2.1.9 Hazards and Hazardous Materials

As noted in the project’s Scoping/Initial Site Assessment memorandum (dated March 11, 2021), the project site is not within a quarter mile of any existing or proposed schools and is not on properties that are included on a list of hazardous materials sites compiled pursuant to California Government Code Section 65962.5. Asbestos-containing materials and lead-containing paint are not expected within the project work areas. Naturally occurring asbestos does not occur within the project area. According to Federal Aviation Administration maps, the project site is not within the vicinity of a private airstrip, an airport land use plan, or within 2 miles of a public airport or public use airport.

Considering the information in the Scoping/Initial Site Assessment memorandum (dated March 11, 2021), publicly available online mapping, LandVision, the California Environmental Protection Agency’s Cortese List, the Federal Aviation Administration San Francisco Visual Flight Rules Sectional Chart, and the California Department of Forestry and Fire Protection’s Fire Hazard Severity Zone Map for Monterey County, 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?	Less Than Significant 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?	Less Than Significant Impact

Question—Would the project:	CEQA Significance Determinations for Hazards and Hazardous Materials
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter 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 two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	No Impact
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Less Than Significant Impact
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	Less Than Significant Impact

Affected Environment

The project site lies along a 1.5-mile-long section of rural highway. Treated wood waste has historically been used for guardrail and other highway components within the project limits. According to the California Department of Forestry and Fire Protection’s Fire Hazard Severity Zone Map for Monterey County, the project site is in a High Fire Hazard Zone and within 0.75 mile of a Very High Fire Hazard Zone to the south. Most of the project site goes through fire-susceptible rural residential areas and open spaces with woodland, scrub, and grassland vegetation.

California is also currently experiencing unprecedented drought conditions that further increase the potential for accidental fire hazard events. According to the Caltrans Climate Change Vulnerability Assessment for District 5, the fire severity levels for the project and surrounding region are forecast to increase over the century due to climate change factors (Caltrans Climate Change Technical Report, November 2021).

Environmental Consequences

The project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Construction of the project could potentially involve encounters with and disposal of treated wood waste, which is considered a hazardous material. The project would implement Standard Special Provision 14-11.14, which includes specifications for handling, storing, transporting, and disposing of treated wood waste.

The yellow traffic striping within the project limits was replaced in 2018 and does not contain hazardous lead. The project would include Standard Special Provisions 36-4 and 84-9.03C, which require the preparation of a lead compliance plan but do not require the traffic stripe debris to be disposed of as a hazardous waste. Standard Special Provision 7-1.02K(6)(ii) would be included to require the submittal of a plan to document a compliance program to prevent or minimize worker exposure to lead.

As listed in Section 1.5, Standard Special Provisions 14-11.03 and 14-11-06 would require compliance with applicable hazardous materials regulations and implementation of standard measures and Best Management Practices for hazardous materials and waste would ensure that potential hazards to the public involving the release of hazardous materials into the environment around the project site would be minimal. Impacts associated with the creation of 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 would be less than significant.

Aerially deposited lead from the historical use of leaded gasoline exists along most roadways throughout California. Soil determined to contain lead concentrations exceeding stipulated thresholds must be managed under the July 1, 2016 Aerially Deposited Lead Agreement between Caltrans and the California Department of Toxic Substances Control. The Aerially Deposited Lead Agreement allows such soils to be safely reused within the project limits as long as all requirements of the Aerially Deposited Lead Agreement are met. Preliminary site investigations performed within portions of the project corridor indicate that soil contaminated with aerially deposited lead is present.

However, if all disturbed or excavated soil is to remain onsite, aerially deposited lead would not be an issue because most disturbance and excavation would not be in areas where aerially deposited lead is present. However, aerially deposited lead might be an issue if this project includes soil excavation for export. If soil excavated from the project location is placed or disposed of outside of the State Highway right-of-way, then soil sampling would be performed to document the soil lead concentrations so the material can be properly handled and disposed. Additional soil testing would be done during the project design (Plans, Specifications, and Estimates) phase to document lead concentrations at project work areas. Applicable standard

special provisions would be included in the construction contract, and a lead compliance plan would be prepared and implemented by the construction contractor in accordance with the 2016 Aerially Deposited Lead Agreement. These could include Standard Special Provisions 14-11.08 and/or 14-11.09, as determined applicable during the project design phase.

During construction, two-way traffic flow would be provided for northbound and southbound traffic on U.S. Route 101. Detour route(s) for vehicle, bicycle, and pedestrian traffic would be provided as necessary as part of Caltrans' standard traffic control and Transportation Management Plan procedures. Temporary traffic control is required for all Caltrans projects that involve lane closure and/or lane modification. As is typical for lane closures and modifications, the traffic control strategies prepared for the project would allow for adequate emergency access.

U.S. Route 101 is included in the list of designated evacuation routes in the Monterey County General Plan (General Plan Safety Element, Table S-1). In addition, Goal S-5.14 of the Safety Element states that all public thoroughfares, private roads, and deeded emergency accesses are considered potential emergency evacuation routes. The Transportation Management Plan that would be implemented to enable access along U.S. Route 101 during construction would account for emergency evacuations and emergency vehicle access along the highway corridor, including specification of detour routes for any project construction locations where full highway or ramp closures would be necessary for a short time. Refer to additional discussions in Section 1.4.1, Build Alternative, and Section 2.1.17, Transportation. Therefore, the project would not impair an adopted emergency evacuation plan.

The project would extend the life of the highway drainage infrastructure. Once installed, the improvements would be mostly underground and, for the culvert repairs, would be in the same locations as existing culverts. The project would not change the existing land uses or generate new development so that new populations and structures would be brought into wildland fire zones. As noted in Section 1.5, the project would implement Standard Special Provision 7-1.02M(2), which would require the contractor to develop and implement a fire prevention plan to minimize the risk of starting a wildfire during construction. Therefore, the project would not expose residents or businesses to increased risk of loss, injury, or death from wildland fires in the long term or permanently increase the potential for wildfire hazards in the region.

Avoidance, Minimization, and/or Mitigation Measures

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

2.1.10 Hydrology and Water Quality

According to the Federal Emergency Management Agency’s Flood Insurance Rate Map 06053C0089G (effective April 2, 2009), the project is not within the boundaries of a designated flood hazard zone. No impacts related to flooding are expected from implementation of the project. The project limits are outside of the Tsunami Hazard Area according to the California Department of Conservation tsunami hazard areas of Monterey County (<https://www.conservation.ca.gov/cgs/tsunami/maps/monterey/>).

Considering the information in the project’s Federal Emergency Management Agency Floodplains and Location Hydraulic Study (dated December 20, 2021), Stormwater Data Report (dated February 15, 2022), Natural Environment Study (dated December 2021), Jurisdictional Delineation (dated March 2021), Geotechnical Report (dated April 12, 2022), and Water Quality Assessment Memo (dated August 10, 2021), 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?	Less Than Significant Impact
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Less Than Significant 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;	Less Than Significant Impact
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite;	Less Than Significant Impact

Question—Would the project:	CEQA Significance Determinations for Hydrology and Water Quality
(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	Less Than Significant 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?	Less Than Significant Impact

Affected Environment

The project lies in Hydrologic Sub-Area 306.00, which is an undefined Hydrologic Area within the Bolsa Nueva Hydrologic Unit. There are no Drinking Water Reservoirs and/or Recharge Facilities within the project limits. The project is near two groundwater basins: Salinas Valley/Langley Area (3-004.09) and Corralitos, Pajaro Valley (3-002.01). As noted in Section 2.1.7, groundwater was encountered and measured during the subsurface investigations and is confined within older alluvium sand interbeds. The average groundwater depth encountered during drilling was 14.13 feet below the surface. Soil moisture content and surface water level of the adjacent ephemeral Carneros Creek and its tributary drainages will fluctuate throughout the year mostly due to seasonal changes and precipitation events.

The project culverts convey mostly runoff from natural drainage features or sheet flow from roadway drainage through dikes and embankment facilities. Most tributary drainages within the project limits are not flowing during the dry season; however, Carneros Creek can hold water late into the season and may require stream diversion and dewatering to isolate construction sites from flowing or standing water.

The receiving water body for this project is Carneros Creek, which drains into Monterey Bay by way of Elkhorn Slough. Review of the project’s location with respect to adjacent receiving waters indicate that Carneros Creek includes impairments listed on the 2014/2016 Clean Water Act Section 303(d) list. According to the 303(d) list, Carneros Creek is impaired for ammonia, chlorophyll-a, fecal coliform, nitrate, dissolved oxygen, pH, and turbidity. The beneficial uses of Carneros Creek are as follows:

- Municipal and Domestic Supply
- Contact Water Recreation
- Non-contact Water Recreation
- Wildlife Habitat
- Cold Freshwater Habitat
- Warm Freshwater Habitat
- Migration of Aquatic Organisms
- Spawning, Reproduction, and/or Early Development
- Rare, Threatened, or Endangered Species
- Freshwater Replenishment
- Commercial and Sport Fishing

Environmental Consequences

Sources of impacts would be mostly from the use of construction equipment and associated worker foot-traffic. Trucks, bulldozers, backhoes, compactors, asphalt concrete rollers, clamshells, excavators, compressors, pavers, water trucks, sweepers, and any other equipment necessary for construction would be used. Staging may occur in closed lanes behind a temporary concrete protective barrier or along ruderal/disturbed edges of U.S. Route 101.

The proposed replacement culverts and infrastructure to be repaired would be replaced at the approximate same locations and alignments and with the same lengths of pipe or slightly longer as the existing facilities. Excavation where the trenching (cut-and-cover) method is proposed would be at approximately the same depths for repair or replacement of culverts as the existing culverts. For the three drainage system locations where the trenchless pipe jacking method is proposed, the new pipe would also be installed at approximately the same depths as the existing infrastructure.

Drainage inlets would be modified at various locations to accommodate the installation of the new culverts. As described in Table 1.1 (Drainage System Locations and Construction Activities), 16 (about four-fifths) of the existing project culverts would be replaced with larger diameter pipes. The larger diameter pipes are proposed so that debris will pass more easily and to facilitate maintenance of the drainage infrastructure. The other project culverts would be replaced with pipes of the same diameter as the existing

pipes. Therefore, the project would not cause any substantial alteration of existing drainage patterns.

The replacement and repair work would not alter the watersheds that contribute surface runoff via tributaries into the project culverts. As culvert pipe size (diameter) increases, the drainage flow rates (velocities) decrease, and potential scour is reduced; the smaller the pipe diameter, the greater the force of water that builds up behind it. Also, the project would not increase the existing grade (degree of steepness) of the drainage infrastructure. Pipe inlets would be designed and spaced to control the quantity of runoff that passes through based on 25-year storm event criteria. Therefore, the project would not increase quantities or flow rates of surface runoff passing through the pipes.

Since the project site is not within a designated flood hazard zone, the project would not cause a significant floodplain encroachment, raise the profile of U.S. Route 101, or have any potentially significant impact on the 100-year floodplain. The proposed drainage systems would be designed in accordance with Federal Highway Administration criteria to meet 25-year storm events. Therefore, the culvert replacement/repairs would not generate additional surface runoff that would increase flood flows in flood zones or cause additional flood hazards that would impact the ability of existing downstream stormwater facilities to convey surface drainage systems capacities.

During construction, perched groundwater conditions with isolated zones of variable moisture content and/or flowing water within the drainages may be encountered; perched groundwater is unconfined groundwater separated from an underlying body of groundwater by an unsaturated zone. Standard provisions and Best Management Practices would be implemented by the contractor during excavation, dewatering, and other construction activities for avoidance and minimization of impacts to surface water and groundwater quality. Dewatering would be conducted in accordance with the Caltrans Field Guide to Construction Site Dewatering Manual and Standard Specification Section 13-4.03G. A dewatering and discharge work plan would be submitted at least 15 days before the start of dewatering activities, detailing the location of dewatering and discharge activities, quantity of water, equipment, and discharge point. The dewatering and discharge work plan would conform to Standard Specifications Section 13-4.01C. The construction activities for drainage system rehabilitation would not use any groundwater for water supply during construction or for mitigation landscape maintenance, and therefore would not affect recharge of local groundwater units. Therefore, the potential for conflicts with or obstruction of the implementation of a water quality control plan or sustainable groundwater management plan would be minimal and less than significant.

Construction activities such as excavation for culvert replacements and repair and trenchless (potentially pipe jacking) horizontal drilling could potentially discharge stormwater along with erosion and sedimentation into surface waters

and receiving water bodies downstream. As noted above in the Affected Environment section, Carneros Creek is impaired for turbidity according to the Central Coast Region's 2016 Clean Water Act Section 303(d) list. The project would involve excavation at each of the drainage system locations. However, the amount of earthwork overall would not be so extensive that existing turbidity conditions would be increased, according to the Water Quality Assessment technical analysis. The project would be designed to avoid impacts from turbidity to receiving waters downstream of the project limits in accordance with the design storm criteria discussed above.

Standard measures and Best Management Practices outlined in Section 1.5 would be implemented to protect surface water and groundwater quality, including potential erosion and sedimentation during construction. A Water Pollution Control Program would be required to be prepared by the construction contractor, who would be responsible for adherence to the specifications and measures in the program. Implementation of the standard measures would keep potential project water quality effects to a minimum and short-term. Also, the construction contractor may implement one of several options for groundwater from dewatering activities, such as evaporation or infiltration, reuse onsite for construction activities if the groundwater is not found to be hazardous, or transport and disposal offsite using a Transportation, Storage, and Disposal contractor. These management options would not discharge into a stormwater drain or receiving water.

Project design features would also help minimize long-term erosion and sedimentation. Some of the existing embankments at culvert inlets and outlets are exhibiting slope failure and soil erosion. Replacement of the project culverts would provide for the opportunity to stabilize the embankment slope as well as place rock slope protection at some of the outlets to prevent further embankment erosion and reduce the concentrated flow velocity. If the damaged culverts are not repaired, there is a high potential for roadway embankment erosion, which could lead to failure of the U.S. Route 101 roadway, and additional erosion and sedimentation impacts to the water quality of downstream drainages and receiving water bodies.

Avoidance, Minimization, and/or Mitigation Measures

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

2.1.11 Land Use and Planning

Transportation plans and programs applicable to this project include the Transportation Agency for Monterey County's 2018 Regional Transportation Plan and the Association of Monterey Bay Area Governments' Metropolitan Transportation Improvement Program for Federal Fiscal Year 2020-2021 to Federal Fiscal Year 2023-2024. The Monterey County plans relevant to the

project study area are the Monterey County General Plan and North County Land Use Plan.

The project is included in the adopted Association of Monterey Bay Area Governments Metropolitan Transportation Improvement Program for Federal Fiscal Year 2020-2021 to Federal Fiscal Year 2023-2024, with funding from the Drainage System Restoration (201.151), and programmed in the State Highway Operation and Protection Program.

As the scope of the project is to rehabilitate drainage infrastructure on U.S. Route 101, existing and future land uses within or adjacent to the project limits would not be changed, nor would the project divide an established community. The replacement culverts would be installed in the same locations as the existing infrastructure with minor adjustments of inlets and outlet structures and a minor amount of additional rock slope protection at selected locations for embankment and slope stabilization.

The project would not conflict with the elements of the general plans of Monterey County or any other land use policy or regulation intended to avoid or mitigate any effects on the environment. Appendix C contains a table that evaluates the project’s consistency with relevant local plans. Because the project would repair aging drainage infrastructure within the highway corridor and would not increase the capacity of the highway, it would not directly or indirectly cause changes in land uses that would conflict with planning policies and regulations. The project would implement compensatory mitigation for potential impacts to sensitive wildlife and plant species and locally and regionally important habitat types. Avoidance and minimization measures would be implemented to further reduce the project’s potential effects on the environmental resources of the project area, including biological resources, visual resources, and generation of greenhouse gases. Standard provisions and standard special provisions would be applied for noise level controls from construction vehicles and equipment, proper handling and disposal of hazardous materials and waste, and Best Management Practices for the protection of water quality.

Upon consideration of the above 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

Question—Would the project:	CEQA Significance Determinations for Land Use and Planning
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

According to the California Geological Survey Mineral Land Classification Map for the project area and the Monterey County 2007 General Plan Draft Environmental Impact Report (Section 4.5.1, Mineral Resources), there are no known mineral resources that would be of value to the region and the residents of the state within the project limits. The nearest mineral resource recovery site to the project limits is the Graniterock: Aromas Transportation Divisions sand and gravel quarry along the Pajaro River. The quarry is 3.5 miles north of the project limits. No access to the site is provided by any roads that connect to U.S. Route 101 within the project limits. 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

Pursuant to 23 Code of Federal Regulations 772.7, the Federal Highway Administration defines transportation projects as Type 1 (construction that involves a substantial horizontal or vertical alteration), Type 2 (construction of noise abatement on an existing highway with no changes to highway capacity or alignment) or Type 3 (projects that do not meet the definitions of either Type 1 or Type 2). The proposed project is a Type 3 project because it would not increase the capacity of U.S. Route 101, and it would not involve substantial design alterations or construct noise abatement measures on the highway. Because the project is a Type 3, long-term local noise levels on the highway from traffic within the project limits would not be changed, and therefore, noise abatement measures would not be required. Also, the project

limits are not located within the vicinity of a private airstrip or an airport land use plan, or within 2 miles of a public airport or public use airport.

Considering the information in the Air Quality, Greenhouse Gas, and Noise Technical Assessment Memo dated August 9, 2021, and the information above, 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
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	No Impact

Affected Environment

The overall project setting is rural with grazing lands and very few residential units scattered along the project limits. In some portions of the project limits, residential development is set back from the highway; in others, it's close by. The closest residence to a proposed work area is at post mile 99.99. Project activities at this location would include excavation of a receiving pit for trenchless removal and replacement of an existing 18-inch-diameter corrugated metal pipe culvert crossing under the route travel lanes and shoulders. A temporary construction easement for this work would be requested from the property owner and would be located approximately 50 feet from the residence on the property. All other residences are 100 feet or more from the project work areas.

Environmental Consequences

The California Environmental Quality Act (CEQA) considers noise to be a significant effect when it increases substantially the ambient noise levels for adjoining areas. The proposed culvert rehabilitation, silt removal, and drainage channel regrading would not cause any permanent increase in

ambient levels in the project vicinity or region. Since no capacity would be added to the highway and no significant change in the profile of the highway is anticipated, it is assumed that local noise levels would be the same after completion of the project as they were before. Long-term noise abatement measures are not anticipated with this project.

It is inevitable that local noise levels in the vicinity of any given location will 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.

Up to 14 days of nighttime work may be required for each drainage system location. In total, nighttime work for this project is not expected to exceed 200 days. As staged work areas move through the project limits, they would come near sensitive receptors (residences) that are located intermittently along the U.S. Route 101 right-of-way. Noise levels could temporarily exceed 86 A-weighted decibels at 50 feet. A Caltrans Resident Engineer would ensure that, whenever possible, construction work would be done during the day when work is near sensitive receptors. When nighttime construction activities would be necessary, the noisiest activities nearest residences would be done as early in the evening as possible. Standard Specifications Section 14-8.02 would also be implemented, which requires the construction contractor to control and monitor construction noise and not to exceed 86 A-weighted decibels at 50 feet from the work site from 9:00 p.m. to 6:00 a.m.

General measures for noise control and public outreach, which Caltrans adopts for all projects near residences, would be included in the Resident Engineer's binder. Noise control measures would include requirements for equipment shielding, equipment location, and noise abatement. Public outreach measures would require notification to the public two weeks in advance of the construction schedule when construction noise and upcoming construction activities likely to produce an adverse noise environment are expected. If noise complaints are received during the construction process, the project's Resident Engineer would consult with District 5 Noise Quality specialists to determine appropriate steps to alleviate noise-related concerns.

Even without these additional measures, adverse noise impacts from implementation of the project are not anticipated because construction would be temporary and intermittent, conducted in accordance with Standard Specifications, and because local noise levels are significantly influenced by local traffic noise. The potential for the project to generate 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 would be less than significant.

The project would not directly or indirectly generate additional long-term vibration or groundborne noise from traffic operations along the project route because the highway's vehicular capacity would not change. The drainage systems rehabilitation would not cause any permanent increase in ambient vibration and groundborne noise levels in the project vicinity or region. The project's potential to generate excessive groundborne vibration or groundborne noise levels would be less than significant.

Avoidance, Minimization, and/or Noise Abatement Measures

The following general measures for noise control and public outreach, which Caltrans adopts for all projects, would be included in the Resident Engineer's binder as project features. Implementation as appropriate would further minimize temporary construction-noise impacts.

Equipment Noise Control

- **Equipment Shielding**—Shield loud pieces of stationary construction equipment if complaints are received.
- **Equipment Location**—Locate portable generators, air compressors, and other similar equipment as far away from sensitive noise receptors as feasibly possible, and limit the grouping of major pieces of equipment operating in one area to the greatest extent feasible.
- **Equipment Noise Abatement**—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. Equip internal combustion engines used for any purpose on or related to the job with a muffler or baffle of a type recommended by the manufacturer.
- **Nighttime Construction**—Ensure that, whenever possible, construction work would be conducted during the day when work is near sensitive receptors. If nighttime construction activities are necessary, conduct the noisiest and/or most vibratory construction activities near residences as early in the evening as possible.

Administrative Measures

- **Public Notice**—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. Provide the notice two weeks in advance. Publish the notice in local news media with the dates and duration of the proposed construction activities. Through the District 5 Public Information Office, post notices of the proposed construction and potential community impacts after receiving notice from a Caltrans Resident Engineer.

- **Noise Complaints**—Consult with District 5 Noise Quality specialists to determine appropriate steps to alleviate noise-related concerns if complaints are received during the construction process.

2.1.14 Population and Housing

The project would not alter the existing capacity or alignment of U.S. Route 101; therefore, it would not induce unplanned population growth directly or indirectly. The project would not displace people or housing units in the region. 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

The drainage system rehabilitation would be within the existing alignment of U.S. Route 101. No population growth or need for additional public services would result from the improvements within the project limits, as the sizes and lengths of the proposed culvert replacement and repairs would be consistent with current design standards and the physical topography soils and other conditions at the individual system locations. The project would not impact any existing or planned governmental facilities near the project location. Public access would be maintained on U.S. Route 101 during construction activities.

Considering this information, 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

The project would rehabilitate drainage systems within the project limits on U.S. Route 101. The existing highway capacity for vehicle traffic would not be increased. The project would not provide new routes or route alignments that could facilitate population growth and additional development. Therefore, the project would not result in direct or indirect impacts that would increase the use of existing neighborhood and regional parks or other recreational facilities so that substantial physical deterioration of the facilities would occur or be accelerated. The project does not include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment. There are no recreational facilities within the project limits or nearby that would be directly or indirectly affected by the project.

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
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 project would not generate any additional population growth in the project area or region, and therefore would not increase traffic volumes along the project route or increase vehicle miles traveled. Drainage rehabilitation would not alter the existing highway alignment or capacity of U.S. Route 101. According to the Caltrans Technical Analysis under CEQA (2020), rehabilitation, replacement, and repair projects designed to improve the conditions of existing transportation assets like culverts and that do not add additional motor vehicle capacity are not likely to lead to a measurable and substantial increase in vehicle travel.

The project improvements would not conflict with any existing or planned transportation-related plans, programs, or facilities in the region as the project would rehabilitate existing drainage systems. The project is included in the 2021 Metropolitan Transportation Improvement Program for the Association of Monterey Bay Area Governments (Federal Statewide Transportation Improvement Program, approved April 16, 2021). The project is programmed in the State Highway Operation and Protection Program and funded under the Drainage System Restoration (201.151).

No changes to the existing highway or adjoining roadway alignments, capacities (number of lanes or lane widths), or design features would be involved with the improvements; therefore, no design-related hazards or incompatible uses would be generated.

Considering the information provided above and in Section 1.4.1, Build Alternative, 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

Within the project limits, U.S. Route 101 is a four-lane divided highway with 12-foot-wide travel lanes and 4- to 10-foot-wide shoulders. A local rural street and residential driveways access U.S. Route 101 within the project limits. The route provides regional access for the public and emergency service providers traveling from San Benito County and the coastal areas of Monterey County.

Environmental Consequences

Project construction would require approximately 240 working days over a staged, one-year schedule. Near work areas, temporary closure and/or modification of lanes along affected portions of U.S. Route 101 would result. However, the two-way flow would remain open throughout construction with the implementation of Caltrans’ Standard Specifications (Sections 12-1 through 12-7), Standard Special Provisions that pertain to traffic management and control, and through the implementation of a Transportation Management Plan prepared specifically for the project route and setting conditions.

The Caltrans Construction Manual requires, whether permanent or temporary, restoration of access as soon as possible without waiting for the work to be completed past all the nearby access points. In accordance with the Caltrans Construction Manual (2019, Section 3-702A), the project’s construction contractor would provide for the convenience of the public and public traffic. Section 7-1.03, “Public Convenience,” of the Standard Specifications requires that operations present the least possible obstruction and inconvenience to the public. The “least possible obstruction and inconvenience” will always depend on a judgment. Ultimately, the construction contractor for the project would use good construction industry practice, comply with specifications, and not materially diminish the degree of convenience and free passage through the area that existed before construction.

Delays in emergency service response times may result during construction due to periodic lane closures and/or modifications, route detours, driveway closures, and other circulation and access alterations. A Transportation Management Plan for traffic control and access during construction would minimize to the extent feasible any delays in emergency service access that could result from the necessity of activating lane closures and/or modifications and detour routes.

The Resident Engineer for the project would notify and coordinate with regional emergency service providers regarding construction-related activities to ensure that project activities would not restrict or prevent access within the project area. Access for fire/paramedic and other emergency service vehicles through the project limits would be enabled through controlled work zones by the project's construction contractor. The construction contractor would also ensure that construction activities would not block emergency service access to all interconnecting roadways and routes in the project area. Coordination with the local transit provider would occur to temporarily relocate bus stops as needed and provide information in advance to allow for route rescheduling. The project would include Standard Specifications and Standard Special Provisions that pertain to actions and strategies that would help maintain a safe environment for construction workers and the traveling public.

The public would be notified of planned construction traffic management strategies through various methods as part of a public awareness campaign and motorist information on the project route. The public awareness campaign may include strategies such as press releases and media alerts, advertisements, Caltrans websites and other highway traffic-related internet applications, and/or a telephone hotline. Traveling motorist information may include tools such as on-highway and local street changeable message signs, construction area signs, and radio advisories. Once installed, the proposed infrastructural repairs within the project limits would not have any long-term effects on emergency access on U.S Route 101.

Avoidance, Minimization, and/or Mitigation Measures

The project would implement standard Caltrans measures, including a Transportation Management Plan during construction. No additional avoidance, minimization, and/or mitigation measures are proposed.

2.1.18 Tribal Cultural Resources

Caltrans conducted Native American consultation as required under Assembly Bill 52 (Public Resources Code 21080.3.1 and 21084.3(c)) in accordance with the California Environmental Quality Act Initial Study preparation. As noted in Section 2.1.5, Cultural Resources, of this document, there are no historic and archaeological resources within the project limits. Letters describing the proposed project were mailed to Native American tribes, individuals, and

organizations on December 21, 2017. The letters initiated Section 106 consultation pursuant to the National Historic Preservation Act and formal notification of a proposed project as required under the California Environmental Quality Act, specifically Assembly Bill 52 (Public Resources Code 21080.3.1 and Chapter 532 Statutes of 2014). Caltrans did not receive any replies or requests for consultation regarding this project.

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
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

Both high and low priority utility facilities exist throughout the project limits. According to the project’s Right-of-Way Data Sheet Request Form in the Draft Project Report, a utility permit search has been completed, utility involvement and/or relocation is not required, no potholing is required, and no verifications are necessary. Construction activities are expected to use electricity and natural gas to power equipment, tools, and vehicles as needed for the repairs and other improvements throughout the construction period (expected to be about one year). Electrical power would be provided by portable gas-powered generators. The project would rehabilitate drainage systems at selected locations within the project limits and would not cause changes in land uses or other environmental effects that would necessitate additional drainage system capacity.

In accordance with the standard procedures and measures developed by Caltrans for all highway construction projects, the construction contractor would

be required to comply with all applicable federal, state, and local management and reduction statutes and regulations related to solid waste implementation. Considering the information in publicly available online records and service maps for the Local Agency Formation Commission of Monterey County, the Aromas Water District, and the Pajaro Valley Water Management Agency, 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 storm water 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?	Less Than Significant 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?	Less Than Significant 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?	Less Than Significant Impact
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Less Than Significant Impact

Affected Environment

The northern 1,400 feet of the project site is within the Sphere of Influence of the Aromas Water District. The district's water is taken from several deep-water wells located in Aromas. Though most of the Aromas Water District falls in the boundary of the Pajaro Valley Water Management Agency, the project site and immediate surrounding area do not. Six landfills with capacity to serve the project's solid waste disposal needs are located within 50 miles of the project site. Public wastewater service is not provided within the project area.

Environmental Consequences

Minor amounts of water would be used for various construction activities throughout the construction period at the project locations. Water would also be needed for the establishment and periodic irrigation maintenance of landscape plantings and tree replanting mitigation areas for up to three and a half years after completion of construction. Caltrans implements water conservation elements as part of the standard procedures for landscape planting and irrigation design processes. Specifically, Caltrans highway landscape projects are required to comply with either the statewide Model Water Efficient Landscape Ordinance or local ordinances for water conservation where applicable.

The landscape planting and irrigation design for the project's replacement plantings would, therefore, include methods to minimize potable usage for supplemental irrigation for plant establishment, such as use of recycled, non-potable water where available, drip irrigation, and low-water-use plant species that are suitable for the micro-climates of the landscape areas. Caltrans landscape planning applies a goal of a 50 percent reduction in water usage from the year 2013, in accordance with the requirements of California executive orders issued under the administration of Governor Edmund G. Brown Jr. Therefore, the project would be expected to have sufficient water supplies to support project restoration landscaping in the long-term during dry or multiple dry years through the use of efficient and minimal water usage practices and would not substantially reduce local and regional water supplies.

Project construction activities would generate minor amounts of solid waste that would not overwhelm the capacity of existing waste management facilities. Recyclable materials would be recycled, and waste materials would be disposed of in accordance with all state and federal requirements.

No sewage facilities or services would be affected by or needed for the project construction activities or for long-term maintenance of the project drainage and other infrastructural improvements. Sewage services for workers during construction would be temporary and managed through portable toilets that would be periodically drained by pump trucks. Sewage would be transported to an offsite location that is permitted for sewage disposal and subsequent processing. Therefore, the project would not substantially affect wastewater treatment in the local project area and the region as the project construction activities would be minor and short term.

Avoidance, Minimization, and/or Mitigation Measures

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

2.1.20 Wildfire

Considering the information in the California Department of Forestry and Fire Protection’s Fire Hazard Severity Zone Map for Monterey County, 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?	Less Than Significant 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?	Less Than Significant 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?	Less Than Significant Impact

Affected Environment

According to the California Department of Forestry and Fire Protection’s Fire Hazard Severity Zone Map for Monterey County, the project site is in a High Fire Hazard Zone and within 0.75 mile of a Very High Fire Hazard Zone to the south. Most of the project site goes through fire-susceptible rural residential areas and open spaces with woodland, scrub, and grassland vegetation. California is also currently experiencing unprecedented drought conditions that further increase the potential for accidental fire hazard events. According to the Caltrans Climate Change Vulnerability Assessment for District 5, the fire severity levels for the project and surrounding region are forecast to increase over the century due to climate change factors (Caltrans Climate Change Technical Report, November 2021).

Environmental Consequences

The project does not involve changes in land use, such as new urban or suburban development. The project would extend the life of the highway drainage infrastructure, and therefore would not expose residents or businesses to increased risk of wildfire in the long term or permanently alter existing wildfire hazards in the region. Once installed, the drainage improvements would be mostly underground and would require less maintenance than the existing facilities.

In addition, the project would not alter existing drainage patterns or potentially increase downstream flooding or landslides as the culverts to be replaced would be in about the same locations as the existing drainage pipes. Design standards would be implemented in accordance with the roadway and hydraulic and topographical conditions at each culvert location to control runoff and ensure slope protection. In addition, Best Management Practices for stormwater management would be implemented as part of Caltrans' standard procedures and measures during construction activities and post-construction activities (see also the discussions in Section 2.1.9, Hazards and Hazardous Materials, and Section 2.1.10, Hydrology and Water Quality).

However, because the drainage rehabilitation locations are in High Fire Hazard Severity Zones with woodland and other highly flammable vegetation in and around the proposed work locations, construction activities would have the potential to unintentionally cause brushfire from the use of fuel-powered and electrical construction equipment and vehicles. During construction, vegetation removal would be necessary at some of the culvert locations to enable access by construction equipment, vehicles, and supplies to the work sites. The project will implement Caltrans' Standard Specifications for fire prevention and safety as precautionary measures to prevent fire-related incidents during construction in accordance with the California Division of Occupational Safety and Health's Construction Safety Orders, Fire Protection and Prevention Guidance. Vegetation removal will be planned and conducted using techniques to avoid and minimize unintentional fire hazards.

Construction of the culvert repairs is expected to necessitate temporary single-lane closures or other lane modifications and construction site strategies to maintain traffic access along U.S. Route 101 at most of the culvert repair locations. As discussed in Section 2.1.17, Transportation, it is expected that one lane in each direction would be maintained during the daytime for traffic access at most of the drainage rehabilitation locations where roadway lane configurations allow.

Any full closure locations, roadway instructional signage, and/or detour routes would be determined as necessary in the Transportation Management Plan that would be implemented during the construction phase (see also Section 1.4.1, Build Alternative). Travel lane closures or reversible one-lane direction control in the construction work locations would occur at nighttime when traffic

levels are lower than the daytime peak periods. Access for emergency vehicles would be maintained along U.S. Route 101 in the project limits during construction as specified in the Transportation Management Plan, and therefore the project would not impair an emergency response plan or evacuation plan. No long-term effects on emergency response or evacuation plans would occur after completion of project construction at the project infrastructure locations because the traffic management lane closures would be temporary during construction.

Avoidance, Minimization, and/or Mitigation Measures

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

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 with Mitigation Incorporated
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 with Mitigation Incorporated
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	No Impact

The following discussion provides information addressing questions A and B in the checklist above. Regarding question C, the project would rehabilitate existing drainage systems. The potential environmental effects of the project would occur during project construction activities. The improvements would not cause substantial impacts on human beings.

Affected Environment

The project would affect environmental resources within and immediately surrounding post miles 98.8 to 100.3 on U.S. Route 101 in Monterey County. The scope of the project would be limited to repairing and replacing existing drainage culvert infrastructure within the project limits. Related functions for project construction would include the use of staging areas for equipment and materials, and temporary construction easements at selected properties outside of the state highway right-of-way.

Environmental Consequences

Overall, the project is not expected to substantially degrade the quality of the environment. The project would not have a substantial adverse effect on scenic vistas or substantially alter the existing appearance of the project repair locations. The proposed drainage infrastructure rehabilitation would incrementally increase the existing utilitarian appearance of the project work areas that would be minimized with the implementation of the avoidance and minimization measures noted in Section 2.1.1, Aesthetics. Although the U.S. Route 101 project corridor aligns with a portion of State Route 156 that is eligible for designation as a Scenic Highway, it is expected that after project construction and revegetation plantings, the project would generally be unnoticed by travelers on the route.

Project construction activities would cause temporary and permanent impacts to habitat for wildlife species, particularly regulated wetlands, other jurisdictional waters, and potential sensitive species habitats. The project has been designed to avoid and minimize impacts to biological resources as much as feasible. For example, the project proposes a nonstandard design variation to match the existing nonstandard side slopes with a ratio of 2-to-1 and 3-to-1 rather than 4-to-1 or flatter in accordance with current design standards, which would potentially increase the impact footprints near biological resources.

Some greenhouse gas emissions would occur during construction from equipment, processing of construction materials, construction vehicle usage, and public vehicles idling during minor traffic delays during construction. Impacts would be less than significant in consideration of the limited scope and temporary nature of the project. However, the project would implement Caltrans standard specifications, Best Management Practices, and the greenhouse gas reduction strategies noted in Section 2.1.8, Greenhouse Gas Emissions, as avoidance and minimization measures to further reduce greenhouse gas emissions during construction.

The project would not impact any known archaeological or historic era resources and therefore would not eliminate any important examples of the major periods of California history or pre-history.

With the implementation of standard specifications, special standard provisions, Best Management Practices, and mitigation measures, impacts to environmental resources would be less than significant.

The project would not have cumulatively considerable effects on the environmental resources of the project study area and vicinity in consideration of past, current, and reasonably foreseeable future projects with implementation of standard specifications, special standard provisions, Best Management Practices, and mitigation measures as noted in this document. The potential for adverse cumulative impacts to California red-legged frogs, Coast Range newts, and western pond turtles and their habitats is estimated to be very low considering the relatively small amount of potential habitat of each that would be affected in relation to the total amount of habitat that occurs in the region. Compensatory mitigation as provided for jurisdictional areas in Section 2.1.4 Biological Resources would also replace habitat for the California red-legged frog, Coast Range newt, and western pond turtle.

In addition, no adverse cumulative impacts to critical habitat, special-status plant, or other special-status animal species are expected. The project is not expected to substantially contribute to adverse cumulative impacts to jurisdictional wetlands, other waters, or riparian habitat because the project would implement replacement habitat onsite to mitigate in accordance with regulatory permits for loss of jurisdictional areas at ratios consistent with jurisdictional areas. Therefore, with the implementation of mitigation, avoidance, and/or minimization measures noted in this document, the project's potential contribution to cumulative impacts would be less than significant.

Avoidance, Minimization, and/or Mitigation Measures

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

Appendix A Title VI Policy Statement

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY

Govin Newsom, Governor

DEPARTMENT OF TRANSPORTATION

OFFICE OF THE DIRECTOR
P.O. BOX 942873, MS-49
SACRAMENTO, CA 94273-0001
PHONE (916) 654-6130
FAX (916) 653-5776
TTY 711
www.dot.ca.gov



Making Conservation
a California Way of Life.

September 2021

NON-DISCRIMINATION POLICY STATEMENT

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964, ensures *"No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."*

Caltrans will make every effort to ensure nondiscrimination in all of its services, programs and activities, whether they are federally funded or not, and that services and benefits are fairly distributed to all people, regardless of race, color, or national origin. In addition, Caltrans will facilitate meaningful participation in the transportation planning process in a nondiscriminatory manner.

Related federal statutes, remedies, and state law further those protections to include sex, disability, religion, sexual orientation, and age.

For information or guidance on how to file a complaint, or obtain more information regarding Title VI, please contact the Title VI Branch Manager at (916) 324-8379 or visit the following web page:
<https://dot.ca.gov/programs/civil-rights/title-vi>.

To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Civil Rights, at 1823 14th Street, MS-79, Sacramento, CA 95811; PO Box 942874, MS-79, Sacramento, CA 94274-0001; (916) 324-8379 (TTY 711); or at Title.VI@dot.ca.gov.

A blue ink signature of Toks Omishakin, consisting of stylized cursive letters.

Toks Omishakin
Director

"Provide a safe and reliable transportation network that serves all people and respects the environment."

Appendix B Preliminary Project Plans

This appendix contains the preliminary aerial layouts and project plans for the drainage system rehabilitation.

The abbreviated notations on the plans are spelled out as follows:

BR: bridge

CMP: corrugated metal pipe

CSP: corrugated steel pipe

DI: direct inlet

FES: flared end section

LOC: location

PM: Post Mile(s)

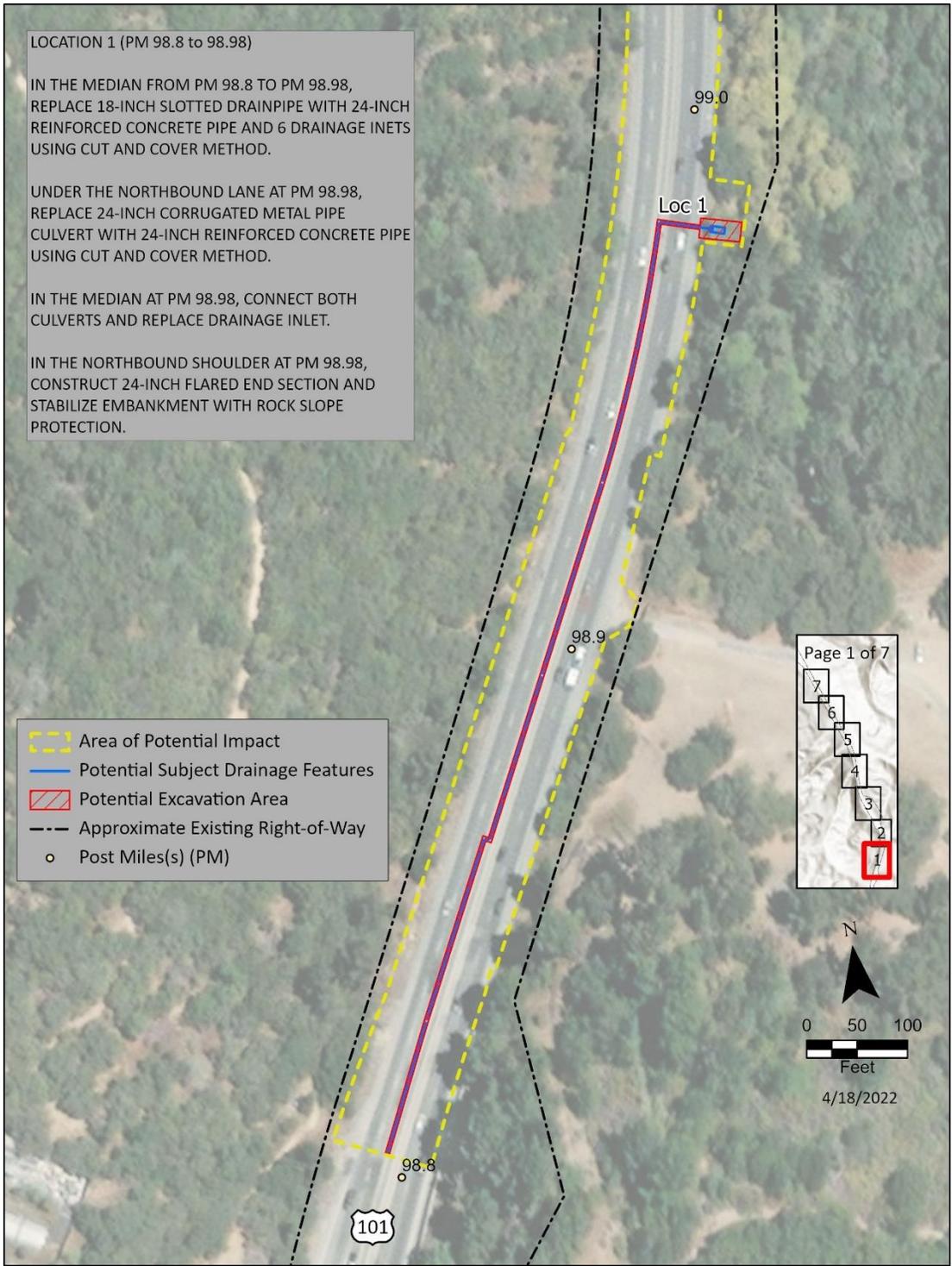
PVC: polyvinyl chloride

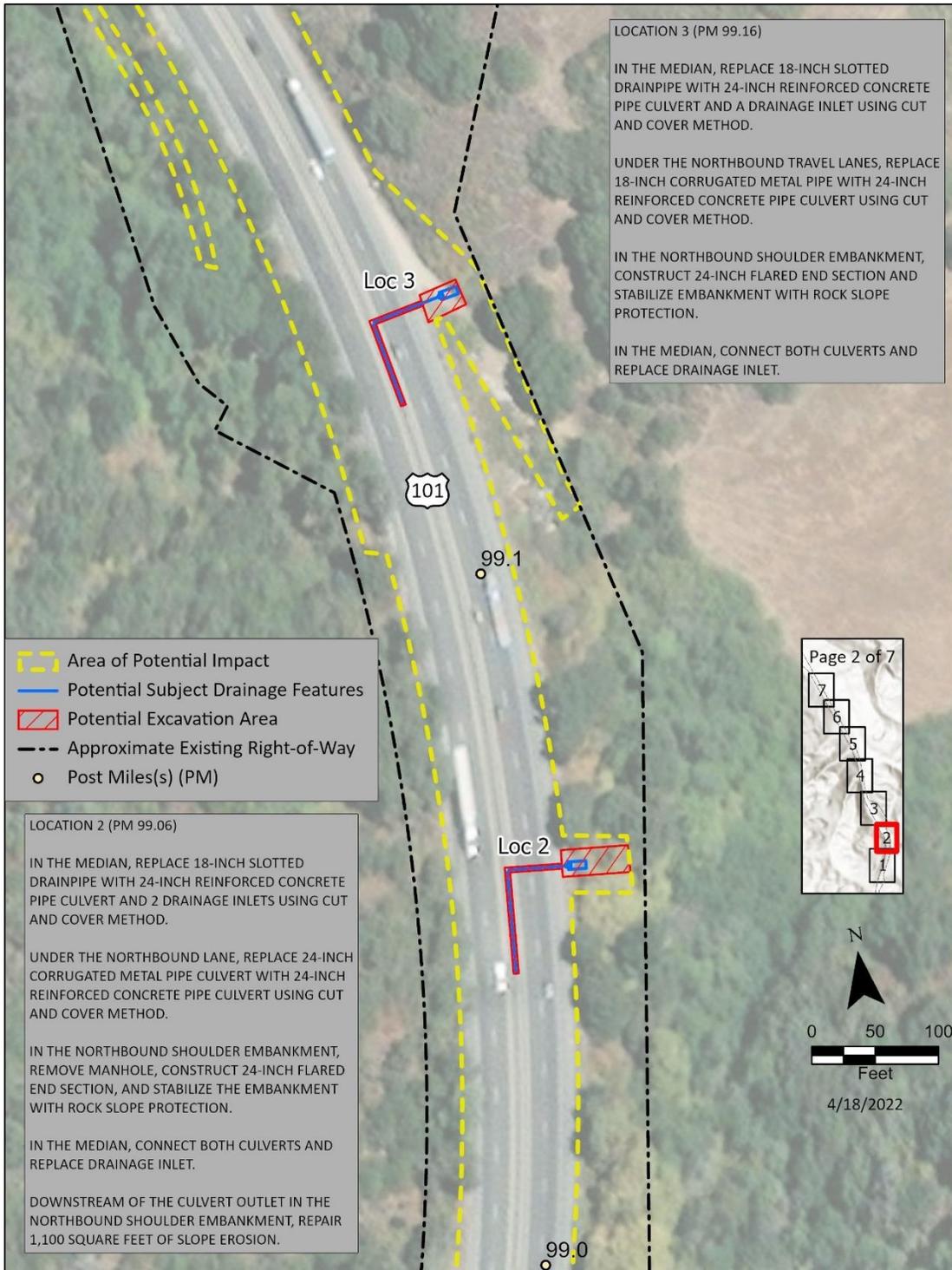
R/W: Right-of-Way (for State Highway)

RCP: reinforced concrete pipe

RSP: rock slope protection

STA: station





LOCATION 3 (PM 99.16)

IN THE MEDIAN, REPLACE 18-INCH SLOTTED DRAINPIPE WITH 24-INCH REINFORCED CONCRETE PIPE CULVERT AND A DRAINAGE INLET USING CUT AND COVER METHOD.

UNDER THE NORTHBOUND TRAVEL LANES, REPLACE 18-INCH CORRUGATED METAL PIPE WITH 24-INCH REINFORCED CONCRETE PIPE CULVERT USING CUT AND COVER METHOD.

IN THE NORTHBOUND SHOULDER EMBANKMENT, CONSTRUCT 24-INCH FLARED END SECTION AND STABILIZE EMBANKMENT WITH ROCK SLOPE PROTECTION.

IN THE MEDIAN, CONNECT BOTH CULVERTS AND REPLACE DRAINAGE INLET.

- Area of Potential Impact
- Potential Subject Drainage Features
- Potential Excavation Area
- Approximate Existing Right-of-Way
- Post Miles(s) (PM)

LOCATION 2 (PM 99.06)

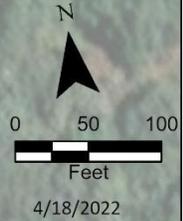
IN THE MEDIAN, REPLACE 18-INCH SLOTTED DRAINPIPE WITH 24-INCH REINFORCED CONCRETE PIPE CULVERT AND 2 DRAINAGE INLETS USING CUT AND COVER METHOD.

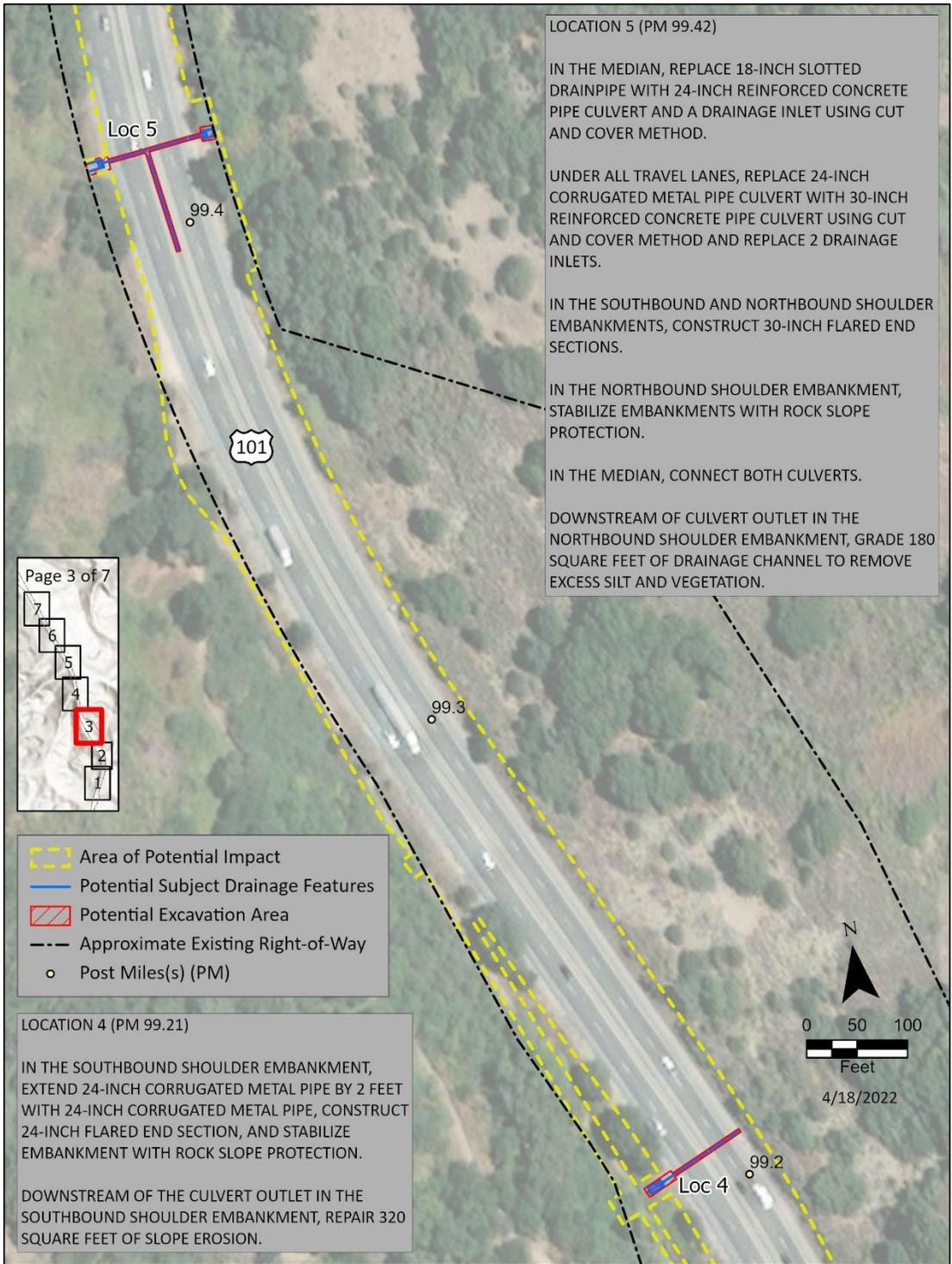
UNDER THE NORTHBOUND LANE, REPLACE 24-INCH CORRUGATED METAL PIPE CULVERT WITH 24-INCH REINFORCED CONCRETE PIPE CULVERT USING CUT AND COVER METHOD.

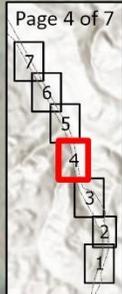
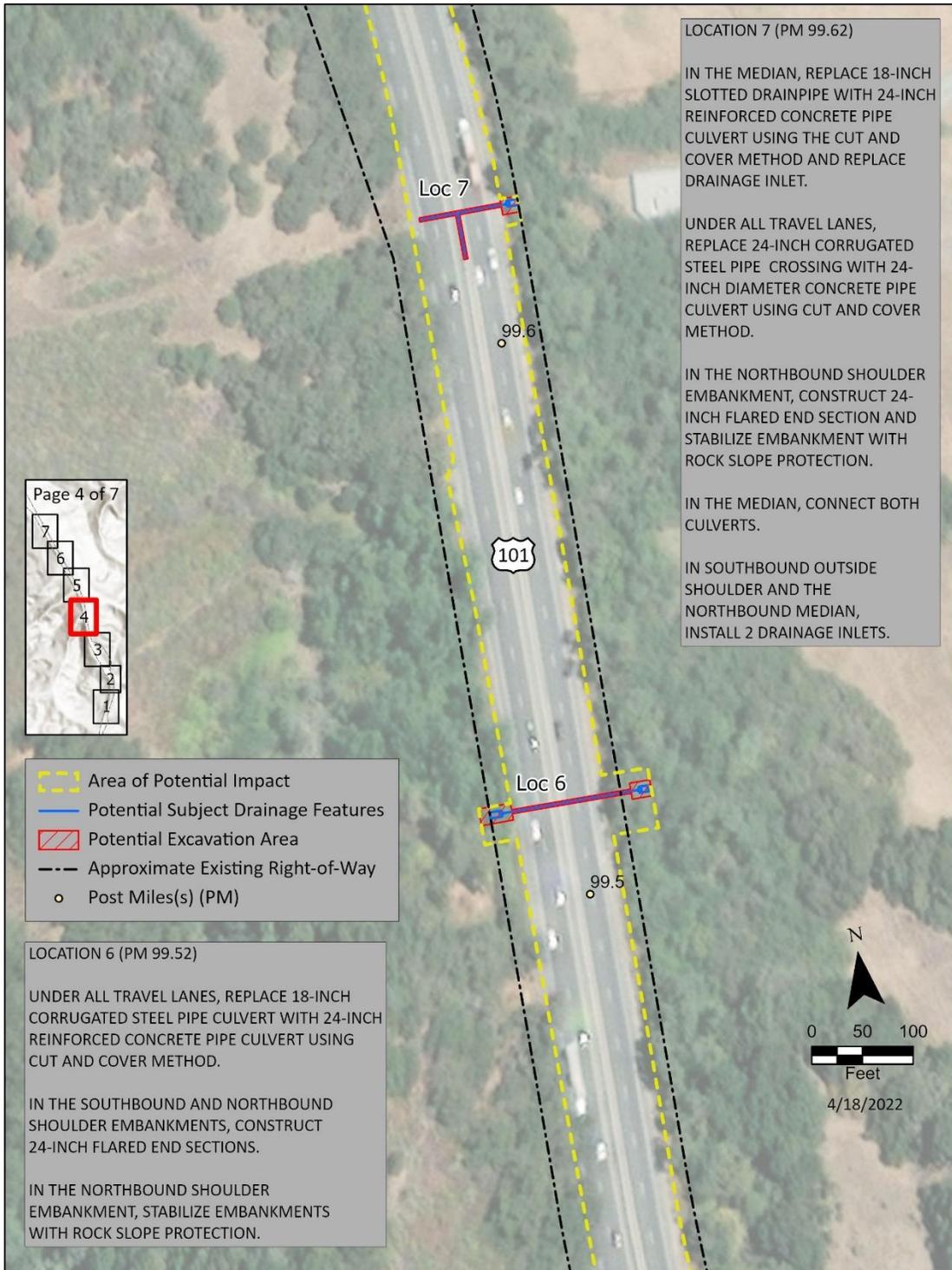
IN THE NORTHBOUND SHOULDER EMBANKMENT, REMOVE MANHOLE, CONSTRUCT 24-INCH FLARED END SECTION, AND STABILIZE THE EMBANKMENT WITH ROCK SLOPE PROTECTION.

IN THE MEDIAN, CONNECT BOTH CULVERTS AND REPLACE DRAINAGE INLET.

DOWNSTREAM OF THE CULVERT OUTLET IN THE NORTHBOUND SHOULDER EMBANKMENT, REPAIR 1,100 SQUARE FEET OF SLOPE EROSION.







- Area of Potential Impact
- Potential Subject Drainage Features
- Potential Excavation Area
- Approximate Existing Right-of-Way
- Post Miles(s) (PM)

LOCATION 6 (PM 99.52)

UNDER ALL TRAVEL LANES, REPLACE 18-INCH CORRUGATED STEEL PIPE CULVERT WITH 24-INCH REINFORCED CONCRETE PIPE CULVERT USING CUT AND COVER METHOD.

IN THE SOUTHBOUND AND NORTHBOUND SHOULDER EMBANKMENTS, CONSTRUCT 24-INCH FLARED END SECTIONS.

IN THE NORTHBOUND SHOULDER EMBANKMENT, STABILIZE EMBANKMENTS WITH ROCK SLOPE PROTECTION.

LOCATION 7 (PM 99.62)

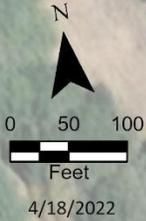
IN THE MEDIAN, REPLACE 18-INCH SLOTTED DRAINPIPE WITH 24-INCH REINFORCED CONCRETE PIPE CULVERT USING THE CUT AND COVER METHOD AND REPLACE DRAINAGE INLET.

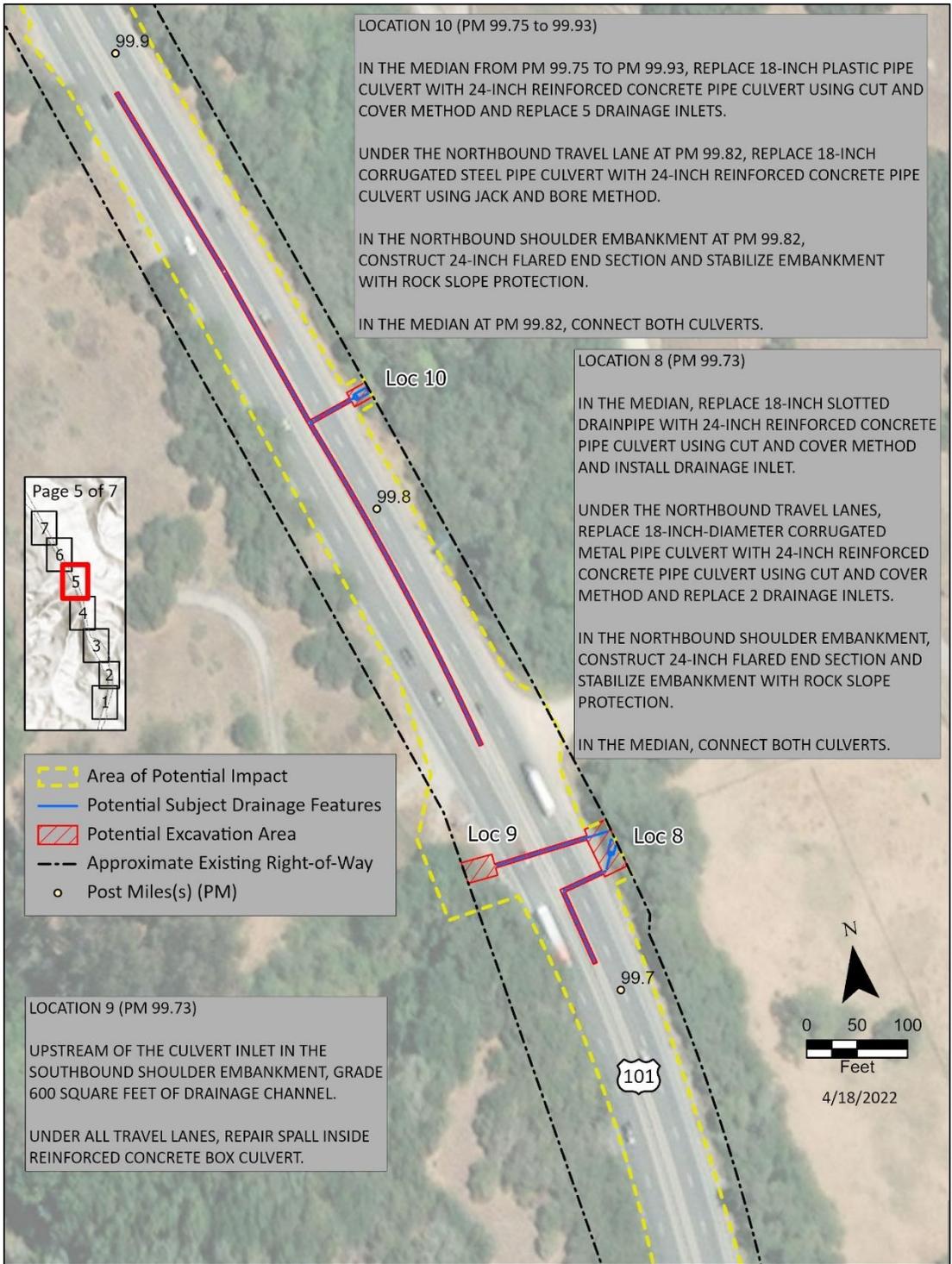
UNDER ALL TRAVEL LANES, REPLACE 24-INCH CORRUGATED STEEL PIPE CROSSING WITH 24-INCH DIAMETER CONCRETE PIPE CULVERT USING CUT AND COVER METHOD.

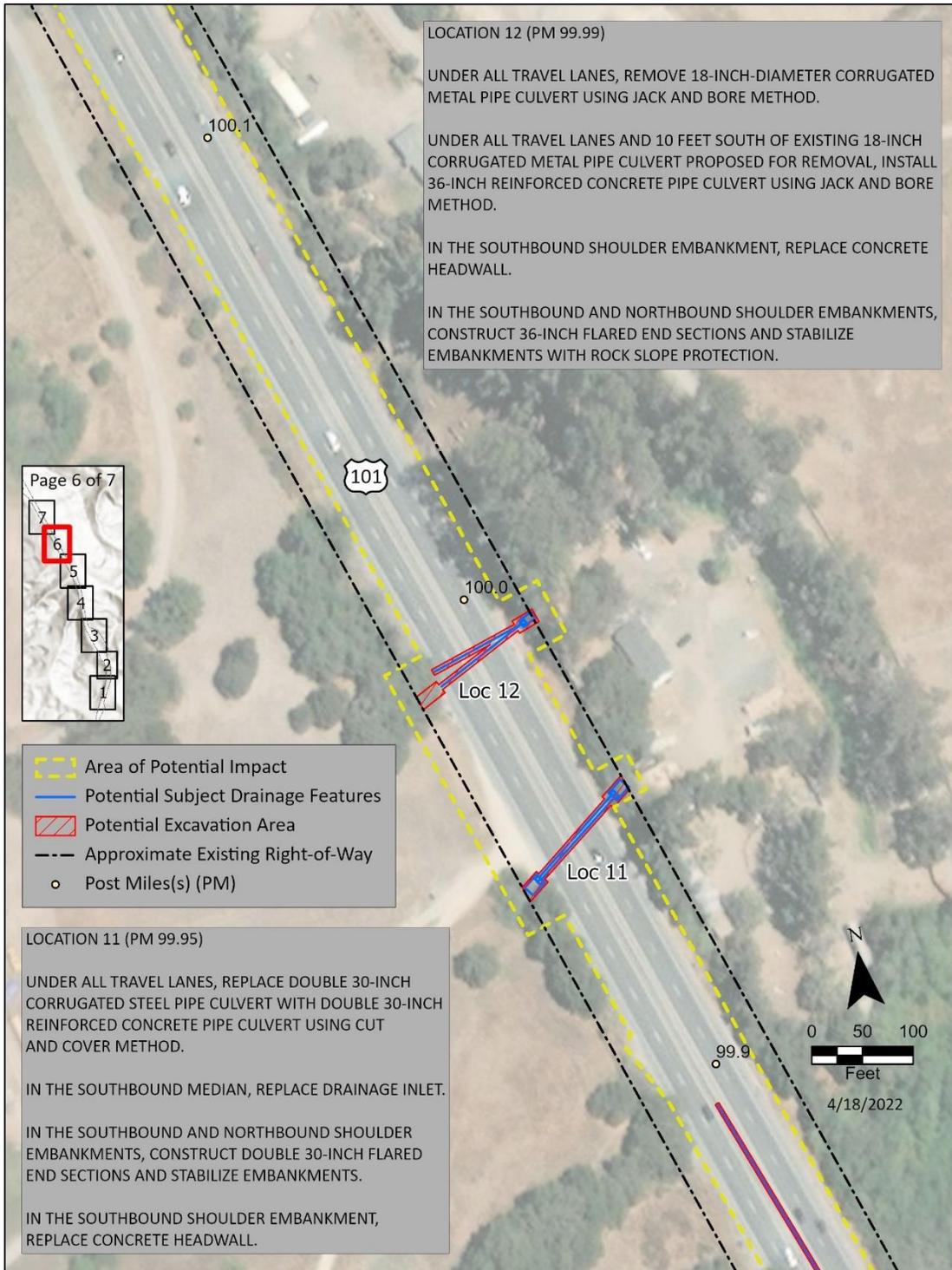
IN THE NORTHBOUND SHOULDER EMBANKMENT, CONSTRUCT 24-INCH FLARED END SECTION AND STABILIZE EMBANKMENT WITH ROCK SLOPE PROTECTION.

IN THE MEDIAN, CONNECT BOTH CULVERTS.

IN SOUTHBOUND OUTSIDE SHOULDER AND THE NORTHBOUND MEDIAN, INSTALL 2 DRAINAGE INLETS.







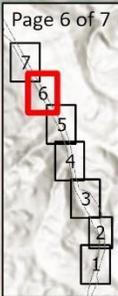
LOCATION 12 (PM 99.99)

UNDER ALL TRAVEL LANES, REMOVE 18-INCH-DIAMETER CORRUGATED METAL PIPE CULVERT USING JACK AND BORE METHOD.

UNDER ALL TRAVEL LANES AND 10 FEET SOUTH OF EXISTING 18-INCH CORRUGATED METAL PIPE CULVERT PROPOSED FOR REMOVAL, INSTALL 36-INCH REINFORCED CONCRETE PIPE CULVERT USING JACK AND BORE METHOD.

IN THE SOUTHBOUND SHOULDER EMBANKMENT, REPLACE CONCRETE HEADWALL.

IN THE SOUTHBOUND AND NORTHBOUND SHOULDER EMBANKMENTS, CONSTRUCT 36-INCH FLARED END SECTIONS AND STABILIZE EMBANKMENTS WITH ROCK SLOPE PROTECTION.



- Area of Potential Impact
- Potential Subject Drainage Features
- Potential Excavation Area
- Approximate Existing Right-of-Way
- Post Miles(s) (PM)

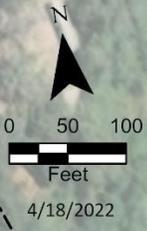
LOCATION 11 (PM 99.95)

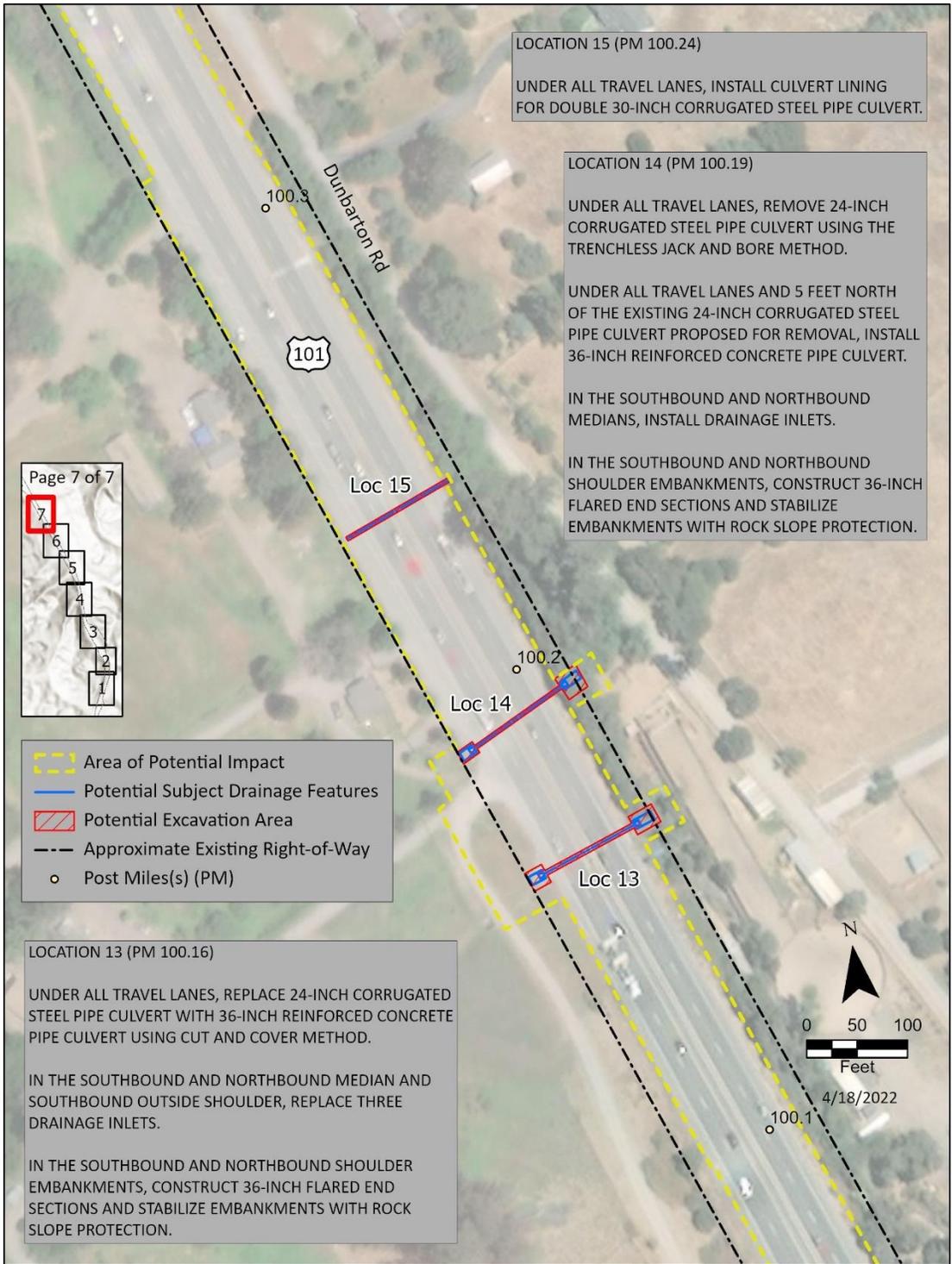
UNDER ALL TRAVEL LANES, REPLACE DOUBLE 30-INCH CORRUGATED STEEL PIPE CULVERT WITH DOUBLE 30-INCH REINFORCED CONCRETE PIPE CULVERT USING CUT AND COVER METHOD.

IN THE SOUTHBOUND MEDIAN, REPLACE DRAINAGE INLET.

IN THE SOUTHBOUND AND NORTHBOUND SHOULDER EMBANKMENTS, CONSTRUCT DOUBLE 30-INCH FLARED END SECTIONS AND STABILIZE EMBANKMENTS.

IN THE SOUTHBOUND SHOULDER EMBANKMENT, REPLACE CONCRETE HEADWALL.

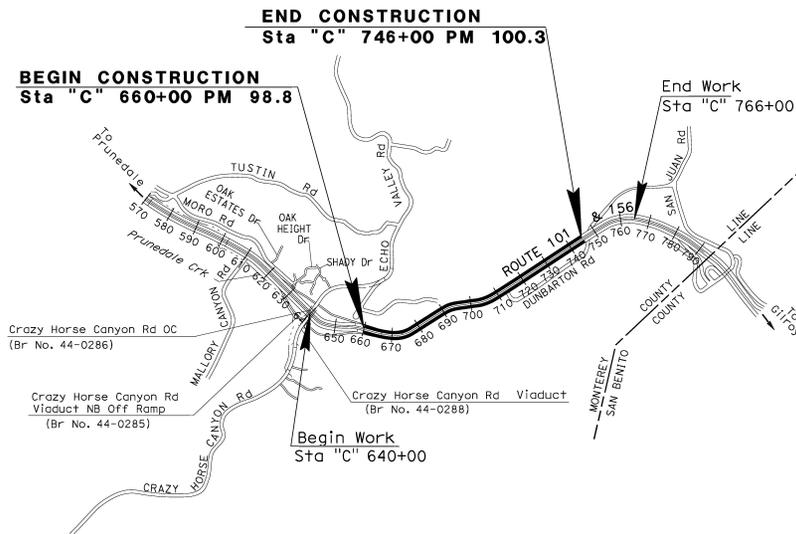




SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
 PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
 IN MONTEREY COUNTY NEAR
PRUNEDALE FROM
0.4 MILE NORTH OF CRAZY HORSE CANYON ROAD
TO 1.1 MILE SOUTH OF SAN JUAN ROAD OVERCROSSING
 TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2018

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon	101	98.8/100.3	1	19



NO SCALE

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

BORDER LAST REVISED 8/1/2016 CALTRANS WEB SITE IS: [HTTP://WWW.DOT.CA.GOV/](http://www.dot.ca.gov/)

RELATIVE BORDER SCALE 0 1 2 3
 15 IN. INCHES

USERNAME => g151674
 DGN FILE => 0521000065sab001.dgn

UNIT 1455 PROJECT NUMBER & PHASE 0000000000

PROJECT MANAGER
 JACKSON S
 DESIGN MANAGER
 MASON LEUNG

PROJECT ENGINEER DATE
 REGISTERED CIVIL ENGINEER



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

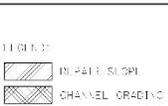
CONTRACT No. **05-1H691**
 PROJECT ID **0521000065**

LAST REVISION
 DATE PLOTTED => 2018-SEP-20
 TIME PLOTTED => 20:42:28
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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN

PROJECT: 467 REVISED 7/2/2010

DESIGNED BY: KAMALDEEP MANN
 CHECKED BY: LUCIUS CASTANA



USERNAME => S148855
 DGN FILE => 0521000651A001.DWG

Drainage Location

Drain System	Drain Item	AMI No.	Node JN	Node CUL	HM	Station
21 System No.	a	741014009898	6	7	98.98	869-84
21 System No.	c	741014009898	7	6	98.98	869-87
21 System No.	i	741014009898	6	5	98.98	869-89
21 System No.	h	741014009898	5	7	98.98	869-87
21 System No.	j	741014009898	7	8	98.98	869-87
21 System No.	l	741014009898	3	2	98.98	869-87
21 System No.	r	741014009898	2	1	98.98	869-87

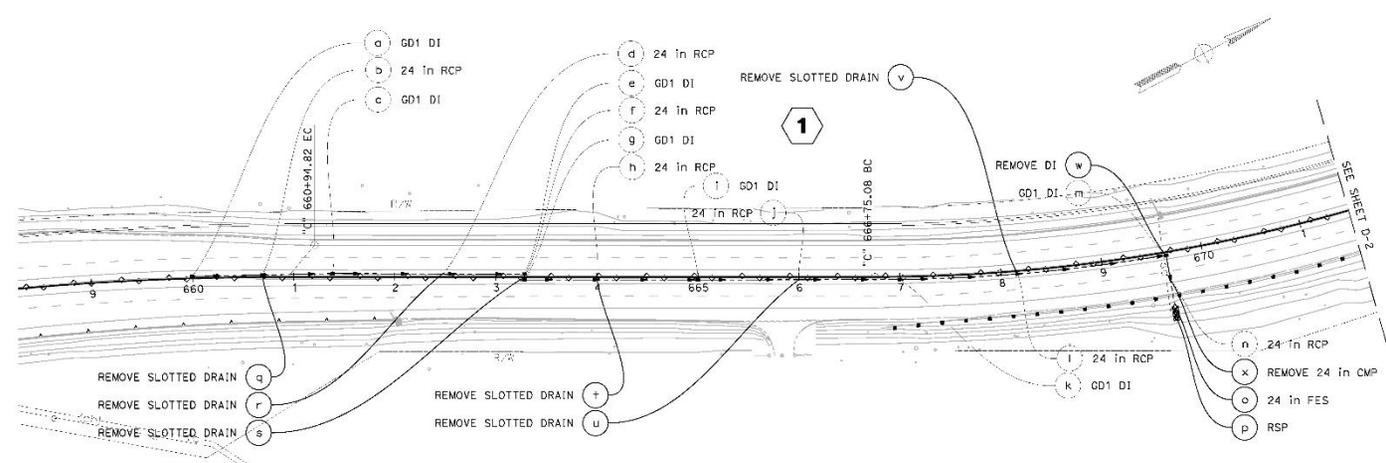
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5	MON	101	98.9/100.3	2 19

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

NO. CIVIL

DRAFT



DRAINAGE PLAN
 SCALE: 1"=50' **D-1**

RELATIVE COASTER ASSET 18 1/2 1/2 1/2

UNIT 1455 PROJECT NUMBER & PHASE 052100065

DATE PLOTTED: 03/28/10
 TIME PLOTTED: 1:58

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

DESIGNED BY: KAMALDEEP MANN
 CHECKED BY: LUCIUS CASTAÑA

DATE: 7/2/2010

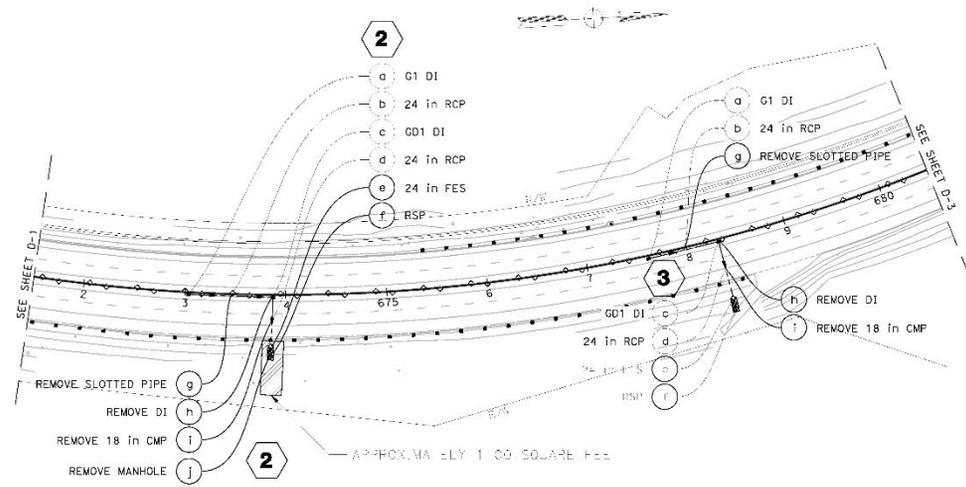
PROJECT NO.: 052100065

PROJECT NAME: PRUNEDALE DRAINAGE IMPROVEMENTS

Drainage Location							
Drain System	Drain Item	AKT No.	Mode	IN	OUT	PM	Station
DI System No.2	b	441074008906	3	2	98.08		673.87
DI System No.2	c	441074008906	2	1	98.08		673.87
DI System No.3	b	441074008916	3	2	98.16		667.25
DI System No.3	c	441074008916	2	1	98.16		667.25

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL No. SHEETS
5	MON	101	98.9/100.3	3 / 19
REGISTERED CIVIL ENGINEER			DATE	
PLANS APPROVAL DATE			No. CIVIL	

DRAFT



DRAINAGE PLAN
 SCALE: 1"=50'
D-2

DATE PLOTTED: 03/18/2012 TIME PLOTTED: 14:59

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN

000000_1455 REVISED 7/2/2010

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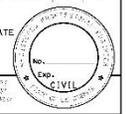
RELATIVE COOPER ADJUST
 18.75 106.76

UNIT 1455

PROJECT NUMBER & PHASE

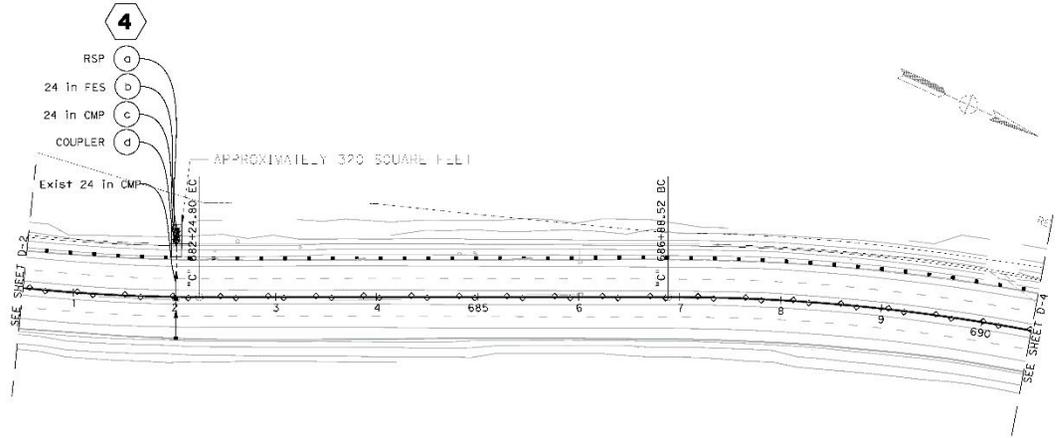
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REGISTERED CIVIL ENGINEER			DATE		
PLANS APPROVAL DATE					



DRAFT

Drainage Location					
Drain System	Drain Item	ABT No.	Node IN	Node OUT	Station
D1 System No.4	a	41 01400002	2		882.00

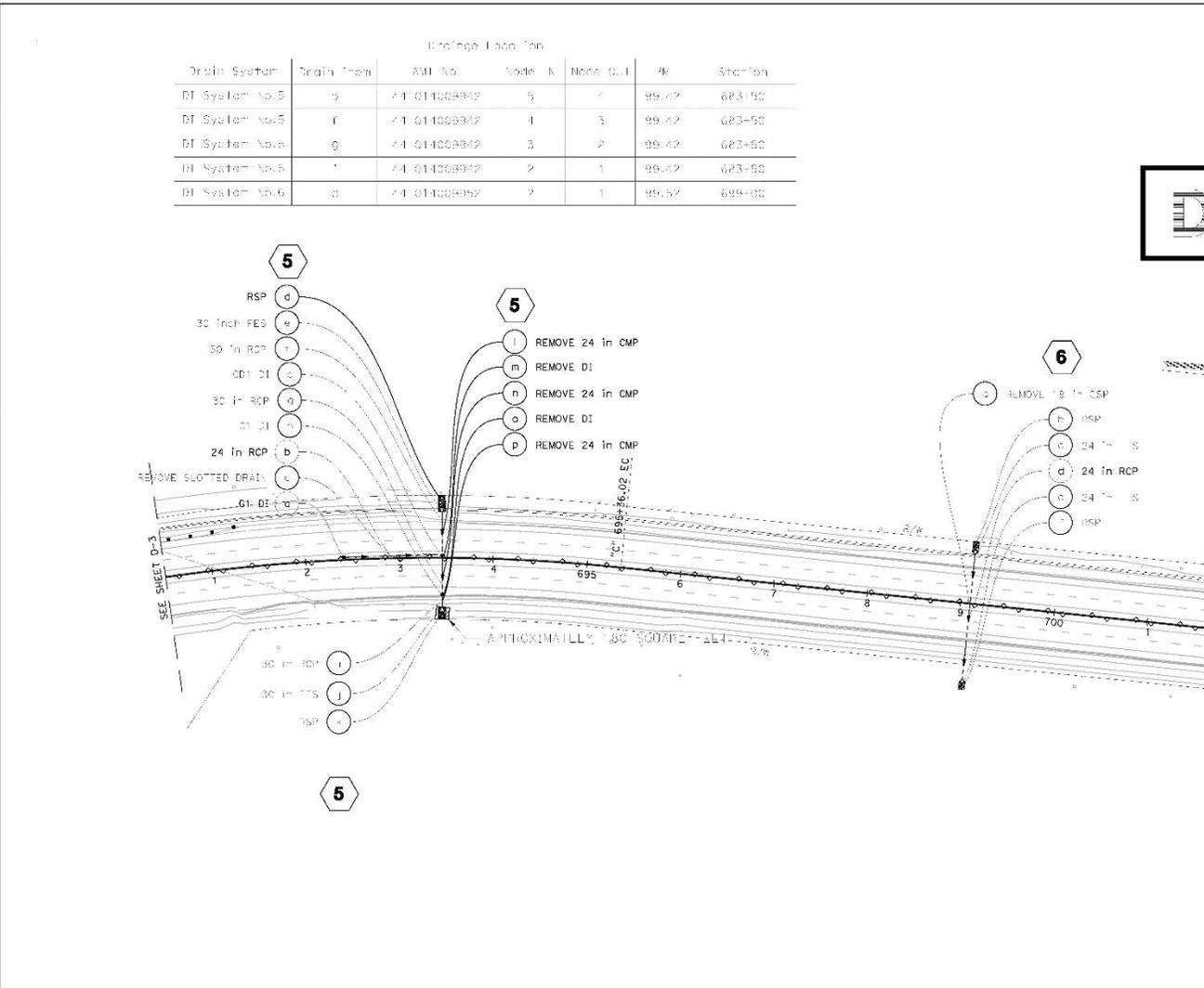


DRAINAGE PLAN
 SCALE: 1"=50'
D-3

0521000065 DATE PLOTTED 03/18/2010 TIME PLOTTED 11:59

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

PROJECT NO. 052100065
 DATE PLOTTED 03/18/2010
 TIME PLOTTED 11:59



Drainage Load Table

Drain System	Drain Item	AMI No.	Node	K	Node G.U.I	W	Station
DI System No.5	g	41-014009942	5	4	99.42	623+50	
DI System No.5	f	41-014009942	4	3	99.42	623+50	
DI System No.5	g	41-014009942	3	2	99.42	623+50	
DI System No.5	f	41-014009942	2	1	99.42	623+50	
DI System No.6	d	41-014009952	2	1	99.52	623+00	

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL No. SHEETS
5	MON	101	98.9/100.3	5 / 19

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

No. _____
 CIVIL

DRAFT

05/20/09 1457 REVISED 7/2/2010

USERNAME => S148855
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RELATIVE COOPER ADJUST
 15.7% 100.7%

UNIT 1455

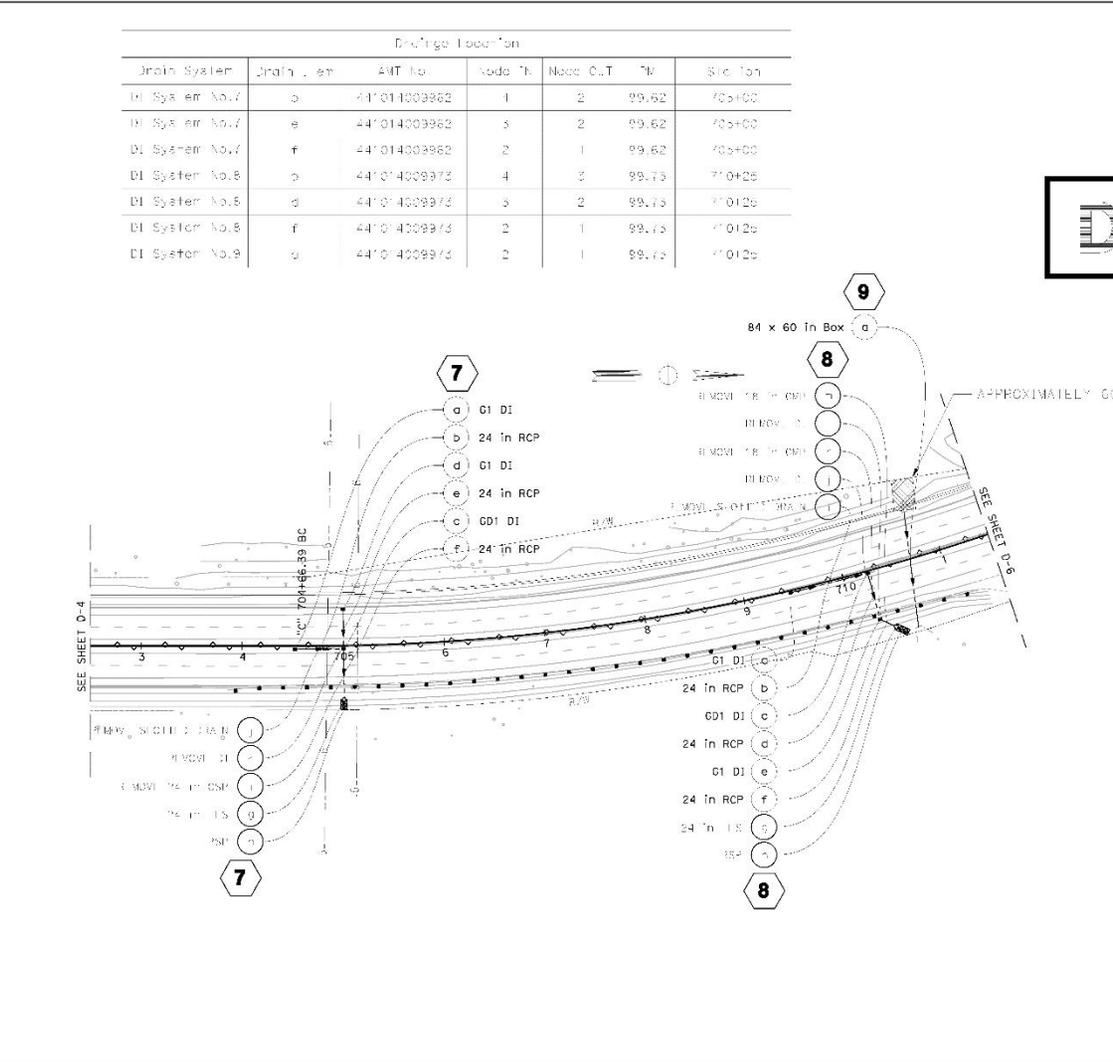
PROJECT NUMBER & PHASE

052100065

DRAINAGE PLAN
 SCALE: 1"=50'
D-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

PROJECT NO. 052100065
 SHEET NO. 6 OF 19
 PROJECT TITLE: PRUNEDALE DRAINAGE IMPROVEMENTS
 DRAWING TITLE: DRAINAGE PLAN
 DATE: 7/2/2010
 REVISIONS:
 NO. DATE BY
 1 7/2/2010 LUCIUS CASTANA



Drainage Location

Drain System	Drain Item	AHT No.	Node No.	Node C.U.T. No.	Station
DI System No.7	b	441014003962	1	2	99.62 705+00
DI System No.7	e	441014003962	3	2	99.62 705+00
DI System No.7	f	441014003962	2	1	99.62 705+00
DI System No.8	b	441014003973	4	3	99.73 710+26
DI System No.8	d	441014003973	3	2	99.73 710+26
DI System No.8	f	441014003973	2	1	99.73 710+26
DI System No.8	a	441014003973	2	1	99.73 710+26

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL No. SHEETS
5	MON	101	98.9/100.3	6 19

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

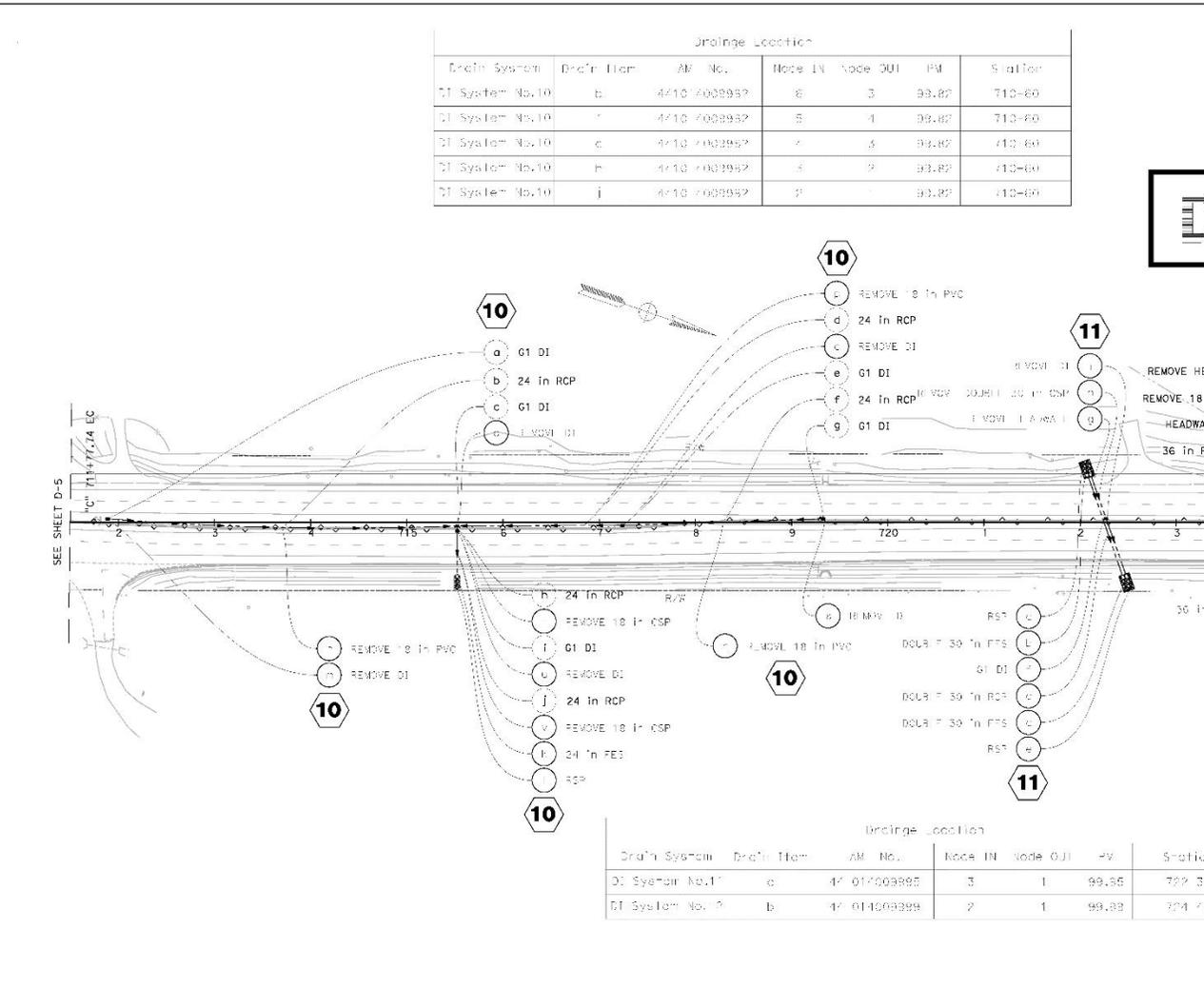
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DRAFT

DATE PLOTTED => 7/2/2010 TIME PLOTTED => 14:00

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

PROJECT NO. 42004
 DRAWING NO. 42004-DRG
 CHECKED BY: [Blank]
 DESIGNED BY: [Blank]
 REVISION BY: [Blank]
 DATE REVISION: [Blank]



Drainage Location

Drain System	Drain Item	AM No.	Node IN	Node OUT	PM	Station
DI System No.10	b	4710-0000000	8	3	99.82	710+00
DI System No.10	c	4710-0000000	5	4	99.82	710+00
DI System No.10	d	4710-0000000	4	3	99.82	710+00
DI System No.10	e	4710-0000000	3	2	99.82	710+00
DI System No.10	f	4710-0000000	2	1	99.82	710+00

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL No. SHEETS
5	MON	101	98.9/100.3	7 19

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

No. [Blank] CIVIL

DRAFT

Drainage Location

Drain System	Drain Item	AM No.	Node IN	Node OUT	PM	Station
DI System No.11	a	47-014000000	3	1	99.85	722+33
DI System No.12	b	47-014000000	2	1	99.89	724+25

DRAINAGE PLAN
 SCALE: 1"=50'
D-6

Appendix C Consistency with Local Plans

Policy	Build Alternative	No-Build Alternative
<p>Monterey County General Plan, Circulation Element Policy C-4.10: <i>Priority shall be given to the improvement and maintenance of highways and arterial roads that carry a significant amount of people and goods movement, particularly agricultural goods.</i></p>	<p>Consistent—Provides maintenance for drainage systems servicing U.S. Route 101.</p>	<p>Not Consistent—Would not make any improvements to maintain drainage system servicing U.S. Route 101. If culverts are allowed to deteriorate any further, future roadway failure is possible.</p>
<p>Monterey County General Plan, Circulation Element Policy C-5.6: <i>Special scenic treatment and design within the rights-of-way of officially designated State Scenic Highways and/or County Scenic Roads shall be implemented and may include highway directional signs, guardrails and fences, lighting and illumination, provision of scenic outlooks, road lanes, frontage roads, vegetation, grading, and highway structures.</i></p>	<p>Consistent—Incorporates special scenic treatment and design within the rights-of-way of a segment of U.S. Route 101 that is Eligible as a State Scenic Highway, including vegetation preservation and replacement, concrete and metal surface treatments, rock slope protection placement, and grading and contouring to match the surrounding pre-project topography.</p>	<p>Not Consistent—Would not apply special scenic treatment or design within the rights-of-way of U.S. Route 101.</p>
<p>Monterey County General Plan, Conservation/Open Space Element Policy OS-4.1: <i>Federal and State listed native marine and freshwater species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant shall be protected. Species designated in Area Plans shall also be protected.</i></p>	<p>Consistent—The project's proposed avoidance, minimization, and mitigations measures would protect potentially impacted federal and State listed freshwater species and subspecies of birds, mammals, amphibians, reptiles, and plants, and other species listed in the applicable local area plans. No federal or State listed marine species or subspecies of birds, mammals, fish, amphibians, reptiles, or plants, or freshwater fish would be impacted.</p>	<p>Consistent—No federal or State listed species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant, or species designated in local area would be impacted.</p>

Policy	Build Alternative	No-Build Alternative
<p>Monterey County General Plan, Conservation/Open Space Element Policy OS-4.2: <i>Direct and indirect discharges of harmful substances into marine waters, rivers or streams shall not exceed state or federal standards.</i></p>	<p>Consistent—Direct and indirect discharges of harmful substances would not exceed state or federal standards. Best Management Practices incorporated for this project would avoid and minimize any discharges of harmful substances into nearby streams.</p>	<p>Not Consistent—Drainage systems would not be rehabilitated, and culverts would further deteriorate. Future roadway failure could result and discharge material, with the potential to contain harmful substances, into nearby streams.</p>
<p>MCGP, Conservation Element OS-5.6: <i>Native and native compatible species, especially drought resistant species, shall be utilized in fulfilling landscaping requirements.</i></p>	<p>Consistent—Replacement plantings would include aesthetic considerations as well as the inherent biological goals. Revegetation would include native trees and plants as determined by the Caltrans Biologist and Caltrans District 5 Landscape Architecture Branch.</p>	<p>Consistent—No replacement plantings would be required.</p>
<p>Monterey County General Plan, Conservation/Open Space Element Policy OS-5.18: <i>Prior to disturbing any federal or state jurisdictional areas, all applicable federal and state permitting requirements shall be met, including all mitigation measures for development of jurisdictional areas and associated riparian habitats.</i></p>	<p>Consistent—All applicable federal and state permitting requirements would be met prior to disturbing any federal or state jurisdictional areas. Mitigation measures would adhere to the requirements and schedules stipulated by the approved conditions as stipulated by the permitting agency.</p>	<p>Consistent—No permits would be required.</p>
<p>Monterey County General Plan, Safety Element Policy S-3.2: <i>Best Management Practices to protect groundwater and surface water quality shall be incorporated into all development.</i></p>	<p>Consistent—Standard provisions and Best Management Practices would be implemented by the contractor during excavation, dewatering, and other construction activities for avoidance and minimization of impacts to surface and groundwater quality.</p>	<p>Consistent—No development would occur.</p>
<p>Monterey County General Plan, Safety Element Policy S-7-10: <i>Construction projects shall include the following</i></p>	<p>Not Applicable—Caltrans follows State and federal guideline to ensure consistency across the</p>	<p>Not Applicable—Caltrans follows State and federal guideline to ensure consistency across the</p>

Policy	Build Alternative	No-Build Alternative
<p><i>standard noise protection measures:</i></p> <ul style="list-style-type: none"> • <i>Construction shall occur only during times allowed by ordinance/code unless such limits are waived for public convenience;</i> • <i>All equipment shall have properly operating mufflers; and</i> • <i>Lay-down yards and semi-stationary equipment such as pumps or generators shall be located as far from noise-sensitive land uses as practical.</i> <p>Monterey County Code, Chapter 10.60 Noise Control, Section 10.60.030: <i>At any time of day, it is prohibited within the unincorporated area of the County of Monterey to operate, allow, or cause to be operated any machine, mechanism, device, or contrivance which produces a noise level that exceeds eighty-five (85) A-Weighted Decibels measured fifty (50) feet therefrom. The prohibition in this section shall not apply to aircraft nor to any such machine, mechanism, device or contrivance that is operated in excess of two thousand five hundred (2,500) feet from any occupied dwelling unit.</i></p> <p>Monterey County Code, Chapter 10.60 Noise Control, Section 10.60.034 (Ordinance 5315): <i>The following regulations shall apply to nighttime noise:</i></p>	<p>State. However, the State standards are very similar to the local standards and include the following standard noise protection measures:</p> <ul style="list-style-type: none"> • Standard Specifications Section 14-8.02 would be implemented, which requires the construction contractor to control and monitor construction noise and not to exceed 86 A-weighted decibels at 50 feet from the work site from 9:00 p.m. to 6:00 a.m. Whenever possible, construction work would be conducted during the day when work is near sensitive receptors. If nighttime construction activities are necessary, the noisiest and/or most vibratory construction activities near residences would be conducted as early in the evening as possible. • Use of newer equipment that is quieter and has the manufacturers' recommended noise abatement measures, such as mufflers, engine covers, and engine vibration isolators, intact and operational, would be required. • Portable generators, air compressors, and other similar equipment, would be located as far away from sensitive noise receptors as feasibly possible. The grouping of major pieces of equipment operating in one area would be 	<p>State. Furthermore, no additional noise would be generated.</p>

Policy	Build Alternative	No-Build Alternative
<p>A. <i>It is prohibited within the unincorporated area of the County of Monterey to make, assist in making, allow, continue, create, or cause to be made any loud and unreasonable sound any day of the week from 9:00 p.m. to 7:00 a.m. the following morning.</i></p> <p>B. <i>Within the time period from 9:00 p.m. to 7:00 a.m. the following morning, and for the purposes of this Section, a loud and unreasonable sound shall include any sound that is plainly audible at a distance of fifty (50) feet in any direction from the source of the sound or any sound that exceeds the exterior noise level standards set forth in Table 1 below.</i></p> <p>Table 1: Exterior Noise Level Standards (Nighttime Only)</p> <ul style="list-style-type: none"> • Nighttime hourly equivalent sound level of 45 decibels • Maximum level of 65 A-Weighted Decibels 	<p>limited to the greatest extent feasible. (No lay-down yards are proposed.)</p>	
<p>North County Land Use Plan, Policy NC-1.3: <i>Large acreages in higher elevations and on steeper slopes should be preserved and enhanced for grazing, where grazing is found to be a viable use.</i></p>	<p>Consistent—Small portions of large acreages zoned for Rural Grazing in higher elevations and on steeper slopes would be temporarily impacted, but no change of land use or parcel size would occur.</p>	<p>Consistent—No large acreages where grazing is found to be a viable use would be affected. No change in land use or parcel size would occur.</p>
<p>North County Land Use Plan, Policy NC-3.4: <i>Removal of healthy, native oak and madrone trees in the North Monterey County Area shall be discouraged. An ordinance shall be</i></p>	<p>Consistent—Chapter 16.60 Preservation of Oak and Other Protected Trees of the Monterey County Code was developed by Monterey County to identify procedures for removal of</p>	<p>Consistent—No native oak or madrone trees would be removed.</p>

Policy	Build Alternative	No-Build Alternative
<p><i>developed to identify required procedures for removal of these trees. Said ordinance shall take into account fuel modification needed for fire prevention in the vicinity of structures and shall include:</i></p> <p><i>a. Permit requirements.</i></p> <p><i>b. Replacement criteria</i></p> <p><i>c. Exceptions for emergencies and governmental agencies</i></p>	<p>native oak and madrone trees in the North County Area. As a government agency, removal of native oak and madrone trees by Caltrans from the State controlled rights-of-way would be exempt from the permitting requirements of this ordinance.</p> <p>Aesthetic measures for vegetation preservation, replacement planting, and revegetation would be implemented. In jurisdictional areas, impacts will be restored at a minimum 1-to-1 ratio (acreage). Replacement plantings would include appropriate native tree and understory species. To ensure success, monitoring and an appropriate plant establishment period would be required, which would include semi-annual (twice a year) inspections, weeding, and replacement.</p>	

Appendix D Avoidance, Minimization and/or Mitigation Summary

To ensure that all of the environmental measures identified in this document are executed at the appropriate times, the following mitigation program (as articulated on the proposed Environmental Commitments Record that follows) would be implemented. During project design, avoidance, minimization, and/or mitigation measures will be incorporated into the project's final plans, specifications, and cost estimates, as appropriate. All permits will be obtained prior to implementation of the project. During construction, environmental and construction/engineering staff will ensure that the commitments contained in the Environmental Commitments Record are fulfilled. Following construction and appropriate phases of project delivery, long-term mitigation maintenance and monitoring will take place, as applicable. Because the following Environmental Commitments Record is a draft, some fields have not been completed; they will be filled out as each of the measures is implemented.

Note: Some measures may apply to more than one resource area. Duplicated or redundant measures have not been included in this Environmental Commitments Record.

Caltrans Standardized Project Measures

This project contains standard measures, standard special provisions, and Best Management Practices that are implemented on all or most Caltrans projects and were not developed in response to any specific environmental impact resulting from the proposed project. The following list of measures are included as project features in Chapter 1 and addressed in more detail in the Environmental Consequences sections found in Chapter 2 when appropriate.

- **7-1.02A General:** The contractor would comply with laws, regulations, orders, and decrees applicable to the project.
- **7-1.02C Emissions Reductions:** The contractor would submit a certification acknowledging compliance with emissions reduction regulations managed by the California Air Resources Board.
- **7-1.02K(6)(j)(ii) Lead Compliance Plan:** This specification requires the submittal of a plan to document a compliance program to prevent or minimize worker exposure to lead.
- **7-1.02M(2) Fire Protection:** Reserved for development of a fire prevention plan, which would minimize the risk of starting a wildfire during construction.

- **7-1.03 Public Convenience:** The contractor would work to minimize the inconvenience to the public or abutting property owners resulting from construction activities.
- **12-1 through 12-7 Temporary Traffic Control:** This section includes general specifications for providing temporary traffic control.
- **13-3 Storm Water Pollution Prevention Plan:** This section 3 includes specifications for preparing a stormwater pollution prevention plan for projects that will disturb one acre or more of soil.
- **13-4 Job Site Management:** This section includes specifications for performing job site management work such as spill prevention and control, material management, waste management, non-stormwater management, and dewatering activities.
- **13-5 Temporary Soil Stabilization:** This section includes specifications for placing temporary soil stabilization materials on stockpiles or disturbed soil areas.
- **13-6 Temporary Sediment Control:** This section covers specifications for installing temporary sediment controls, such as check dams and drainage inlet protections.
- **13-9 Temporary Concrete Washouts:** This section covers specifications for installing temporary concrete washouts to receive and dispose of concrete waste.
- **13-10 Temporary Linear Sediment Barriers:** This section covers specifications for installing temporary linear barriers to control sediment.
- **14-1.02 Environmentally Sensitive Area:** Caltrans would mark areas that are environmentally sensitive. These areas cannot be entered unless authorized. If an Environmentally Sensitive Area is breached, work near the area would stop immediately, and the Resident Engineer would be notified.
- **14-2.03 Archaeological Resources:** If archaeological resources are discovered within or near the construction limits, the resources would not be further disturbed, and all work near the discovery would stop immediately. The area would be secured, and the Resident Engineer notified.
- **14-6.03 Species Protection:** This specification includes instructions for the protection of regulated species and their associated habitat, including migratory and nongame birds. If a protected species is discovered, work would stop near the discovery, and the engineer would be notified so that Caltrans biologists could investigate the discovery and take appropriate action.
- **14-7.03 Discovery of Unanticipated Paleontological Resources:** If unanticipated paleontological resources are discovered, the resources would not be further disturbed, and all work near the discovery would stop

immediately. The area would be secured, and the Resident Engineer notified.

- **14-8.02 Noise Control:** Noise from work activities would be controlled and monitored. Noise would not exceed 86 decibels at 50 feet from the job site from 9:00 p.m. to 6:00 a.m.
- **14-9.02 Air Pollution Control:** The project would comply with applicable air pollution control rules, regulations, ordinances, and statutes.
- **14-10.02: Solid Waste Disposal and Recycling Report:** The types and amounts of solid waste taken to or diverted from landfills or reused on the project would be tracked and reported on each calendar year.
- **14-11.03 Hazardous Waste Management:** This specification outlines the procedures for the handling, storage, transport, and disposal of hazardous waste, which would comply with 22 California Code of Regulations Division 4.5.
- **14-11.04 Dust Control:** Excavation, transportation, and handling of material containing hazardous waste or contamination must result in no visible dust migration. When clearing, grubbing, and performing earthwork operations in areas containing hazardous waste or contamination, a water truck or tank would be provided on the job site.
- **14-11.06: Contractor-Generated Hazardous Waste:** This specification provides instructions to the contractor for the management of hazardous wastes that may be generated during construction, such as petroleum materials, paints, stains, and wood preservatives. Instructions for the management of contaminated soils that may be created due to accidental leaks or spills are also included.
- **14-11.08 For Regulated Material Containing Aerially Deposited Lead:** This specification provides instructions to the contractor for the handling, management, and disposal of regulated material containing aerially deposited lead.
- **14-11.09 For Minimal Disturbance of Regulated Material Containing Aerially Deposited Lead:** This specification reserved for providing instructions to the contractor for the minimal disturbance of regulated material containing aerially deposited lead.
- **14-11.14 Treated Wood Waste:** Includes specifications for handling, storing, transporting, and disposing of treated wood waste.
- **36-4 Residue Containing Lead from Paint and Thermoplastic:** For work involving residue from grinding and cold-planing that contains lead from paint and thermoplastic.
- **84-9.03C Remove Traffic Stripes and Pavement Markings Containing Lead:** This specification includes instructions for the removal of yellow traffic stripe if the stripe would be removed using a cold plane or grinding operation.

- **Transportation Management Plan:** A standard measure implemented on every Caltrans project that prescribes specific lane closures, detour routes, public information programs, and other procedures to manage traffic flow through project work areas during construction periods. See also Section 1.4.1, Build Alternative, for additional information.

Aesthetic/Visual (Section 2.1.1)

The following context-sensitive measures would be implemented to ensure that the project would be consistent with local scenic values along U.S. Route 101.

- **Vegetation Preservation**—As much existing vegetation as possible will be preserved. Prescriptive clearing and grubbing and grading techniques that save the most existing vegetation possible will be used.
- **Visible Concrete Drainage Elements**—All visible concrete drainage elements (like headwalls, drain inlet aprons, and other similar elements) will be colored to blend with the surroundings and reduce reflectivity. The specific colors of these concrete elements will be determined by the Caltrans District 5 Landscape Architecture Branch.
- **Visible Metal Components**—All visible metal components related to down drains and inlets (flared end sections, connectors, anchorage systems, safety cable systems, and other similar elements) will be darkened or colored to blend with the surrounding environment and reduce reflectivity. The specific color will be determined by the Caltrans District 5 Landscape Architecture Branch.
- **Rock Slope Protection**—All visible rock slope protection will be placed in natural-appearing shapes rather than in geometric patterns to the greatest extent possible to reduce its engineered appearance. Following placement of rock slope protection, the visible rock will be colored to blend with the surroundings and reduce reflectivity. The specific color will be determined by Caltrans District 5 Landscape Architecture.
- **Replacement Planting and Revegetation**—Replacement planting will include aesthetic considerations as well as the inherent biological goals. Revegetation will include native trees and plants as determined by the Caltrans Biologist and Caltrans District 5 Landscape Architecture Branch. Revegetation will occur at the maximum extent horticulturally viable and be maintained until established.
- **Grading and Contouring**—Following construction, all new construction staging areas and other temporary uses will be graded and contoured as necessary to match the surrounding pre-project topography.

Biological Resources (Section 2.1.4)

The measures listed below would reduce potential impacts to biological resources to below significance. Compensatory mitigation measures are labeled as such, and the remaining measures are avoidance and/or minimization measures. The measures have been organized by the primary resource or species they are designed to protect.

Potential Jurisdictional Areas

The following avoidance and minimization measures would be implemented to reduce potential impacts to these jurisdictional areas resulting from the project:

- **Jurisdictional Areas 1**—Prior to construction, Caltrans will 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, and a Section 1602 Streambed Alteration Agreement from the California Department of Fish and Wildlife. All permit terms and conditions will be incorporated into construction plans and implemented.
- **Jurisdictional Areas 2**—Prior to any ground-disturbing activities, Environmentally Sensitive Area fencing will be installed around jurisdictional features and the dripline of trees to be protected within the project limits. Caltrans-defined Environmentally Sensitive Areas will be noted on design plans and delineated in the field prior to the start of construction activities, in accordance with Standard Special Provision 14-1.02.
- **Jurisdictional Areas 3**—Construction activities in jurisdictional waters and for temporary stream diversion, if needed, will be timed to occur between June 1 and October 31 in any given year, or as otherwise directed by the regulatory agencies, when the surface water is likely to be dry or at a seasonal minimum. Deviations from this work window will be made only with permission from the relevant regulatory agencies.
- **Jurisdictional Areas 4**—During construction, all project-related hazardous materials spills within the project site will be cleaned up immediately. Readily accessible spill prevention and cleanup materials will be kept by the contractor onsite at all times during construction.
- **Jurisdictional Areas 5**—During construction, erosion control measures will be implemented. Fiber rolls and Large Sediment Barriers will be installed as needed between the project site and jurisdictional other waters and riparian habitat. At a minimum, erosion controls will be maintained by the contractor on a daily basis throughout the construction period.
- **Jurisdictional Areas 6**—During construction, the staging areas will conform to Best Management Practices. At a minimum, all equipment and

vehicles will be checked and maintained by the contractor on a daily basis to ensure proper operation and avoid potential leaks or spills.

- **Jurisdictional Areas 7**—Stream contours will be restored as close as possible to their original condition.

The following compensatory mitigation and onsite restoration would prevent a net loss of wetlands or other aquatic resource acreage, function, and value:

- **Jurisdictional Area Restoration**—Temporary impacts will be restored at a 1:1 ratio (acreage). Replacement plantings will include appropriate native tree and understory species. To ensure success, monitoring and an appropriate plant establishment period will be required, which will include semi-annual (twice a year) inspections, weeding, and replacement.
- **Jurisdictional Area Mitigation**—Permanent impacts will be restored at a 3:1 ratio (acreage). Replacement plantings will include appropriate native tree and understory species. To ensure success, monitoring and an appropriate plant establishment period will be required, which will include semi-annual (twice a year) inspections, weeding, and replacement.
- **Mitigation and Monitoring Plan**—Replacement plantings will be detailed in Caltrans' Landscape Architecture Landscape Planting Plan and the final Mitigation and Monitoring Plan. The Mitigation and Monitoring Plan will be developed in coordination with a biologist and will include developed planting specifications and grading plans to ensure survival of planted vegetation and re-establishment of functions and values. The final Mitigation and Monitoring Plan will detail mitigation commitments and will be consistent with standards and mitigation commitments from the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Wildlife. The Mitigation and 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 anticipated that restoration plantings will consist mostly of native riparian species and associated riparian understory and bank species.

California Red-Legged Frog

Caltrans anticipates that the project would qualify for Federal Endangered Species Act incidental take coverage under the Programmatic Biological Opinion for Projects Funded or Approved under the Federal Highway Administration's Federal Aid Program (U.S. Fish and Wildlife Service 2011). The following measures are the applicable measures from the Programmatic Biological Opinion that would be implemented for this project:

- **California Red-Legged Frog 1**—Only a U.S. Fish and Wildlife Service-approved biologist shall participate in activities associated with the capture, handling, and monitoring of California red-legged frogs. Biologists

authorized under the Programmatic Biological Opinion do not need to re-submit their qualifications for subsequent projects conducted pursuant to this Programmatic Biological Opinion, unless the U.S. Fish and Wildlife Service has revoked their approval at any time during the life of this Programmatic Biological Opinion.

- **California Red-Legged Frog 2**—Ground disturbance will not begin until written approval is received from the U.S. Fish and Wildlife Service that the biologist is qualified to conduct the work, unless the individual(s) has/have been approved previously and the Service has not revoked that approval.
- **California Red-Legged Frog 3**—A U.S. Fish and Wildlife Service-approved biologist shall survey the project site no more than 48 hours before the onset of work activities. If found, the U.S. Fish and Wildlife Service-approved biologist shall relocate the California red-legged frogs the shortest distance possible to a location that contains suitable habitat and will not be affected by the activities associated with the project. The relocation site shall be in the same drainage to the extent practicable.
- **California Red-Legged Frog 4**—Before any activities begin on a project, a U.S. Fish and Wildlife Service-approved biologist shall conduct a training session for all construction personnel. At a minimum, the training shall include a description of the California red-legged frog and its habitat, the specific measures that are being implemented to conserve the California red-legged frog for the current project, and the boundaries within which the project may be accomplished.
- **California Red-Legged Frog 5**—A U.S. Fish and Wildlife Service-approved biologist shall be present at the project site until all California red-legged frogs have been removed, workers have been instructed, and initial disturbance of habitat has been completed. If work is stopped because California red-legged frogs would be affected in a manner not anticipated by Caltrans and the U.S. Fish and Wildlife Service during review of the proposed action, they shall notify the Resident Engineer immediately. When work is stopped, the U.S. Fish and Wildlife Service shall be notified as soon as possible.
- **California Red-Legged Frog 6**—During project activities, all trash that may attract predators or scavengers shall be properly contained, removed from the work site, and disposed of at the end of each work week. Following construction, all trash and debris shall be removed from work areas.
- **California Red-Legged Frog 7**—All refueling, maintenance and staging of non-stationary equipment and vehicles shall occur at least 60 feet from riparian habitat or water bodies and not in a location from where a spill

would drain directly toward aquatic habitat. If stationary equipment must be refueled within 60 feet of riparian habitat or water bodies, secondary containment Best Management Practices shall be implemented. The Caltrans biologist shall ensure contamination of habitat does not occur during such operations. Prior to the onset of work, Caltrans shall ensure that a plan is in place for prompt and effective response to any accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

- **California Red-Legged Frog 8**—Habitat contours shall be returned to a natural configuration at the end of the project activities. This measure shall be implemented in all areas disturbed by activities associated with culvert repair/replacement and drainage improvements, unless U.S. Fish and Wildlife Service and Caltrans determine that it is not feasible, or modification of original contours would benefit the California red-legged frog.
- **California Red-Legged Frog 8**—The number of access routes, size of staging areas, and the total area of activity shall be limited to the minimum necessary to achieve the project. Environmentally Sensitive Areas shall be established to confine access routes and construction areas to the minimum area necessary to complete construction and minimize the impact to California red-legged frog habitat; this goal includes locating access routes and construction areas outside of wetlands and riparian areas to the maximum extent practicable.
- **California Red-Legged Frog 9**—Caltrans shall attempt to schedule work for times of the year when impacts to the California red-legged frog would be minimal. For example, work that would affect large pools that may support breeding would be avoided, to the maximum degree practicable, during the breeding season (November through May).
- **California Red-Legged Frog 10**—To control sedimentation during and after project completion, Caltrans shall implement Best Management Practices outlined in any authorizations or permits issued under the authorities of the Clean Water Act received for the project.
- **California Red-Legged Frog 11**—If a work site is to be temporarily dewatered by pumping, intakes shall be completely screened with wire mesh not larger than 0.2 inch to prevent California red-legged frogs from entering the pump system. Water shall be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. Upon completion of construction activities, any diversions or barriers to flow shall be removed in a manner that would allow flow to resume with the least disturbance to the substrate. Alteration of the streambed shall be minimized to the maximum extent possible; any imported material shall be removed from the streambed upon completion of the project.

- **California Red-Legged Frog 12**—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.
- **California Red-Legged Frog 13**—Project sites shall be revegetated with an assemblage of native riparian, wetland, and upland vegetation suitable for the area. Locally collected plant materials shall be used to the extent practicable. Invasive, exotic plants shall be controlled to the maximum extent practicable.
- **California Red-Legged Frog 14**—Caltrans shall not use herbicides as the primary method to control invasive, exotic plants.
- **California Red-Legged Frog 15**—Upon completion of the project, Caltrans shall ensure that a Project Completion Report is completed and provided to the U.S. Fish and Wildlife Service, following the template provided with the Programmatic Biological Opinion.

No compensatory mitigation is required for the California red-legged frog, but implementation of mitigation described for jurisdictional areas would benefit the California red-legged frog and ensure any suitable habitat onsite that is temporarily impacted would be restored.

Coast Range Newt and Western Pond Turtle

Avoidance and minimization measures prescribed for the California red-legged frog would also minimize impacts to the Coast Range newt and western pond turtle. In addition to those measures, the following avoidance and minimizations measures would be implemented:

- **Coast Range Newt and Western Pond Turtle 1**—A Caltrans-approved biologist shall survey the project site no more than 48 hours before the onset of work activities in drainages for the Coast Range newt and western pond turtle. If found, the biologist shall relocate the species the shortest distance possible to a location that contains suitable habitat and will not be affected by the activities associated with the project. The relocation site shall be in the same drainage to the extent practicable.
- **Coast Range Newt and Western Pond Turtle 2**—Before any project activities begin, a Caltrans-approved biologist shall conduct a training session for all construction personnel. At a minimum, the training shall include a description of the Coast Range newt and western pond turtle and their habitat, the specific measures that are being implemented to conserve these species for the current project, and the boundaries within which the project may be accomplished.

No compensatory mitigation is required for the Coast Range newt and western pond turtle, but implementation of mitigation described for

jurisdictional areas would benefit these species and ensure any suitable habitat onsite that is temporarily impacted would be restored.

Northern California Legless Lizard

The following avoidance and minimization measures would be implemented for the Northern California legless lizard:

- **Northern California Legless Lizard 1**—A qualified biologist shall conduct pre-construction surveys for legless lizards no more than 48 hours before initial ground disturbance proposed within coast live oak woodlands and/or prior to tree removal. Where feasible, this survey shall include systematic subsurface searching (raking suitable habitat) because legless lizards are fossorial.
- **Northern California Legless Lizard 2**—If any legless lizards are discovered during pre-construction surveys, they will be relocated to a nearby area with suitable habitat similar to where they were discovered. Also, if the species were discovered during pre-construction surveys, a qualified biologist will be present during oak tree removal to safely relocate any legless lizards that could be uncovered during tree removal.

With the above avoidance and minimization measures implemented, no impacts to the Northern California legless lizard are anticipated, and no compensatory mitigation is required.

Monterey Dusky-Footed Woodrat

The following avoidance and minimization measures are recommended for the Monterey dusky-footed woodrat and are applicable to project activities occurring within the project's Area of Potential Impacts:

- **Monterey Dusky-Footed Woodrat 1**—Prior to implementation of proposed project activities, a pre-construction visual survey will be conducted within suitable woodrat habitat in the project's Area of Potential Impacts to determine the presence or absence of woodrat nests.
- **Monterey Dusky-Footed Woodrat 2**—If woodrat nests are located during this survey, an Environmentally Sensitive Area should be established with a 25-foot buffer around each active nest.
- **Monterey Dusky-Footed Woodrat 3**—To the extent feasible, project activities requiring grading or vegetation removal within the 25-foot protective buffer should occur only during the non-breeding season (October 1-December 31) to avoid noise impacts to any breeding woodrats that may occupy the nest from January through September.
- **Monterey Dusky-Footed Woodrat 4**—If project activities cannot avoid impacting or removing the nest, then it should be dismantled by hand prior

to grading or vegetation removal activities. The dismantling shall occur during the non-breeding season (October 1-December 31) and shall be conducted so that the nest material is removed starting on the side where most impacts will occur and ending on the side where the most habitat will be undisturbed, which will allow for any woodrats in the nest to escape into adjacent undisturbed habitat.

- **Monterey Dusky-Footed Woodrat 5**—If young are encountered during nest dismantling, the dismantling activity should be stopped and the material replaced back on the nest and the nest should be left alone and rechecked in 2-3 weeks to see if the young are out of the nest or capable of being out on their own (as determined by a qualified biologist); once the young can fend for themselves, the nest dismantling can continue.

No compensatory mitigation is required for Monterey dusky-footed woodrat.

Migratory and Nesting Birds and Roosting Bats

The following measures apply to all birds protected by the Migratory Bird Treaty Act and California Fish and Game Code. The list of birds protected by these regulatory laws is extensive, and not all birds protected by these laws are included in Table 2.7 (Special-Status Animal Species in the Biological Study Areas). There are no formal survey protocols for most of these bird species, but the California Department of Fish and Wildlife typically requires pre-construction nesting bird surveys and avoidance of impacts to active bird nests.

- **Migratory and Nesting Birds 1**—Prior to construction, vegetation removal shall be scheduled to occur from September 2 to January 31, outside of the typical nesting bird season, if possible, to avoid potential impacts to nesting birds. If tree removal or other construction activities are proposed to occur within 100 feet of potential habitat during the nesting season (February 1 to September 1), a nesting bird survey shall be conducted by a biologist determined qualified by Caltrans no more than ten (10) calendar days prior to construction. If an active nest is found, Caltrans shall implement an appropriate buffer based on the habits and needs of the species. The buffer area shall be implemented until a qualified biologist has determined that juveniles have fledged, or nesting activity has otherwise ceased.
- **Migratory and Nesting Birds 2**—During construction, active bird nests shall not be disturbed and eggs or young of birds covered by the Migratory Bird Treaty Act and California Fish and Game Code shall not be killed, destroyed, injured, or harassed at any time.
- **Migratory and Nesting Birds 3**—Prior to any ground-disturbing activities, Environmentally Sensitive Area fencing shall be installed around the dripline of trees to be protected within project limits.

- **Migratory and Nesting Birds 4**—All clearing/grubbing and vegetation removal shall be monitored and documented by the biological monitor(s) regardless of time of year.

As previously discussed, impacts to vegetation would be offset by replacement plantings within the project limits, which would also replace in-kind bird nesting habitat. No additional compensatory mitigation is proposed.

The following measures apply to roosting bats:

- **Roosting Bats 1**—Tree removal shall be scheduled to occur from September 2 to January 31, outside of the typical bat maternity roosting season, if possible, to avoid potential impacts to roosting bats. If tree removal or other construction activities are proposed to occur within 100 feet of potential habitat during the bat maternity roosting season (February 1 to September 1), a bat roost survey shall be conducted by a biologist determined qualified by Caltrans within 14 days prior to construction. The biologist(s) conducting the pre-construction surveys will also identify the nature of the bat utilization (i.e., no roosting, night roost, day roost, maternity roost) and determine if passive bat exclusion will be necessary and feasible. If an active day roost is found, a qualified Caltrans biologist shall determine an appropriate buffer based on the habits and needs of the species. The buffer area shall be avoided until a qualified biologist has determined that roosting activity has ceased or exclusionary methods have successfully evicted roosting bats.
- **Roosting Bats 2**—If bats are found by a qualified biologist to be maternity roosting, active bat maternity roosts shall not be disturbed or destroyed at any time.
- **Roosting Bats 3**—Readily visible exclusion zones shall be established in areas where roosts must be avoided using Environmentally Sensitive Area fencing. The size/radius of the exclusion zone(s) shall be determined by a qualified biologist.

As previously discussed, impacts to vegetation would be offset by replacement plantings within the project limits, which would also replace in-kind bat roosting habitat. No additional compensatory mitigation is proposed.

Invasive Species

The following avoidance and minimization measures are recommended for invasive species:

- **Invasive Species 1**—During construction, Caltrans will ensure that the spread or introduction of invasive exotic plant species will be avoided to the maximum extent possible.

- **Invasive Species 2**—Only clean fill shall be imported. When practicable, invasive exotic plants in the project site shall be removed and properly disposed. Any plant species rated as “High” on the Cal-IPC Invasive Plant Inventory that are removed from the construction site shall be taken to a landfill to prevent the spread of invasive species. Inclusion of any species that occurs on the Cal-IPC Invasive Plant Inventory in the Caltrans erosion control seed mix or landscaping plans for the project shall be avoided.
- **Invasive Species 3**—Construction equipment shall be inspected to verify it is clean and weed free by Caltrans before entering the construction site. If necessary, wash stations onsite shall be established for construction equipment under the guidance of Caltrans in order to avoid/minimize the spread of invasive plants and/or seed within the construction area. If wash stations onsite are infeasible due to the site’s space constraints, construction equipment shall be cleaned offsite and then driven only on paved roads to the site.

No compensatory mitigation for invasive species is proposed.

Greenhouse Gas Emissions (Section 2.1.8)

The following greenhouse gas reduction strategies would further help offset greenhouse gas emissions during construction:

- **Construction Waste Reduction**—Reduce construction waste and maximize the use of recycled materials, including but not limited to the replaced culvert pipes, joints, and other components, stockpiling pavement grindings for future use, salvaging rebar from demolished concrete, and processing waste to create usable fill.
- **Improved Fuel Efficiency**—Operate construction equipment with improved fuel efficiency by:
 - Properly tuning and maintaining equipment
 - Limiting idling to 5 minutes for delivery and dump trucks and other diesel-powered equipment
 - Using the right-sized equipment for the job
 - Using equipment with newer technologies
 - Use of alternative fuels such as renewable diesel as feasible
 - Produce hot mix asphalt with warm mix technology
- **Balanced Earthwork**—Balance earthwork (cut and fill quantities) to reduce the need for transport of earthen materials.

- **Truck Trips**—Schedule truck trips outside of peak morning and evening commute hours.
- **Reduced Water Consumption**—Reduce water consumption during construction and prioritize the use of recycled water for construction needs.
- **Large Tree Salvage**—Salvage large trees that are removed and repurpose them for lumber, landscaping, or other onsite beneficial uses as feasible.
- **Improved Carbon Sequestration**—Improve carbon sequestration rates through the application of compost before seeding and replanting disturbed areas, and use of compost socks in place of straw wattles.
- **Construction Emissions Reduction Training**—Conduct construction environmental training to provide construction personnel with information regarding methods to reduce greenhouse gas emissions related to construction.
- **Pedestrian, Bicycle, and Transit Access**—Maintain pedestrian, bicycle, and transit access throughout construction.

Noise (Section 2.1.13)

The following general measures for noise control and public outreach, which Caltrans adopts for all projects, would be included in the Resident Engineer's binder as project features. Implementation as appropriate would further minimize temporary construction-noise impacts.

Equipment Noise Control

- **Equipment Shielding**—Shield loud pieces of stationary construction equipment if complaints are received.
- **Equipment Location**—Locate portable generators, air compressors, and other similar equipment, as far away from sensitive noise receptors as feasibly possible and limit the grouping of major pieces of equipment operating in one area to the greatest extent feasible.
- **Equipment Noise Abatement**—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. Equip internal combustion engines used for any purpose on or related to the job with a muffler or baffle of a type recommended by the manufacturer.
- **Nighttime Construction**—Ensure that, whenever possible, construction work would be conducted during the day when work is near sensitive

receptors. If nighttime construction activities are necessary, conduct the noisiest and/or most vibratory construction activities near residences as early in the evening as possible.

Administrative Measures

- **Public Notice**—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. Provide the notice two weeks in advance. Publish the notice in local news media with the dates and duration of the proposed construction activities. Through the District 5 Public Information Office, post notices of the proposed construction and potential community impacts after receiving notice from a Caltrans Resident Engineer.
- **Noise Complaints**—Consult with District 5 Noise Quality specialists to determine appropriate steps to alleviate noise-related concerns if complaints are received during the construction process.

List of Technical Studies Bound Separately (Volume 2)

Air Quality, Greenhouse Gas, and Noise Technical Assessment (August 9, 2021)

Climate Change Report (April 29, 2022)

Cultural Resources Review (August 9, 2021)

Geotechnical Report (April 2022)

Hazardous Waste Initial Site Assessment (March 11, 2021)

Location Hydraulic Study (December 20, 2021)

Natural Environment Study (December 2021)

Jurisdictional Delineation (March 2021)

Paleontology Review (December 9, 2021)

Storm Water Data Report (February 15, 2022)

Visual Impact Assessment (August 2021)

Water Quality Assessment (August 10, 2021)

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

Matt C. Fowler
Environmental Branch Chief, District 5
California Department of Transportation
50 Higuera Street, San Luis Obispo, California 93401

Or send your request via email to: Matt.C.Fowler@dot.ca.gov

Or call: 805-779-0793

Please provide the following information in your request:

Project title: Prunedale Drainage Improvements

General location information: Multiple drainage improvements within a 1.5-mile-long section of U.S. Route 101 in Monterey County from just north of the Crazy Horse Canyon Road/Echo Valley Road overcrossing to the northernmost intersection with Dunbarton Road

District number-county code-route-post mile: 05-MON-101-PM 98.8-100.3

Project Number: 0521000065

EA: 05-1H691