

Hurricane Point to Rocky Creek Safety Upgrades

Route 1 in Monterey County

In Big Sur, from 1 mile south of Bixby Creek Bridge
to 0.25 mile south of Rocky Creek Bridge

5-Mon-1-PM 58.3-59.8

05-0002-0284 / EA 05-1A000

Initial Study with Proposed Mitigated Negative Declaration



The environment
federal laws
responsibility pursuant to 23 USC 327.

May 2016



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:

1. Please read this Initial Study. Additional copies of this document are available for review at the Caltrans district office at 50 Higuera, San Luis Obispo, CA 93402, Henry Miller Memorial Library, 48603 Hwy One, Big Sur 93920 and Big Sur Lodge (Front Desk), 47225 Hwy. One Big Sur, CA 93920
2. The document can also be accessed electronically at the following website:
<http://www.dot.ca.gov/dist05/projects/>
3. Tell us what you think. If you have any comments regarding the proposed project, please send your written comments to Caltrans or request a public hearing by the deadline. Submit comments via U.S. mail to: Matt Fowler, Senior Environmental Planner, Environmental Analysis, California Department of Transportation,
50 Higuera Street San Luis Obispo, CA 93401.
4. Submit comments via email to: matt.c.fowler@dot.ca.gov
5. Submit comments by the deadline: June 6, 2016

What happens next:

After comments are received from the public and 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 build all or part of the project.

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 call or write to Caltrans, Attn: Matt Fowler, Environmental Planning, 50 Higuera Street, San Luis Obispo, CA 93401; phone (805) 542-4603 (Voice), or use the California Relay Service 1 (800) 735-2929 (TTY), 1 (800) 735-2929 (Voice), or 711.

[SCH #]
05-MON-1-PM 58.3-59.8
0500020284/1A000

Widen the lanes and shoulders, replace drainage inlets, and construct or repair guardrail on Route 1 from post miles 58.3 to 59.8 in Big Sur

**INITIAL STUDY
with Mitigated Negative Declaration**

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

THE STATE OF CALIFORNIA
Department of Transportation

4/14/16
Date of Approval



Matt C. Fowler
Senior Environmental Planner
California Department of Transportation

The following person(s) may be contacted for more information about this document

Matt Fowler, Senior Environmental Planner, Environmental Analysis, California Department of Transportation, 50 Higuera Street San Luis Obispo, CA 93401 (805) 542-4603

Proposed Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) proposes to widen the shoulders and lanes, fix drainage, and construct or repair guardrail on Route 1, from 1 mile south of Bixby Creek Bridge to 0.25 mile south of Rocky Creek Bridge in Monterey County. The project is 15 miles south of Carmel and 13 miles north of Big Sur.

Determination

This proposed 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 on the project is final. This Mitigated Negative Declaration is subject to change based on comments received from 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 adverse effect on land use, growth, farmlands/timberlands, local communities, utilities/emergency services, traffic, transportation/pedestrian or bicycle facilities, hydrology, floodplains, water quality, storm water runoff, paleontology, cultural resources, air quality, or "other waters."
- The project would not create any significant impacts due to noise, vibration, hazardous waste or materials, geology, soils, wetlands, topography, or invasive species; the proposed project would not be particularly vulnerable to seismic activity.

In addition, the proposed project would have no significant effect on aesthetics or biological resources because the following mitigation measures would reduce potential effects to insignificance:

- Re-seed all areas disturbed by the project, including but not limited to temporary access roads, staging and other areas, with native plant species.
- Color and/or darken the posts and beams of all new or replaced guardrail to blend with the surroundings and reduce reflectivity.
- To avoid the loss of buckwheat in the range of Smith's blue butterfly and to promote species recovery across the range, seaciff buckwheat and seaside buckwheat will be replanted onsite from individual seedlings, with a total of two seedlings planted for every one plant removed (2:1 replacement ratio).

Matt C. Fowler
Senior Environmental Planner
District 5
California Department of Transportation

Date

Section 1 Project Information

Project Title

Hurricane Point to Rocky Creek Safety Upgrades

Lead Agency Name and Address

California Department of Transportation (Caltrans), District 5
50 Higuera, San Luis Obispo, CA 93401

Contact Person and Phone Number

Matt Fowler
805-542-4603

Project Location

On Route 1 in Big Sur, from 1 mile south of Bixby Creek Bridge to 0.25 mile south of Rocky Creek Bridge

Project Sponsor's Name and Address

California Department of Transportation (Caltrans), District 5
Ken Dostalek, Project Manager
50 Higuera, San Luis Obispo, CA 93401

General Plan Description and Zoning

The project lies on Route 1 along the Monterey Peninsula and the Big Sur coast. In this area, granite and metamorphic rocks form the Gabilan and Santa Lucia mountain ranges, characterized by step slopes and complex drainage patterns.

In this region, the County's intent is not to alter existing regional, state or federal laws and regulations, but rather enable greater cooperation among public agencies and the public to share management responsibilities in accomplishing the shared goal of conserving and protecting the resources of the region.

The Monterey County General Plan, Conservation/Open Space Element (October 2010) states: *Although the County contains useful minerals, the tremendous complex geology caused by extensive faulting and deformation makes investigation difficult and inconclusive. Monterey is the biological center of California; many plant species that find either their northern or southern limits can be found in Monterey County. In addition, a high number of plant species are native only to Monterey County.*

Description of Project

The project proposes to widen the shoulders and lanes on Route 1, construct or repair guardrail, construct catch slopes and reinforced slopes, replace or adjust culvert inlets, replace an existing culvert, and extend one concrete box culvert.

The project will widen the southbound lane to 12 feet and southbound shoulders to 4 feet from post miles 58.32 to 58.36. Both sides of the highway will be widened to 12 foot lanes and 4 foot shoulders from post miles 58.36 to 59.22. New guardrail is proposed on the southbound shoulder from post miles 58.30 to 58.36 and from post miles 58.40 to 58.45. Guardrail replacement is proposed in spot locations identified by Caltrans Traffic Safety Division from post miles 59.25 to 59.71. The historic Bixby Bridge lies within these limits, and the guardrail-to-bridge-rail transitions at all four bridge corners are proposed to be replaced.

Purpose and Need

Purpose

The purpose of the project is to reduce the number and severity of run-off-the-road collisions.

Need

This segment of Route 1 is experiencing a pattern of run-off-the-road collisions. Errant vehicles that travel beyond the limits of the traveled way may overcompensate by attempting to redirect the vehicle, also referred to as “overcorrecting.” An investigation of the collisions indicates a pattern of errant vehicles rolling after the initial impact. The actual collision rate at this location is lower than the statewide average for similar facilities, but the relative severity compared by the fatality rates is higher.

Surrounding Land Uses and Setting

The landform of the Big Sur coast is generally characterized by steep slopes and ravines forming a series of ridgelines and valleys as the mountains rise from the Pacific Ocean. The topography supports a mostly winding, curving roadway that produces views for the highway traveler ranging from close-in views of the inland slopes to mid-range coastline views and wide open panoramas.

Surface water is an important visual element throughout the region. The Pacific Ocean is visible throughout much of the route and can be seen from the entire project limits. Numerous seasonal streams run throughout the area, though many are blocked from view and not noticeable from a moving vehicle.

Throughout the region, vegetation is a large component of visual character. Route 1 passes through a variety of plant communities and vegetative types within the project limits. In general, creeks and drainages hold stands of sycamore, redwood, cottonwood and willows. Oak and other native trees, along with coastal chaparral, are found mostly at the upper elevations.

Although native plant communities are the most visually prevalent, exotic plants such as pampas grass have established themselves at various locations along the highway corridor.

Other Public Agencies Whose Approvals Are Required

The project area is within the coastal zone; a coastal development permit would be acquired from Monterey County.



Project Location and Vicinity Map

Section 2 Impacts Checklist

05-Mon-01

58.3/59.8

1A000 (0500020284)

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P.M/P.M.

E.A.

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included either following the applicable section of the checklist or is within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
I. AESTHETICS: Would the project:				
a) Have a substantial adverse effect on a scenic vista	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>Explanation:</i> The project would result in a slight visual change. The visible elements would have little effect on the compositional make-up of the viewshed and the existing harmony. (Source: Visual Impact Assessment, December, 2015)				
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Explanation:</i> With implementation of the project, public views to the Pacific Ocean, Bixby Creek Bridge and other high-quality visual elements would remain intact and visual access to scenic resources would be essentially unchanged. (Source: Visual Impact Assessment, December, 2015)				
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>Explanation:</i> The proposed new and replaced guardrail would be more noticeable in the landscape due to its metallic components and bright appearance. Coloring and/or darkening the posts and beams would blend with the surroundings and reduce reflectivity. Further discussion follows this checklist under <i>Additional Explanations for Questions in the Impacts Checklist</i> . (Source: Visual Impact Assessment, December, 2015)				

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Explanation: No new sources of light or glare are proposed as part of the project. (Source: Visual Impact Assessment, December 2015)

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

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Explanation: There is no farmland in the project area. (Source: Rural Land Use Category map)

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Explanation: There is no zoning for agriculture or Williamson Act properties in the project area. (Source: Rural Land Use Category map)

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Explanation: There is no forest land or timberland in the project area. (Source: Rural Land Use Category map)

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
d) Result in the loss of forest land or conversion of forest land to non-forest use? <i>Explanation:</i> There is no forest land or timberland in the project area. (Source: Rural Land Use Category map)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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? <i>Explanation:</i> There is no farmland or forest in the project area. (Source: Rural Land Use Category map)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan? <i>Explanation:</i> Projects that eliminate a hazardous feature or location are exempt from this determination. The contractor will comply with emissions thresholds and follow Caltrans standard practices that pertain to air quality control. The project is not expected to exceed the maximum thresholds. (Source: Air Quality Memorandum, July 2011)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? <i>Explanation:</i> Compliance with Caltrans standard practices would prevent violations of air quality standards. There are no existing violations at this location. (Source: Air Quality Memorandum, July 2011)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? <i>Explanation:</i> The project is in an attainment area for ozone, nitrogen dioxide, CO, PM2.5 and PM10. The project would create dust during construction, but development projects along coastal Route 1 are rare and dust ultimately disperses and settles. The project is exempt from all project-level conformity requirements. Cumulative effects on air quality are unlikely. (Source: Air Quality Memorandum, July 2011)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p><i>Explanation:</i> The project would generate air pollutants during construction. The exhaust from construction equipment contains hydrocarbons, oxides of nitrogen, carbon monoxide, suspended particulate matter (fine dust), and odors. The largest percentage of pollutants would be windblown dust generated during excavation, grading, hauling, and various other activities.</p> <p>The contractor will comply with emissions thresholds and follow Caltrans standard practices that pertain to air quality control. These conditions should effectively reduce and control emissions impacts during construction. (Source: Air Quality Memorandum, July 2011)</p>				
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p><i>Explanation:</i> See response to (d) above. Construction equipment would generate odors that could be detected by nearby residents and travelers on the highway. (Source: Air Quality Memorandum, July 2011)</p>				
IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p><i>Explanation:</i> The project would affect potential habitat for Smith's blue butterfly (federally endangered). Further discussion follows this checklist under <i>Additional Explanations for Questions in the Impacts Checklist</i>. (Source: Natural Environment Study, December 2015)</p>				
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><i>Explanation:</i> Two major plant communities dominate the project area: coastal scrub and ruderal/disturbed. Neither of these is considered sensitive. (Source: Natural Environment Study, December 2015)</p>				

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
<p>c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?</p> <p><i>Explanation:</i> There are no federally jurisdictional wetlands in the project area. (Source: Natural Environment Study, December 2015)</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>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?</p> <p><i>Explanation:</i> See response to question (a) above.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?</p> <p><i>Explanation:</i> The project does not appear to conflict with any local policies or ordinances. The project would be subject to a Coastal Development Permit administered by the County of Monterey. As part of the permitting process, the County would review the project for compliance. (Source: Coastal Zone Land Use Ordinance, revised November 2011)</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>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?</p> <p><i>Explanation:</i> There are no conservation plans applicable to this location. See response to question (e) above.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>V. CULTURAL RESOURCES: Would the project:</p>				
<p>a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?</p> <p><i>Explanation:</i> Caltrans, pursuant to the Section 106 Programmatic Agreement Stipulation IX.A, has determined a finding of No Historic Properties Affected. (Source: Historic Property Survey Report, November 2015)</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Archaeological resources are considered “historical resources” and are covered under question V(a).				
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Explanation:</i> Formations are shown to have no potential for encountering sensitive paleontological resources. (Source: Paleontology Review Memo, August 2011)				
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Explanation:</i> Caltrans, pursuant to the Section 106 Programmatic Agreement Stipulation IX.A, has determined a finding of No Historic Properties Affected (Historic Property Survey Report, November 2015). In the event cultural material is encountered during construction, work shall cease until a qualified archaeologist can assess the unanticipated discovery in accordance with the Programmatic Agreement, and the Caltrans Environmental Planning Branch shall be notified immediately. (Source: Section 106 and 5024 close-out Memo, November 2015)				
VI. GEOLOGY AND SOILS: Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Explanation:</i> The site is not located within the Earthquake Fault Hazard Zone in California. The potential for surface fault rupture hazard is considered low. (Source: Email – Ryan Turner, P.E., Transportation Engineer, Geotechnical Design December 2015)				

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Explanation: The potential for soil liquefaction due to strong ground shaking is considered low. (Source: Email – Ryan Turner, P.E., Transportation Engineer, Geotechnical Design December 2015)</p>				
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Explanation: The soil makeup, coupled with steep slopes, has resulted in a continual process of natural erosion from the hillside both above and below the highway. The project will not add to this erosion potential. The project is not within the limits of mapped landsliding and is not anticipated to be affected by landslides. (Source: Email – Ryan Turner, P.E., Transportation Engineer, Geotechnical Design, December 2015)</p>				
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Explanation: The soil makeup, coupled with steep slopes, has resulted in a continual process of natural erosion from the hillside both above and below the highway.</p> <p>Temporary slopes and shoring for construction of the reinforced embankments and support of the roadway above excavations shall be proposed and designed by the contractor as required using Best Management Practices as needed. Global stability of existing slopes in the widening portion of this project is not anticipated to be affected. (Source: Email – Ryan Turner, P.E., Transportation Engineer, Geotechnical Design, December 2015)</p>				

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No 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 on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Explanation: The project will not cause the location to become unstable, although slides can happen in the project location through natural causes. (Email – Ryan Turner, P.E., Transportation Engineer, Geotechnical Design, December 2015)				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Explanation: The project is not located on expansive soil. (Source: Email – Ryan Turner, P.E., Transportation Engineer, Geotechnical Design, December 2015)				
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Explanation: Septic tanks and other waste water disposal systems will not be used. (Source: Email – Ryan Turner, P.E., Transportation Engineer, Geotechnical Design December 2015)				

VII. GREENHOUSE GAS EMISSIONS: Would the project:

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

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

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>Explanation:</i> There are no nearby hazardous waste sites or businesses commonly associated with hazardous waste generation. There may be routine transport of hazardous materials such as treated wood waste and/or yellow stripe. (Source: Initial Site Assessment September 2011)				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Explanation:</i> The use or transport of hazardous materials is not included with this project, so an accident is unlikely to occur. (Source: Initial Site Assessment September 2011)				
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Explanation:</i> There are no schools, proposed or existing, within one-quarter mile of the project. (Source: Monterey County map)				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Explanation:</i> The location is not on any list of hazardous material sites. (Source: Initial Site Assessment September 2011)				
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Explanation:</i> The location is not within an airport land use plan or within two miles of an airport. (Source: Monterey County map)				
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Explanation:</i> The location is not within the vicinity of a private airstrip. (Source: Monterey County map)				

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? <i>Explanation:</i> To construct the proposed shoulder widening and allow for continuous flow of traffic, shoulder and intermittent lane closures are expected. Approximately 5 nights of full closures are also expected to construct the widening. For reinforced slope construction, a temporary signal will have to be installed. The temporary signal will be in place for approximately 20 working days. In the case of an emergency, road barriers would be removed. (Source: Draft Project Report, December 2015)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? <i>Explanation:</i> This project will not contribute to any significant risk in wildland fires. (Source: Draft Project Report, December 2015)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

IX. HYDROLOGY AND WATER QUALITY: Would the project:

a) Violate any water quality standards or waste discharge requirements? <i>Explanation:</i> Best Management Practices would be included in the project to protect water quality. In addition, the contractor would be required to prepare a Stormwater Pollution Prevention Plan prior to construction and abide by Caltrans Standard Specifications related to water quality during construction. (Source: Water Quality Assessment August 2011)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)? <i>Explanation:</i> Existing stormwater drains would be maintained with the project. (Source: Draft Project Report)				

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or offsite?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Explanation:</i> There are no streams or rivers in the project vicinity. (Source: Field Survey)				
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Explanation:</i> See response to questions (b) and (c) above.				
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Explanation:</i> Because this project does not propose to create more than 1 acre of net new impervious surfaces, permanent Storm Water Treatment is not required. This project proposes to disturb more than 1 acre of soil. During construction, effective combinations of temporary and permanent erosion and sediment controls will be used. Storm water management for the site will be coordinated through the contractor with Caltrans construction personnel to effectively manage erosion by implementing a Storm Water Pollution Prevention Plan (SWPPP). (Source: Email from Pete Riegelhuth, December 2015)				
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Explanation:</i> See response to question (a) above.				
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Explanation:</i> Housing construction or relocation is not included in the project. (Source: Draft Project Report)				
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Explanation:</i> The project is not located within a 100-year flood hazard area. (Source: FEMA map)				

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
<p>i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?</p> <p><i>Explanation:</i> The project area is on a steep slope about above the shore, and there are no flooding sources nearby. (Source: field review; Google Earth)</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>j) Inundation by seiche, tsunami, or mudflow</p> <p><i>Explanation:</i> There would be no change to the highway elevation. This lateral change would not increase the existing risk of inundation. (Source: Draft Project Report)</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
X. LAND USE AND PLANNING: Would the project:				
<p>a) Physically divide an established community?</p> <p><i>Explanation:</i> There would be no change in the spatial relationship of the highway to residences or businesses. (Source: Draft Project Report)</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?</p> <p><i>Explanation:</i> The project would potentially conflict with Coastal Zone Land Use Ordinance Section 23.06.044(a) related to nighttime noise levels. Measures have been included to bring the project into compliance or moderate the adverse effects the ordinance addresses. The project would require a Coastal Development Permit from the County of Monterey prior to construction; final determination of compliance will be made by the County at that time. Further discussion follows this checklist under <i>Additional Explanations for Questions in the Impacts Checklist</i>. (Source: Coastal Zone Land Use Ordinance, revised November 2011)</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>c) Conflict with any applicable habitat conservation plan or natural community conservation plan?</p> <p><i>Explanation:</i> The project does no conflict with conservation plans. (Source: Monterey County General Plan, October 2010)</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XI. MINERAL RESOURCES: Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Explanation:</i> There are no known mineral resources in the project area. (Source: Email from Isaac Leyva, Environmental Engineer, December 2013)				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Explanation:</i> There are no known mineral resources in the project area. (Source: Email from Isaac Leyva, Environmental Engineer, December 2013)				
XII. NOISE: Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>Explanation:</i> Night work may be necessary and could temporarily exceed the allowable decibel levels. However, the closest potential receptor is a mile away. Construction equipment is expected to generate noise levels ranging from 70 to 90 dB at a distance of 50 feet, and noise produced by construction equipment would be reduced over distance at a rate of about 6 dB per doubling of distance. (Source: Noise Study Memorandum, March 2016)				
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>Explanation:</i> Because the nearest receptor is a mile away, there will be no noticeable vibrations felt. (Source: Noise Study Memorandum, March 2016)				

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? <i>Explanation:</i> The project would not add any permanent noise source. (Source: Project Description)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? <i>Explanation:</i> During construction, there is the potential to temporarily disturb nearby residents. The closest residence is a mile away. An increase in ambient and periodic noise levels could be substantial at times. (Source: Noise Study Memorandum, March 2016)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? <i>Explanation:</i> The project is not located within an airport land use plan or within two miles of an airport. (Source: Google Earth)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? <i>Explanation:</i> The project area is not within the vicinity of a private airstrip. (Source: Google Earth)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XIII. POPULATION AND HOUSING: Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? <i>Explanation:</i> The project has no growth-inducing components. (Source: Project Description)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? <i>Explanation:</i> The project would not remove any housing. (Source: Project Description)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? <i>Explanation:</i> The project would not remove any housing. (Source: Project Description)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Explanation: During construction, there could be delays for emergency response vehicles due to one-way traffic or temporary road closures. Emergency vehicles would be given priority, and road barriers would be removed. (Source: Draft Project Report)

XV. RECREATION:

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Explanation: There are no recreational facilities in the project area. (Source: Project Description)

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Explanation: There are no recreational facilities in the project area. (Source: Project Description)

XVI. TRANSPORTATION/TRAFFIC: Would the project:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Explanation: The project would not add capacity to the highway or increase traffic. (Source: Project Description)

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
<p>b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?</p> <p><i>Explanation:</i> Periodically limiting the roadway to one lane during construction would cause temporary congestion and delays lasting several minutes while traffic from the opposing direction was cleared through the project site. In addition, there would be temporary full road closures of 8 to 10 hours for approximately 5 nights during construction. These closures would be timed to have the least impact on traffic and would be advertised in the media in advance. The project would not permanently affect the level of service of the roadway. (Source: Draft Project Report)</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?</p> <p><i>Explanation:</i> The project would have no effect on air traffic. (Source: Project Description)</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?</p> <p><i>Explanation:</i> The project would bring this section of the highway up to current width standards except for two areas within the project limits where the width is insufficient for standard 12-foot lanes and 4-foot shoulders. These two locations will require reinforced slopes at a 1:1 inclination. The reinforced slope will be allowed to revegetate after construction is complete. All standard safety design features would be included. (Source: Draft Project Report)</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>e) Result in inadequate emergency access?</p> <p><i>Explanation:</i> Emergency response vehicles could be delayed during construction if there is a traffic queue, but they would not be blocked from getting through in the event of a full road closure. (Source: Draft Project Report)</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?</p> <p><i>Explanation:</i> The project includes widening the roadway shoulders to 4 feet, which would accommodate cyclists and pedestrians. (Source: Draft Project Report)</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Explanation:</i> There is no wastewater treatment included in the project. (Source: Draft Project Report)				
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Explanation:</i> There would be no requirement for water or additional source of wastewater as a result of the project. (Source: Draft Project Report)				
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Explanation:</i> There will be modifications to some of the existing storm water drains. All work would be within the area of disturbance for the project, so there will be no additional environmental impacts as a result of the modifications. (Source: Draft Project Report)				
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Explanation:</i> There is no water service required for the project. (Source: Draft Project Report)				
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Explanation:</i> There would be no wastewater treatment provider required for the project. (Source: Draft Project Report)				
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Explanation:</i> Most material from the project would be either reused onsite (dirt) or taken to a recycling facility (old asphalt concrete, metal). (Source: Draft Project Report)				

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

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

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Explanation: The project could remove up to 24 buckwheat plants, which are the host plant for Smith’s blue butterfly (a federally endangered species). No butterflies were observed during protocol surveys, and any buckwheat removed will be replaced at a 2:1 ratio. (Source: Natural Environment Study, December 2015)

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)?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Explanation: Due to the rural area and steep unstable terrain, there is little development or construction within a wide area around the project location. There are no known nearby projects. Therefore, no cumulative impacts are anticipated. (Source: Google Earth)

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

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Explanation: The project would have no adverse effects on humans. Construction activities have the potential to cause nuisance effects from noise, dust, and traffic delays. None of these are expected to be significant. Further discussion can be found under the checklist questions for these topics. (Source: Environmental technical documents prepared for this project)

Additional Explanations for Questions in the Impacts Checklist

Aesthetics (checklist item I, questions a and c)

Affected Environment

Route 1 through the project limits is classified as an All-American Road in the National Scenic Byway system as well as an Officially Designated State Scenic Highway.

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

The California Coastal Conservancy website contains information that indicates the preliminary alignment of the California Coastal Trail lies on Route 1 north of Bixby Creek Bridge and follows an inland route through the project limits south of Bixby Creek Bridge. Route 1 is also the California Pacific Bike Route. Most of the project lies within the viewshed of the highly visited historic Bixby Creek Bridge.

Environmental Consequences

The project would change the visual character throughout much of the project limits by increasing the width of the roadway and paved shoulders, constructing stabilized slopes, adding guardrail, and replacing existing weathered guardrail with new metal rail. The overall effect of these changes would be a slightly larger, more engineered-looking highway facility. This character change would be minor, however, because a highway already exists there and the changes would be subordinate to the surrounding high-quality viewshed. The 12-foot wide lanes and 4-foot wide shoulders are seen elsewhere along Route 1 and are not inconsistent with other rural roadways throughout the state.

Visibility of the proposed reinforced slopes would be somewhat minimized because of their location downhill of the roadway. When revegetated, the reinforced slopes would appear as a natural part of the landscape and would likely be unnoticed by most viewers on and off the highway.

The proposed new and replaced guardrail would be more noticeable in the landscape due to its metallic components and bright appearance. This increased noticeability would contribute to an increased perception of visual clutter throughout the project limits.

Avoidance, Minimization, and/or Mitigation Measures

- Preserve as much existing vegetation as possible. Prescriptive clearing and grubbing and grading techniques that save the most existing vegetation possible will be employed.
- Reinforced slope-face shall have open soil and/or voids capable of sustaining the appropriate native vegetation.
- Topsoil and/or native duff material shall be placed on the slope-face to create a favorable growing medium, as determined by the Caltrans Landscape Architect in collaboration with the Caltrans Biologist.
- Re-seed all areas disturbed by the project, including but not limited to temporary access roads, staging and other areas, with native plant species.
- Following construction, re-grade and re-contour any new construction access roads, staging areas and other temporary uses as necessary to match the surrounding natural topography.
- Color and/or darken the posts and beams of all new or replaced guardrail to blend with the surroundings and reduce reflectivity.

Biological Resources (checklist item IV, questions a and d)

Affected Environment

Permanent impact areas will result mainly from shoulder widening, construction of the catch slope and reinforced slope, and Reinforced Slope Protection at the culvert outlet at post mile 59.02. Temporary impact areas will result mainly from guardrail modifications and construction. Adjacent to the roadway, duff and/or topsoil will be temporarily stockpiled during excavation and replaced after construction to allow for passive regeneration of plant species. No tree removal is necessary. Sources of impacts would be primarily from the use of construction equipment and associated worker foot-traffic. Trucks, bulldozers, backhoes, compactors, asphalt concrete rollers, clamshells, excavators, compressors, scrapers, pavers, water trucks, sweepers, and any other equipment necessary in the course of construction would be used.

The Smith's blue butterfly (*Euphilotes enoptes smithi*) is a federally endangered taxon. The historic range includes two areas within an approximately 80-linear-mile strip along the California coast, including: 1) dune habitats along Monterey Bay, from the Salinas River south to the City of Monterey and 2) the coast of Monterey County and northern San Luis Obispo County.

No Smith's blue butterflies were observed during protocol surveys in 2015. Similarly, no Smith's blue butterflies were observed during surveys of the neighboring Rocky Creek Viaduct site in 2011 and 2012, or during ongoing monitoring visits to the buckwheat mitigation site at post mile 58.5. Based on negative survey results, the small number of plants to be removed by the project, and proposed replanting within the project area, this project is not expected to affect the Smith's blue butterfly.

Avoidance, Minimization, and/or Mitigation Measures

- All buckwheat plants or stands outside the work limits will be flagged and marked as Environmentally Sensitive Areas prior to construction. Environmentally Sensitive Area limits will be shown on the final design plans and will be placed in the field by Caltrans Biology prior to the start of work.
- Five days prior to the beginning of work, the Resident Engineer shall meet with the District Biologist in the field at the project site for the identification of select locations where flagging shall be incorporated.
- All equipment staging and material storage, stockpile, disposal, and borrow sites must be inspected for potentially sensitive biological resources prior to use or equipment mobilization. If sites are selected other than those already designated on the approved project plans, the Resident Engineer shall contact the environmental planning construction liaison or District Biologist no less than two weeks prior to use of equipment staging and material storage, stockpile, disposal, and borrow sites. If sensitive biological resources are found at such sites, then new locations shall be selected.
- To minimize the introduction of invasive plant species, all vehicles, machinery, and equipment shall be in a clean and soil-free condition before entering the project limits.
- To avoid the loss of buckwheat in the range of Smith's blue butterfly (*Euphilotes enoptes smithi*) and to promote species recovery across the range, seacliff buckwheat (*Eriogonum parvifolium*) and seaside buckwheat (*Eriogonum latifolium*) will be replanted onsite from individual seedlings, with a total of two seedlings planted for every one plant removed (2:1 replacement ratio). Replanting will occur as close as possible to the original site of buckwheat removal, but outside the vegetation control area or other areas where repeated disturbance or future activities are anticipated. Seacliff buckwheat (*Eriogonum parvifolium*) will also be planted at a mitigation site at post mile 58.5 to offset losses in the center of the site due to extreme drought conditions in 2014 and 2015.

Appendix A Climate Change

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

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to greenhouse gas emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of greenhouse gas generated by human activity including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF₆), HFC-23 (fluoroform), HFC-134a (s, s, s, 2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the U.S., the main source of greenhouse gas emissions is electricity generation, followed by transportation. In California, however, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles make up the largest source (second to electricity generation) of greenhouse gas-emitting sources. The dominant greenhouse gas emitted is CO₂, mostly from fossil fuel combustion.

There are typically two terms used when discussing the impacts of climate change: "greenhouse gas mitigation" and "adaptation." "Greenhouse gas mitigation" is a term for reducing greenhouse gas emissions to reduce or "mitigate" the impacts of climate change. "Adaptation" refers to the effort of planning for and adapting to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels)¹.

There are four main strategies for reducing greenhouse gas emissions from transportation sources: 1) improving the transportation system and operational efficiencies, 2) reducing growth of vehicle miles traveled (VMT), 3) transitioning to lower greenhouse gas emitting fuels, and 4) improving vehicle technologies. To be most effective, all four strategies should be pursued collectively. The following Regulatory Setting section outlines state and federal efforts to comprehensively reduce greenhouse gas emissions from transportation sources.

Regulatory Setting

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

Assembly Bill 1493 (AB 1493), Pavley. Vehicular Emissions: Greenhouse Gases, 2002: This bill requires the California Air Resources Board to develop and implement

¹ http://climatechange.transportation.org/ghg_mitigation/

regulations to reduce automobile and light truck greenhouse gas emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year. In June 2009, the U.S. Environmental Protection Agency (U.S. EPA) Administrator granted a Clean Air Act waiver of preemption to California. This waiver allowed California to implement its own greenhouse gas emission standards for motor vehicles beginning with model year 2009. California agencies will be working with federal agencies to conduct joint rulemaking to reduce greenhouse gas emissions for passenger cars model years 2017-2025.

Executive Order S-3-05 (signed on June 1, 2005 by then-Governor Arnold Schwarzenegger). The goal of this order is to reduce California's greenhouse gas emissions to: 1) year 2000 levels by 2010, 2) year 1990 levels by the 2020, and 3) 80 percent below the year 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32.

AB 32, the Global Warming Solutions Act of 2006, Núñez and Pavley: AB 32 sets the same overall greenhouse gas emissions reduction goals as outlined in Executive Order S-3-05, while further mandating that the California Air Resources Board create a scoping plan, (which includes market mechanisms) and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases."

Executive Order S-20-06 (signed on October 18, 2006 by then-Governor Arnold Schwarzenegger): This order further directs state agencies to begin implementing AB 32, including the recommendations made by the California's Climate Action Team.

Executive Order S-01-07 (signed on January 18, 2007 by former Governor Arnold Schwarzenegger): This order set forth the low-carbon fuel standard for California. Under this order, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020.

Senate Bill 97 (SB 97) Chapter 185, 2007: This bill required the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the California Environmental Quality Act (CEQA) Guidelines for addressing greenhouse gas emissions. The amendments became effective on March 18, 2010.

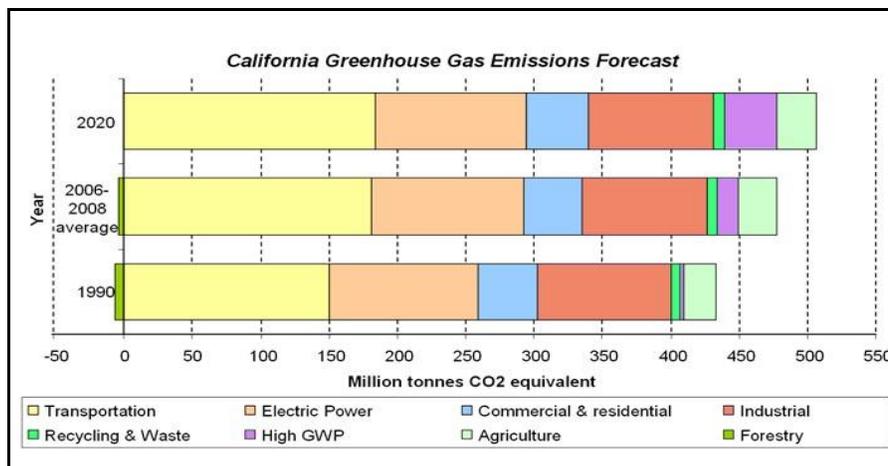
Caltrans Director's Policy 30 (DP-30) Climate Change (approved June 22, 2012): This policy established a department policy to ensure coordinated efforts to incorporate climate change into departmental decisions and activities. This policy contributes to Caltrans' stewardship goal to preserve and enhance California's resources and assets.

Project Analysis

An individual project does not generate enough greenhouse gas emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may contribute to a potential impact through its incremental change in emissions when combined with the contributions of

all other sources of greenhouse gas.² In assessing cumulative impacts, it must be determined if a project’s incremental effect is “cumulatively considerable” (CEQA Guidelines sections 15064(h)(1) and 15130). For this determination to be made, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects to make this determination is a difficult, if not impossible, task.

The AB 32 Scoping Plan mandated by AB 32 contains the main strategies California will use to reduce greenhouse gas emissions. As part of its supporting documentation for the Draft Scoping Plan, the California Air Resources Board released the greenhouse gas inventory for California (forecast last updated: October 28, 2010). See the figure below. The forecast is an estimate of the emissions expected to occur in 2020 if none of the foreseeable measures included in the Scoping Plan were implemented. The base year used for forecasting emissions is the average of statewide emissions in the greenhouse gas inventory for 2006, 2007, and 2008.



Source: <http://www.arb.ca.gov/cc/inventory/data/forecast.htm>

California Greenhouse Gas Forecast

Caltrans and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing greenhouse gas emission reduction and climate change. Recognizing that 98 percent of California’s greenhouse gas emissions are from the burning of fossil fuels and 40 percent of all human-made greenhouse gas

² This approach is supported by the AEP: *Recommendations by the Association of Environmental Professionals on How to Analyze greenhouse gas Emissions and Global Climate Change in CEQA Documents* (March 5, 2007), as well as the South Coast Air Quality Management District (Chapter 6: The CEQA Guide, April 2011) and the US Forest Service (Climate Change Considerations in Project Level NEPA Analysis, July 13, 2009).

emissions are from transportation, Caltrans has created and is implementing the Climate Action Program at Caltrans that was published in December 2006.³

The proposed project would not increase the capacity of the highway because it would maintain the same number of lanes and capacity as the existing roadway. Because the project would not increase capacity or vehicle hours traveled, no increases in operational greenhouse gas emissions are anticipated. During construction, temporary signals will be used to regulate traffic. Vehicles idling at a red signal and the presence of construction equipment could cause a temporary increase in the local concentrations of greenhouse gas emissions, but traffic volumes on this route are not heavy, so this increase is not expected to be substantial. While construction emissions of greenhouse gases are unavoidable, the project would provide an overall long-term public benefit through improved safety and operation of the highway.

Construction Emissions

Greenhouse gas emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction greenhouse gas emissions include emissions produced 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 construction phases.

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 mitigated to some degree by longer intervals between maintenance and rehabilitation events.

California Environmental Quality Act Conclusion

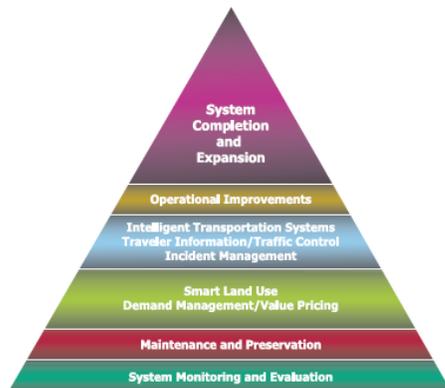
While construction will result in a slight increase in greenhouse gas emissions during construction, Caltrans expects that there would be no operational increase in greenhouse gas emissions associated with the proposed project. However, it is Caltrans' determination that in the absence of further regulatory or scientific information related to greenhouse gas emissions and California Environmental Quality Act significance, it is too speculative to make a determination on the project's direct impact and its contribution on the cumulative scale to climate change. Nonetheless, Caltrans is taking further measures to help reduce energy consumption and greenhouse gas emissions. These measures are outlined in the following section.

³ Caltrans Climate Action Program is located at the following web address:
http://www.dot.ca.gov/hq/tpp/offices/ogm/key_reports_files/State_Wide_Strategy/Caltrans_Climate_Action_Program.pdf

Greenhouse Gas Reduction Strategies

AB 32 Compliance

Caltrans continues to be actively involved on the Governor's Climate Action Team as the California Air Resources Board works to implement Executive Orders S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. Many of the strategies Caltrans is using to help meet the targets in AB 32 come from the California Strategic Growth Plan, which is updated each year. Former Governor Arnold Schwarzenegger's Strategic Growth Plan calls for a \$222 billion infrastructure improvement program to fortify the state's transportation system, education, housing, and waterways, including \$100.7 billion in transportation funding during the next decade. The Strategic Growth Plan targets a significant decrease in traffic congestion below today's level and a corresponding reduction in greenhouse gas emissions. The Strategic Growth Plan proposes to do this while accommodating growth in population and the economy. A suite of investment options has been created that combined together



Mobility Pyramid

are expected to reduce congestion. The Strategic Growth Plan relies on a complete systems approach to attain CO₂ reduction goals: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements as shown in the adjacent figure, Mobility Pyramid.

Caltrans is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high density housing along transit

corridors. Caltrans works closely with local jurisdictions on planning activities but does not have local land use planning authority. Caltrans assists efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light and heavy-duty trucks; Caltrans is doing this by supporting ongoing research efforts at universities, by supporting legislative efforts to increase fuel economy, and by its participation on the Climate Action Team. It is important to note, however, that the control of the fuel economy standards is held by U.S. Environmental Protection Agency and the California Air Resources Board.

The following table summarizes agency and statewide efforts that Caltrans is implementing to reduce greenhouse gas emissions. More information about each strategy is included in the Climate Action Program at Caltrans (December 2006).

Climate Change/Carbon Dioxide (CO₂) Reduction Strategies

Strategy	Program	Partnership		Method/Process	Estimated CO ₂ Savings (MMT)	
		Lead	Agency		2010	2020
Smart Land Use	Intergovernmental Review (IGR)	Caltrans	Local Governments	Review and seek to mitigate development proposals	Not Estimated	Not Estimated
	Planning Grants	Caltrans	Local and regional agencies and other stakeholders	Competitive selection process	Not Estimated	Not Estimated
	Regional Plans and Blueprint Planning	Regional Agencies	Caltrans	Regional plans and application process	0.975	7.8
Operational Improvements & Intelligent Trans. System (ITS) Deployment	Strategic Growth Plan	Caltrans	Regions	State ITS; Congestion Management Plan	0.07	2.17
Mainstream Energy & GHG into Plans and Projects	Office of Policy Analysis & Research; Division of Environmental Analysis	Interdepartmental effort		Policy establishment, guidelines, technical assistance	Not Estimated	Not Estimated
Educational & Information Program	Office of Policy Analysis & Research	Interdepartmental, CalEPA, CARB, CEC		Analytical report, data collection, publication, workshops, outreach	Not Estimated	Not Estimated
Fleet Greening & Fuel Diversification	Division of Equipment	Department of General Services		Fleet Replacement B20 B100	0.0045	0.0065 0.045 0.0225
Non-vehicular Conservation Measures	Energy Conservation Program	Green Action Team		Energy Conservation Opportunities	0.117	0.34
Portland Cement	Office of Rigid Pavement	Cement and Construction Industries	2.5 % limestone cement mix	1.2	4.2	
			25% fly ash cement mix	0.36	3.6	
			> 50% fly ash/slag mix			
Goods Movement	Office of Goods Movement	Cal EPA, CARB, BT&H, MPOs		Goods Movement Action Plan	Not Estimated	Not Estimated
Total					2.72	18.18

The following measure will also be included in the project to reduce the greenhouse gas emissions and potential climate change impacts from the project:

- According to Caltrans’s Standard Specifications, the contractor must comply with all of the local Air Pollution Control District’s rules, ordinances, and regulations regarding to air quality restrictions.

Adaptation Strategies

“Adaptation strategies” refer to how Caltrans and others can plan for the effects of climate change on the state’s transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased

variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and intensity, and increasing frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damage to roadbeds from longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. There may also be economic and strategic ramifications as a result of these types of impacts to the transportation infrastructure.

At the federal level, the Climate Change Adaptation Task Force, co-chaired by the White House Council on Environmental Quality (CEQ), the Office of Science and Technology Policy (OSTP), and the National Oceanic and Atmospheric Administration (NOAA), released its interagency report on October 14, 2010 outlining recommendations to President Barack Obama for how federal agency policies and programs can better prepare the U.S. to respond to the impacts of climate change. The Progress Report of the Interagency Climate Change Adaptation Task Force recommended that the federal government implement actions to expand and strengthen the nation's capacity to better understand, prepare for, and respond to climate change.

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

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

The California Natural Resources Agency was directed to coordinate with local, regional, state and federal public and private entities to develop the California Climate Adaptation Strategy (Dec 2009)⁴, which summarizes the best-known science on climate change impacts to California, assesses California's vulnerability to the identified impacts, and then outlines solutions that can be implemented within and across state agencies to promote resiliency.

The strategy outline is in direct response to Executive Order S-13-08 that specifically asked the Resources Agency to identify how state agencies can respond to rising temperatures, changing precipitation patterns, sea level rise, and extreme natural events. Numerous other state agencies were involved in the creation of the Adaptation Strategy document, including the California Environmental Protection Agency; Business, Transportation and Housing; Health and Human Services; and the Department of Agriculture. The document is broken down into strategies for different

⁴ <http://www.energy.ca.gov/2009publications/CNRA-1000-2009-027/CNRA-1000-2009-027-F.PDF>

sectors that include: public health; biodiversity and habitat; ocean and coastal resources; water management; agriculture; forestry; and transportation and energy infrastructure. As data continues to be developed and collected, the state's adaptation strategy will be updated to reflect current findings.

The Resources Agency was also directed to request the National Academy of Science to prepare a Sea Level Rise Assessment Report⁵ to advise how California should plan for future sea level rise. The report included:

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

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

Interim guidance has been released by the Coastal Ocean Climate Action Team as well as Caltrans as a method to initiate action and discussion of potential risks to the state's infrastructure due to projected sea level rise.

The proposed project has an expected serviceable life span of about 50 years. According to values adopted in 2011 by the Ocean Protection Council, we can anticipate a maximum sea level rise at this location of 32 inches by 2070. The finished roadway would be about 500 feet above sea level; the foundation of the retaining wall structure would reach to about 450 feet above sea level. The separation between the highest anticipated sea level during the life of the project and the project itself is substantial, therefore the project is not expected to be affected by sea level rise due to climate change and no adaptive measures would be required.

Executive Order S-13-08 also directed the Business, Transportation, and Housing Agency to prepare a report to assess vulnerability of transportation systems to sea level rise affecting safety, maintenance and operational improvements of the system,

⁵ Pre-publication copies of the report, *Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future*, were made available from the National Academies Press on June 22, 2012. For more information, please see http://www.nap.edu/catalog.php?record_id=13389.

and economy of the state. Caltrans continues to work on assessing the transportation system vulnerability to climate change, including the effect of sea level rise.

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

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