

DRAFT PROJECT REPORT

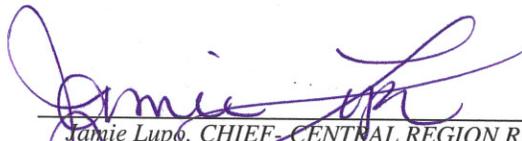
To approve the release of the draft environmental document (DED) to the public.

On Route 1 in Monterey County north of Big Sur

From 1 mile south of the Bixby Creek Bridge

To 0.25 miles south of the Rocky Creek Bridge

I have reviewed the right of way information contained in this Draft Project Report and the Right of Way Data Sheet attached hereto, and find the data to be complete, current and accurate:



Jamie Lupó, CHIEF- CENTRAL REGION RIGHT OF WAY

APPROVAL RECOMMENDED:

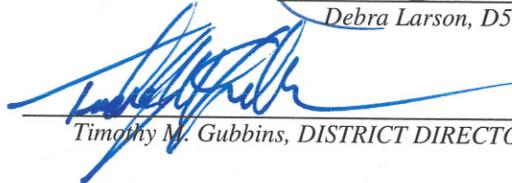


Ken Dostalek, PROJECT MANAGER



Debra Larson, D5 TRAFFIC SAFETY COORDINATOR

APPROVED:

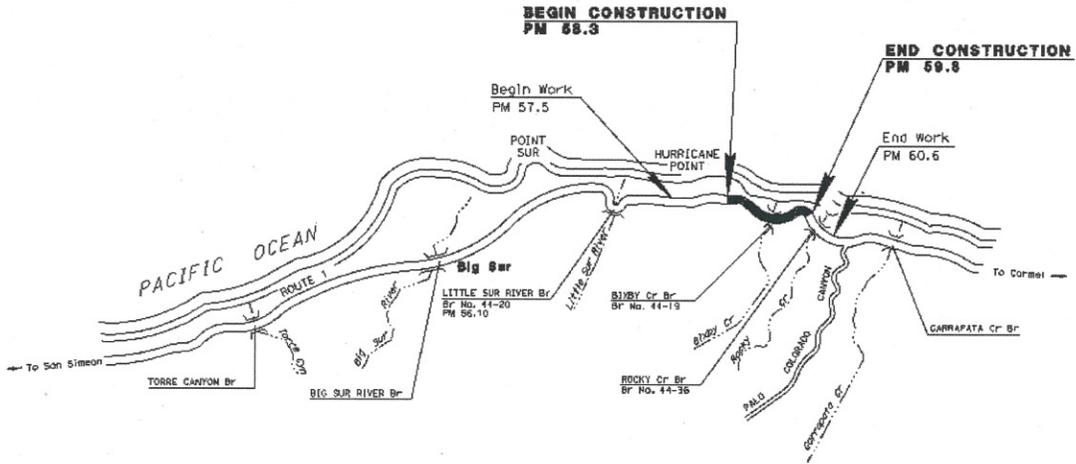


Timothy M. Gubbins, DISTRICT DIRECTOR-05

5/10/2016
DATE

05-MON-1-58.3/59.8
05-1A000-0500020284-2313
20.xx.201.015
April 2016

VICINITY MAP



On Route 1 in Monterey County north of Big Sur

From 1 mile south of the Bixby Creek Bridge

To 0.25 miles south of the Rocky Creek Bridge

05-MON-1-58.3/59.8
05-1A000-0500020284-2313
20.xx.201.015
April 2016

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



BRIAN FULLER, P.E.

4/26/16
DATE



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1. INTRODUCTION

Project Description:

The proposed project is located on Route 1, from 1 mile south of Bixby Creek Bridge to 0.25 miles south of the Rocky Creek Bridge in Monterey County. The project is 15 miles south of Carmel and 13 miles north of Big Sur. The project proposes to widen the shoulders and lanes on Route 1, and construct or repair guardrail. The current capital construction cost estimate for this project is \$4,046,000 (January, 2016). See the Project Report Cost Estimate (Attachment C) for specific work items included in this project.

Project Limits	05-Mon-1-Post mile 58.3 to 59.8	
Number of Alternatives	3	
	Current Cost Estimate:	Escalated Cost Estimate:
Capital Outlay Support	N/A	\$2,847,000
Capital Outlay Construction	\$4,046,000	\$5,349,000
Capital Outlay Right-of-Way	\$23,788	\$30,000
Funding Source	201.015	
Funding Year	2017/2018	
Type of Facility	Two Lane Conventional	
Number of Structures	0	
SHOPP Project Output	5 collisions reduced over the life of the project.	
Environmental Determination or Document	Mitigated Negative Declaration (CEQA) Categorical Exclusion (NEPA)	
Legal Description	On Route 1 in Monterey County north of Big Sur, from 1 mile south of the Bixby Creek Bridge to 0.25 miles south of the Rocky Creek Bridge.	
Project Development Category	4B	

2. RECOMMENDATION

It is recommended that the attached Initial Study with Proposed Mitigated Negative Declaration / Categorical Exclusion be approved to publicly circulate and that an opportunity for a public hearing be offered if appropriate.

3. BACKGROUND

Project History

The District 5 Traffic Safety Department initiated this project and approval of the Project Initiation Form came in October 2010. The Project Study Report (PSR) for this project was approved on July 23, 2012. There have been no significant scope changes since PSR approval.

Existing Facility

There are two general terrain types within the project limits. Relatively gentle coastal plains are found between stations 11+00 (post mile 58.3) and station 58+00 (post mile 59.3), which coincides with proposed shoulder widening. This section is described in the subsequent two paragraphs. Outside of the coastal plain, the highway rests on cliffs high above the ocean (post mile 59.3 to 59.8) which is described in the subsequent third paragraph (see attachment C).

Route 1 within the coastal plain (post mile 58.3 to post mile 59.3) consists of a 2-lane conventional highway with 10.5- to 11-foot lanes and 0- to 4-foot shoulders, a 1.5:1 (horizontal : vertical) and flatter cut slope on the northbound side and a 1.4:1 and flatter fill slope on the southbound side. There are widened areas used as pullouts in a few locations where terrain is favorable. On the southbound side the slope catches at or near the right of way line, except for station 11+00 to 13+00 and station 15+00 to 17+00. On the northbound side the slope extends well past the right of way line to elevations a couple hundred feet above the roadway. The cut hinge point is generally 16 feet from centerline, while the fill hinge point is generally 15 to 22 feet from centerline. Fills are generally 15 feet high, with the exception of the southbound slope from station 10+00 to 20+00 which is around 150 feet.

At the curves near station 40+00 and 50+00, reinforced fill slopes are proposed. In these two locations the existing slopes have a height of 15 feet or less and an inclination of 1.4:1, reinforced slopes are proposed in these cost effective locations to provide a continuous 4-foot shoulder and avoid cutting in to the hillside on the northbound side of the highway. At station 22+00 an existing

concrete box culvert cattle crossing will be extended by 2 feet on each side to construct the widening. Other widening locations do not require walls or reinforced slopes since the hinge point is far enough away from centerline to accommodate widening, with some locations requiring small 2:1 embankments.

The entire project area is vegetated with environmentally sensitive Sea-Cliff Buckwheat which is a habitat for the Smith's Blue Butterfly, a Federal Endangered species. The alignment within the coastal plain allows slightly higher speeds than the cliffs area, although curves within this section have advisory speed postings. Drainage off the slopes above the highway is intercepted by a vegetated and paved northbound side ditch and conveyed under the highway with inlets and culverts.

In the cliffs section (post mile 59.3 to 59.8), Route 1 is a 2-lane conventional highway with 10.5- to 11-foot lanes and no shoulders. Vegetated slopes extend upwards for hundreds of feet from the northbound shoulder at inclinations steeper than 1:1 in many locations. Along the southbound shoulder sheer slopes extend in fractured cliffs to the ocean approximately 100 to 200 feet below. The alignment in these areas contains small radius curves with short intervening tangents as dictated by the rugged terrain. Sight distance is poor due to steep cut slopes near the roadbed. Speeds are lower in this section due to the alignment and sight distance.

Route 1 within the entire project limits is characterized by tight radius curves and steep profile grades as it conforms to the mountainous terrain. Posted curve advisory speeds range from 20 to 35 mph in the project limits. The design speed for the segment is 45 mph. This is a California Legal Advisory Truck Route with a king-pin-to-rear-axle maximum of 30 feet.

The right of way is 80 feet wide centered on the 1932 alignment. Traffic is largely recreational with a low percentage of trucks (1%). The California Coastal Conservancy website contains information that indicates 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 Bridge (Although the alignment is not finalized at this time). Route 1 is the California Pacific Bike Route. The entire project lies within a highly visited historic Bixby Bridge view-shed and scenic resource.

Existing utilities within the project limits include a subsurface communications line (ATT) and an overhead telephone line (ATT). The telephone pole line mostly follows the east right of way line. There is also an overhead electric line (PG&E) within the project limits from station 70+00 north. The project is bordered by various large rural properties (private and United States Forest Service [USFS]).

4. PURPOSE AND NEED

Purpose:

The purpose of this 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 indicate 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.

A. Problem, Deficiencies, Justification

This project was initiated through the Run off the Road Monitoring Program. Data from January 1, 2001 – December 31, 2003 was used. There were 11 run off the road collisions within the project limits of Mon-1-post mile-58.3 to Mon-1-post mile-59.8. Of the eleven, ten were injury collisions and there were no fatal collisions in the Run Off The Road Report. However, from January 1, 2009 to December 31, 2011 the collision total was ten, one of which was fatal and seven of which were injury. (See table next page).

As mentioned above roadway departure collisions triggered an investigation at this location through the Run off the Road Monitoring Report. A pattern of roadway departure collisions was seen from post mile 58.3 to 59.3. Widening and guardrail has been proposed by District Traffic Safety as corrective action to reduce the number and severity of roadway departure collisions. From post mile 59.3 to 59.8 there are sections of existing metal beam guardrail that will be replaced with Midwest Guardrail System. There are also sections of existing guardrail that will be adjusted to standard height.

This project proposes to reduce the number and severity of run-off-the-road collisions by providing wider lanes and shoulders where terrain is favorable and installing guardrail at spot locations as recommended by District Traffic Safety.

**COLLISION DATA
 (01/01/2009 to 12/31/2011)**

LOCATI ON	POST MILE	NUMBER OF COLLISIONS			COLLISION RATES		COLLISION RATES	
		TOTAL	FATAL	INJURIES	ACTUAL F+I (ACCS/MVM)	AVERAGE F+I (ACCS/MVM)	ACTUAL TOTAL (ACCS/MVM)	AVERAGE* TOTAL (ACCS/MVM)
Route 1	58.3 to 59.8	10	1	7	1.16	0.76	1.45	1.51

Note: Rates are collisions per million vehicle miles (MVM).
 * Statewide average collision rate for similar facilities.

B. Regional and System Planning:

Route Designation Classification

Within the project limits, Route 1 is comprised of two lanes and classified as Conventional Highway without access control. The 2006 Transportation Concept Report (TCR) for Route 1 in District 5 indicates that this area is functionally classified as Rural Minor Arterial. It is officially designated as a Scenic Highway. The Pacific Coast Bike Route follows this segment of Route 1. The California Coastal Conservancy website contains information that shows the California Coastal Trail on Route 1 north of the Bixby Creek Bridge. South of the Bixby Creek Bridge the trail is shown inland of Route 1 on Old Coast Road. Although the Coastal Trail Alignment is not finalized at this time.

Goods Movement

At the project location, Route 1 is designated as a California Legal Advisory truck Route with a 30-foot king-pin-to-rear-axle limit. It is not part of the Strategic Highway Network (STRAHNET). Trucks make up approximately 1% of the traffic flow. Route 1 is the only highway to access the coastal communities and residences of Big Sur.

C Traffic:

Design Designation

The Design Designation is a concise expression of the basic factors controlling the design of a given highway, as described in Topic 103 of the Highway Design Manual (HDM). The following is Design Designation for this project.

		Design Hourly Volume (DHV)				Average Daily Traffic (ADT)			
From	To	2009	2016	2026	2036	2009	2016	2026	2036
46.63	62.93	590	685	758	832	4,050	4,749	5,462	6,157

From	To	Split	Trucks in Peak Hour	Trucks in ADT	Traffic Index (10 Year)	Traffic Index (20 Year)	Design Speed (MPH)
56.10	63.18	60%	1.0%	1.0%	6	7	45

Planning Horizon

The 2006 Transportation Concept Report (TCR) indicates that the proposed concept for SR 1 in Monterey County is a 2-lane conventional highway. The proposed project is consistent with the future route concept.

5. ALTERNATIVES

5A. Viable Alternative

Proposed Engineered Features

Alternatives considered for this project share the characteristic of widening the roadway of Route 1 within the coastal plain and upgrades to guardrail in the cliffs section of the project.

Alternative 1 (Build) is to widen the lanes to 12 feet and shoulders to 4 feet within the coastal plain on the southbound side from station 11+00 (post mile 58.32) to 13+10 (post mile 58.36) and widen both sides of the highway from station 13+10 (post mile 58.36) to station 58+40 (post mile 59.22) as recommended by traffic safety in direct response to run-off-the-road-collisions. New guardrail is proposed on the southbound side from station 10+00 (post mile 58.30) to 13+00 (post mile 58.36) and from station 15+00 (post mile 58.40) to 16+75 (pm 58.43). It is also proposed to replace guardrail in spot locations that Traffic Safety deems necessary as a preventative measure in the cliffs section of the project from station 60+00 (post mile 59.25) to station 84+00 (post mile 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 as part of this project. Headquarters structures has provided the design for these connections. The intent is to replace the railings and posts matching the existing metal beam guardrail connections but with the new Midwest Guardrail System railing and post heights (see attached preliminary structures plan).

Through the widening limits of the project, the widening on the southbound side will require constructing a catch slope with a 2:1 inclination, the height of this slope ranges from 1 to 10 feet. Constructing a slope on the southbound side has been chosen in order to limit impacts to sensitive vegetation on the northbound side of the highway and avoid cutting in to the northbound slope. General practice has been to avoid cutting into the northbound slope in the Big Sur area on Route 1 due to slope stability and erosion issues. The widening on the northbound side will be constructed within the existing bench at the base of the northbound cut slope.

There are two areas within the project limits where the width is insufficient for standard 12-foot lanes and 4-foot shoulders and an embankment with a 2:1 slope. The locations are station 39+50 (post mile 58.86) to 45+50 (post mile 58.97) and station 48+50 (post mile 59.03) to 56+50 (post mile 59.18). These two locations will require reinforced slopes at a 1:1 inclination. The maximum height of the reinforced slope is 10 feet. The reinforced slope will be allowed to revegetate after construction is complete. Geotechnical Design concurs with this proposal and a preliminary Geotechnical Design Report is attached.

Drainage will be addressed by collecting the project runoff into roadside ditches and into existing drainage inlets and culverts that outlet on the west side of Route 1. Inlets will be replaced or adjusted as necessary to accommodate the widening. As part of inlet adjustment for the widening on the northbound side, at station 37+25 (post mile 58.82) the headwall will be replaced, at station 44+55 (post mile 58.96) a drainage inlet will be replaced and at station 57+35 (post mile 59.20) the culvert inlet will be extended by 2.5 feet and the headwall replaced.

The 18 inch corrugated metal culvert at station 47+80 (post mile 59.02) has been identified by District Hydraulics as being in need of replacement and is proposed to be replaced in this contract. The invert of this culvert is failing. The new culvert will be 24 inches in diameter. Additionally, at station 21+75 (post mile 58.53) an existing concrete box culvert 6.1' wide x 6.95' high is proposed to be extended on each side by approximately 2 feet in order to accommodate the wider road section. The box culvert will be extended using the standard plan for box culvert extension. Geotechnical Design concurs with the location for the culvert extension. Headquarters Structures was consulted regarding the box culvert extension and also concurs. The box culvert appears to be used as a cattle undercrossing, although it does handle drainage during peak flows.

There are nonstandard (Highway Design Manual) features proposed. Mandatory design exceptions for shoulder width, horizontal clearance, stopping sight distance and horizontal alignment were approved on January 5, 2012. Advisory Design Exceptions for embankment slope and super-elevation transitions were signed on February 26, 2016. As District Traffic Safety's corrective action identified shoulder widening only within the coastal plain (post mile 58.3 to 59.3),

nonstandard features were evaluated for the entire roadbed width only within those limits. Outside of those limits, guardrail was the only corrective action and only nonstandard horizontal clearance was evaluated at those specific locations. The estimated cost for this alternative is \$4,046,000 (See Attachment C).

5B. Rejected Alternatives

Alternative Two is similar in scope to the Alternative One (build) alternative. But was not selected by the project development team.

- Shoulders wider than 4 feet carry significant additional costs due to the need for large retaining walls, slopes and / or right of way acquisition and extensive environmental mitigation and impacts. Extending the scope of widening past the coastal plain and into the cliffs section of the project will greatly increase project costs due to the need for viaducts on the west side of the highway and / or large scale grading and retaining walls on the east side of the highway. As well as large right of way takes.
- Excavation on the northbound side in to the existing slope will cause future slope instability and would go against general practice for Route 1 in the Big Sur area of not cutting in to the inland slope. Additionally excavation in the northbound slope will create extensive environmental impacts.
- Slopes at an inclination flatter than 2:1 will require Right of Way acquisition and cause extensive environmental impacts to sensitive vegetation as the project footprint would be significantly increased.
- Realignment the route to accommodate the standard curve radius of 700 feet would require even more extensive impacts than the above mentioned rejected alternatives.

Alternative Three “No-Build” is also a possibility, but does not address the project's purpose and need.

6. CONSIDERATIONS REQUIRING DISCUSSION

6A. Hazardous Waste

An Initial Site Assessment (ISA) was performed on this project. There are no apparent indications of hazardous waste within the project limits. Due to the very rural location of the project aerially deposited lead (ADL) will not be an issue. A standard lead compliance plan item will be required on the project. No impacts are anticipated regarding Air and Noise.

There are no naturally occurring serpentine or ultramafic materials within the project limits so naturally occurring asbestos (NOA) will not be an issue.

Treated wood waste will need to be disposed of with the guardrail replacement and yellow thermoplastic traffic stripe paint that is removed on the project will also be disposed of as a hazardous waste.

6B. Value Analysis

Since the project cost is less than \$50 million dollars a Value Analysis is not required.

6C. Resource Conservation

Rubberized Hot Mix Asphalt

Rubberized Hot Mix Asphalt will likely be viable for use in this project. The recommended structural section for asphalt on the project is 0.20 ft Rubberized Hot Mix Asphalt (Gap Graded) over 0.30 ft Hot Mix Asphalt (Type A).

6D. Right-of-Way Issues

The construction of the proposed widening does not require permanent acquisition of right of way. Two easements are required. A drainage easement is required to replace the 18 inch corrugated steel pipe culvert at station 47+80. Additionally a temporary construction easement is required to reconstruct the guardrail on the north east corner of the Bixby Bridge, at this time the relocation of utilities does not appear necessary due to conflicts with the proposed project.

There are no high or low risk utilities within the project limits. Existing utilities within the project limits include a subsurface communications line (ATT) and an overhead telephone line (ATT). The telephone pole line mostly follows the east right of way line. There are a few utility vaults (ATT) on the northbound shoulder, the vaults will be protected in place. The (ATT) line is planned to be protected in place during construction. There is also an overhead electric line (PGE) within the project limits from station 70+00 north. The project is bordered by various large rural properties including State and US Forest Service lands.

As part of alternative analysis for the project study report, costs for undergrounding the overhead Telephone line throughout the project were estimated by the Right of Way Department during the Project Study Report phase. Since this line is not in conflict with proposed construction the cost would be at least \$450,000. The Project Development Team had proposed undergrounding the utility to add to the scenic quality of the highway, but the cost is too high to warrant.

6E. Environmental Issues

The environmental document for the proposed project is a Negative Declaration/Categorical Exclusion. This document level has been selected based on the potential impacts to Smith's Blue butterfly habitat which is anticipated to be mitigated below the threshold of significance as defined by CEQA. The California Department of Transportation would act as the lead agency in the preparation of a joint NEPA/CEQA (National Environmental Policy Act/California Environmental Quality Act) environmental document. Caltrans will serve as the NEPA lead agency under its assumption of responsibility pursuant to 23 U.S. Code 327.

Multiple environmental studies and reports have been completed for this project including (but not limited to): Archaeology Survey Report, Historic Resource Evaluation Report, Historic Property Survey Report. Mitigation planting for Sea-Cliff Buckwheat is required and included in the project cost estimate.

Permits

A Coastal Development Permit from the County of Monterey will be required since the project limits are located within the coastal zone.

Landscape Architecture / Visual

A Visual Impact Assessment was performed for this project. Since the project is highly visible to the public and located in a sensitive location in the Coastal Zone, all project features have been designed to limit visual impacts as much as possible. To minimize and reduce visual impacts preservation of existing vegetation will be maximized, areas of disturbance will be reseeded, and guardrail will be darkened with stain.

6H. Other Issues

Stage Construction and Transportation Management Plan

In order to construct the proposed shoulder widening and allow for continuous flow of traffic, shoulder and intermittent lane closures are anticipated. Approximately 5 nights of full closures are also anticipated to construct the widening. For reinforced slope construction a temporary signal will need to be installed. The temporary signal will be in place for approximately 20 working days.

Storm Water

The Project Study Report level Storm Water Data Report for this project was signed on November 2, 2015. This project is found to be exempt from further consideration of treatment BMPs since the net new impervious area was not increased by one acre or more. Storm water pollution during construction will be prevented using slope/surface protection systems, preserving the largest practical vegetated surfaces, and other standard erosion control methods. A contractor submitted Storm Water Pollution Prevention Plan (SWPPP) and Construction Site Monitoring Program (CSMP) will be required for this project prior to beginning construction.

Planting

Planting will be for compensatory mitigation described in the Natural Environment Study. Work will include planting, temporary irrigation, and plant establishment (1 year). Final scope and locations of work will be refined in coordination with the project biologist as commitments to the various regulatory agencies are resolved.

Permanent Erosion Control

Permanent erosion control may include duff, compost, rolled erosion control product netting, compost socks, hydroseed, and other components. Components will be selected to best address varied conditions within the project. Seed will

include a combination of native species selected in coordination with the project biologist and regulatory agencies involved.

SHOPP Performance Indicator

The SHOPP performance indicator for this project is 5 collisions reduced over the life of the project.

Coastal Trail

In 2001, the California State Legislature, enacted SB 908, which directed the State Coastal Conservancy to determine what is needed to complete the Coastal Trail. The report was completed in early 2003 and was titled "Completing the California Coastal Trail."

In 2007 the Governor signed SB 1396 directing the Coastal Conservancy to coordinate development of the Coastal Trail with the Department of Transportation (Caltrans). This bill also required local transportation planning agencies, whose jurisdiction includes a portion of the Coastal Trail or property designated for the trail, to coordinate with the Coastal Conservancy, Coastal Commission, and Caltrans regarding development of the trail.

The "Completing the California Coastal Trail" report identifies the project area as needing improvements for non-motorized travel. The exact route of the coastal trail within the project limits is undetermined. The trail will either follow an inland route likely along the Old Coast Highway or it may follow the coast and Route 1. The proposed project alternative improves non-motorized access with wider shoulders and lanes. Additionally the proposed project does not preclude the coastal trail from following the Route 1 alignment within the project limits.

7. OTHER CONSIDERATIONS AS APPROPRIATE

Community Involvement

An opportunity for a hearing will be offered as part of the project environmental process.

Complete Streets

This project provides improved highway traveled way and shoulder width for drivers, bicycle riders and pedestrians which share use of the Route. Route 1 through the project limits is a designated bicycle route.

Coast Highway Management Plan

The Big Sur Coast Highway Management Plan (2004) is the result of collaboration that was made possible through grant funds from the Federal Highway Administration with support from Congressman Sam Farr and the management of the California Department of Transportation. A large amount of stakeholder and community input was also used to develop the plan.

The plan addresses: Corridor Aesthetics, Landslide Management & Storm Damage Response and Vegetation Management.

The plan provides the framework for ongoing collaboration to meet stakeholders' common vision for the corridor.

The route concept as stated in the Plan is two 12 foot lanes and two 4 foot shoulders, which is consistent with this project proposal.

Risk Management

A Risk Management Plan (RMP) has been developed for the project (See Attachment G). Because the project is located in a sensitive coastal area the RMP identifies several significant risks related to the Environmental, Right of Way, and Coastal Development Permit processes that are likely to add cost and delays to the project. Avoidance or Mitigation responses are identified to minimize most of these risks. However, as the RMP cannot identify all risks in advance of occurrence for a project, some risks are unknown.

8. FUNDING / PROGRAMMING

Funding

It has been determined that this project is eligible for Federal-aid funding.

Programming

The proposed project is to be funded by the Collision Severity Reduction Program (201.015) for delivery in the 2017/18 fiscal year. The current estimated project cost is \$4,046,000 (January 2016). See Attachment C for the Project Report Cost Estimate. The proposed estimated resources and funding schedule for this project are summarized in the following table.

Proposed Estimated Resources

Project Cost Component	Fiscal Years						Grand Total
	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	
R/W Capital				\$30			\$30
Construction Capital					\$5,349		\$5,349
PA&ED Support		\$675					\$675
PS&E Support				\$983			\$983
R/W Support			\$35				\$35
Construction Support					\$1,154		\$1,154
Total Support		\$675	\$35	\$983	\$1,154		\$2,847
Total		\$675	\$35	\$1,013	\$6,503		\$8,226

Note: all costs x \$1,000. Support Categories are the same as those identified by SB 45. Support Costs escalated at 3.10%. Construction Capital and Right of Way Capital escalated at 5%. Support Cost Ratio: 53%.

9. SCHEDULE

Project Milestones		Milestone Designation (Target/Actual)
PROGRAM PROJECT	M015	7/1/2014
BEGIN ENVIRONMENTAL	M020	8/2014
CIRCULATE DED EXTERNALLY	M120	5/15/2016
PA & ED	M200	10/1/2016
PS&E TO DOE	M377	9/1/2017
RIGHT OF WAY CERTIFICATION	M410	3/1//2018
READY TO LIST	M460	4/1/2018
FUND ALLOCATION (CTC VOTE)	M470	5/1/2018
HEADQUARTERS ADVERTISE	M480	8/1/2018
AWARD	M495	10/1/2018
APPROVE CONTRACT	M500	11/1/2018
CONTRACT ACCEPTANCE	M600	10/1/2019
END PROJECT	M800	11/1/2020

10. FHWA COORDINATION

This project is considered to be an Assigned Project in accordance with the current FHWA and Department of Transportation (Caltrans) Joint Stewardship and Oversight Agreement.

11. PROJECT REVIEWS

Scoping team field review <u>Scott Morris / Brian Fuller</u>	Date <u>October, 2010</u>
District Program Advisor <u>Debra Larson</u>	Date <u>December, 2015</u>
Headquarters SHOPP Program Advisor <u>Richard Stone</u>	Date <u>April, 2016</u>
District Maintenance <u>Don Johnston</u>	Date <u>April, 2016</u>
Headquarters Project Delivery Coordinator <u>Christine Inouye</u>	Date <u>April, 2016</u>
Project Manager <u>Ken Dostalek</u>	Date <u>December, 2015</u>
District Safety Review <u>Mark Ballentine / Brian Fuller</u>	Date <u>July, 2015</u>
Constructability Review <u>PDT</u>	Date <u>December, 2011</u>
District Planning <u>Brandy Rider</u>	Date <u>March 2016</u>

12. PROJECT PERSONNEL

1.	Ken Dostalek	Project Manager	(805) 549-3133
2.	Claudia Espino	Design Manager	(805) 549-3079
3.	Brian Fuller	Project Engineer	(805) 549-3104
4.	Julie McGuigan	Environmental Planner	(805) 549-3118
5.	Debra Larson	Traffic Safety Program Mgr.	(805) 549-3017
6.	Bob Carr	Landscape Architect	(805) 549-3083
7.	Chris Shaeffer	RW / Utilities	(805) 549-3565
8.	Patrick Dussell	Construction Senior	(831) 663-8928
9.	Glenn Johnson	Materials	(805) 549-3158
10.	Pete Riegelhuth	District Storm Water	(805) 549-3375
11.	Mark Ballentine	District Traffic Safety	(805) 549-3024
12.	Yu Song	Structures Barrier / Railings	(916) 227-1954
13.	Peter New	Landscape Architect	(805) 549-3347

13. ATTACHMENTS

- A. Location Map
- B. Preliminary Typical Cross Sections
- C. Preliminary Plans
- D. Project Report Cost Estimate
- E. Right of Way Data Sheet
- F. Initial Study with Mitigated Negative Declaration and NEPA Categorical Exclusion
- G. Storm Water Data Report
- H. Risk Management Plan
- I. Transportation Management Plan
- J. Preliminary Geotechnical Report
- K. Distribution List

ATTACHMENT A

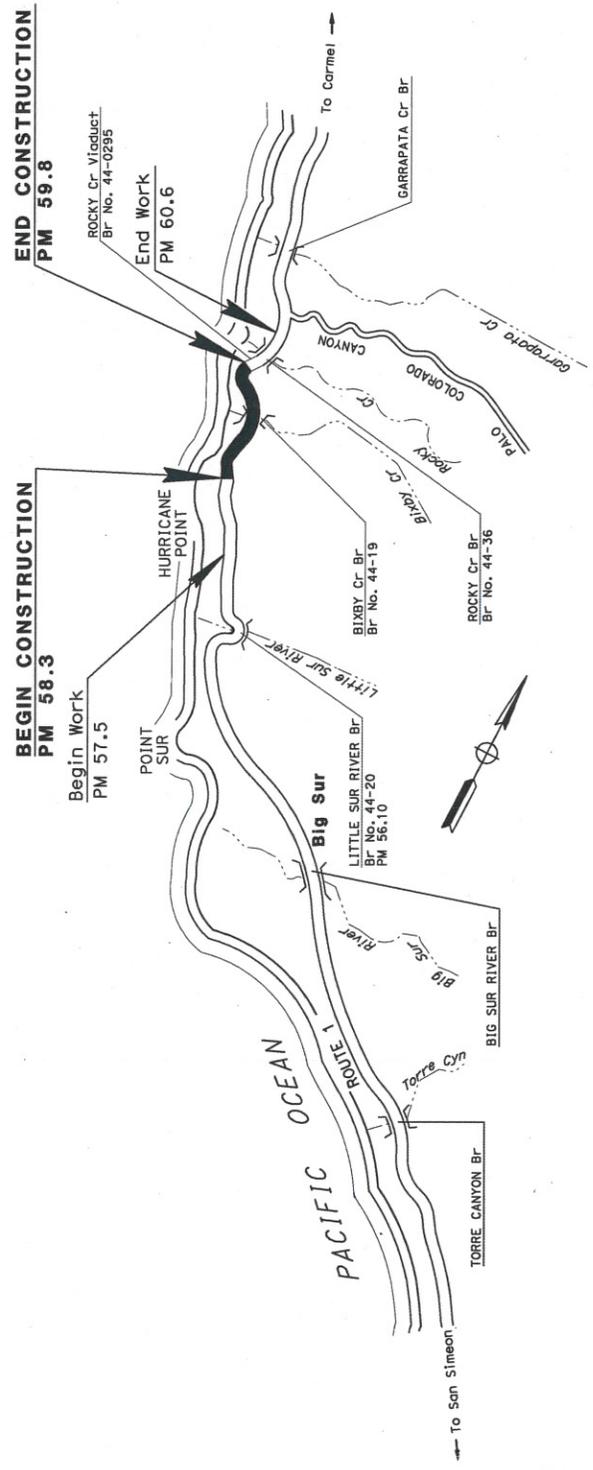
**STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY**

**IN MONTEREY COUNTY NORTH OF BIG SUR
FROM 1 MILE SOUTH OF THE BIXBY CREEK BRIDGE
TO 0.25 MILES SOUTH OF THE ROCKY CREEK BRIDGE**

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL SHEETS
05	MON	1	58.3/59.8	

LOCATION MAP



NO SCALE

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

BORDER LAST REVISED 7/2/2010 | CALTRANS WEB SITE IS: [HTTP://WWW.DOT.CA.GOV/](http://www.dot.ca.gov/)

RELATIVE BORDER SCALE IS IN INCHES

UNIT 1450

CONTRACT No.	05-1A0000
PROJECT ID	0500020284
PROJECT NUMBER & PHASE	05000202841

DESIGN ENGINEER	STEVE WYATT
PROJECT MANAGER	KEN DOSTALEK

ATTACHMENT B

DATE	COUNTY	LOCATION CODE	POST MILES	TOTAL PROJECT	SHEET TOTAL
05	Mon		56.3759.8		NO. SHEETS

REGISTERED CIVIL ENGINEER	DATE
PLANS APPROVAL DATE	

PROFESSIONAL ENGINEER	NO.	EXPIRES
REGISTERED	00-1111	05-01-2015

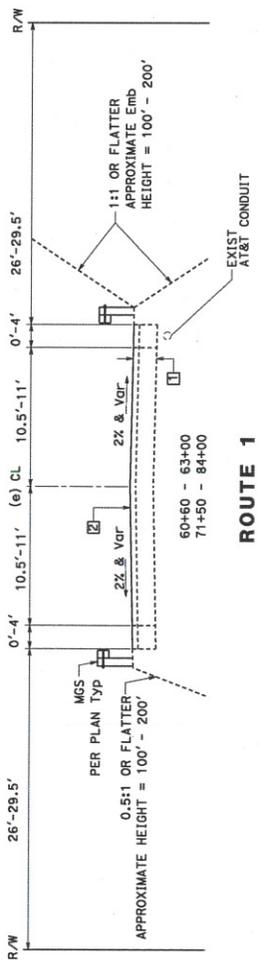
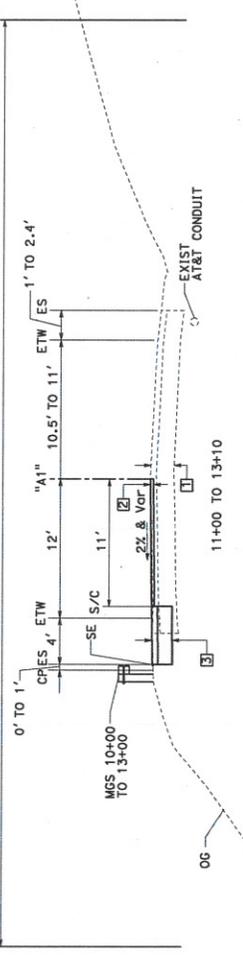
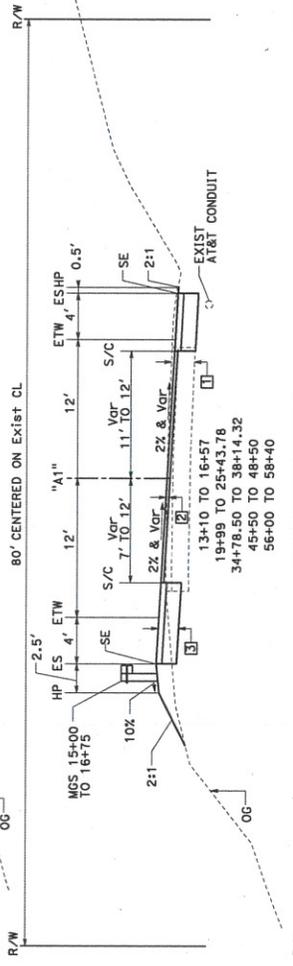
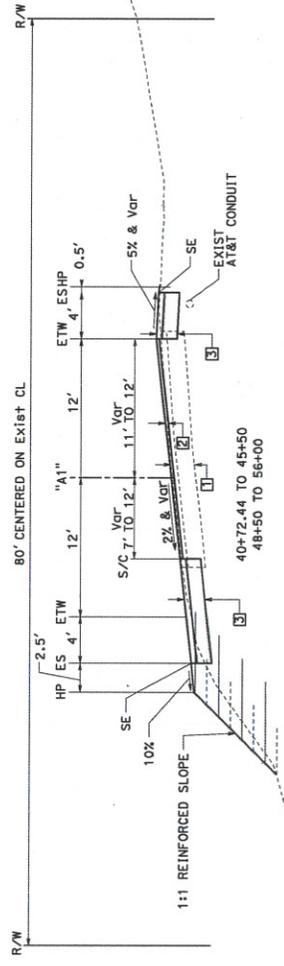
NOTES:
 1. TYPICAL SECTIONS ARE VALID FOR PROJECT REPORT ONLY.

DESIGN DESIGNATION:

ADT (2009) = 4,050
 ADT (2033) = 3,275
 DHV (2033) = 538
 ESAL = 33,100
 D = 60%
 T = 1%
 V = 45 MPH
 TI (20 YR OUTSIDE LANES) = 6
 TI (20 YR SHOULDER) = 5

STRUCTURAL SECTIONS

- 1. Exist 0.30' AC
0.50' CLASS 2 AB
AND VARIABLE
- 2. COLD PLANE 0.00' TO 0.50'
Var-HMA (TYPE A)
0.10' TO 1.00'
- 3. 0.20' RHMA-G
0.30' HMA (TYPE A)
1.25' CL 2 AB



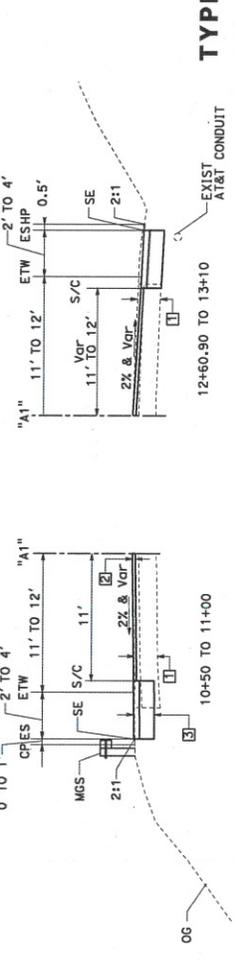
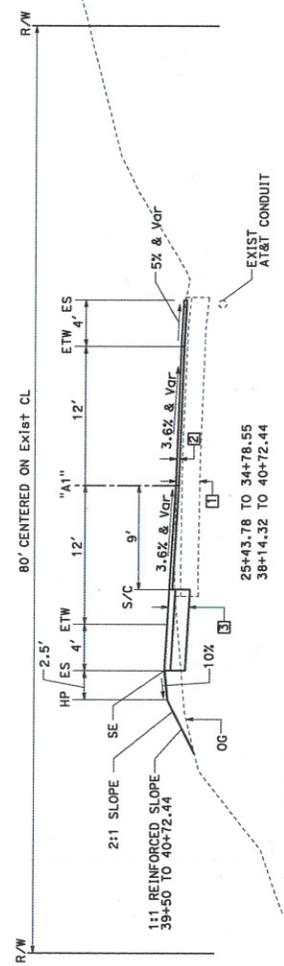
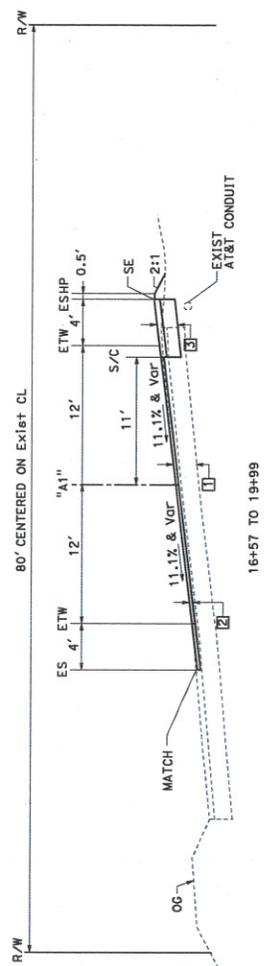
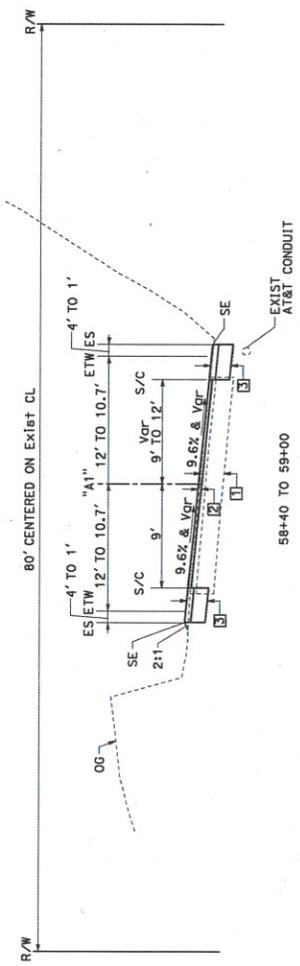
**TYPICAL CROSS SECTIONS
 DRAFT PROJECT REPORT X-1**

ROUTE 1



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	STEVE WYATT	CHECKED BY	BRIAN FULLER	DATE REVISED
	DESIGNED BY				
	CALCULATED BY				

POST MILES	56.3759.8	SHEET TOTAL	
COUNTY	Mon	TOTAL PROJECT	NO. SHEETS
LOCATION CODE			
REGISTERED CIVIL ENGINEER		DATE	
PLANS APPROVAL DATE _____ THE STATE OF CALIFORNIA FOR THE OFFICERS OF AGENCIES SHALL NOT BE RESPONSIBLE FOR CORRECTNESS OF THIS PLAN SHEET.			



**TYPICAL CROSS SECTIONS
DRAFT PROJECT REPORT X-2**

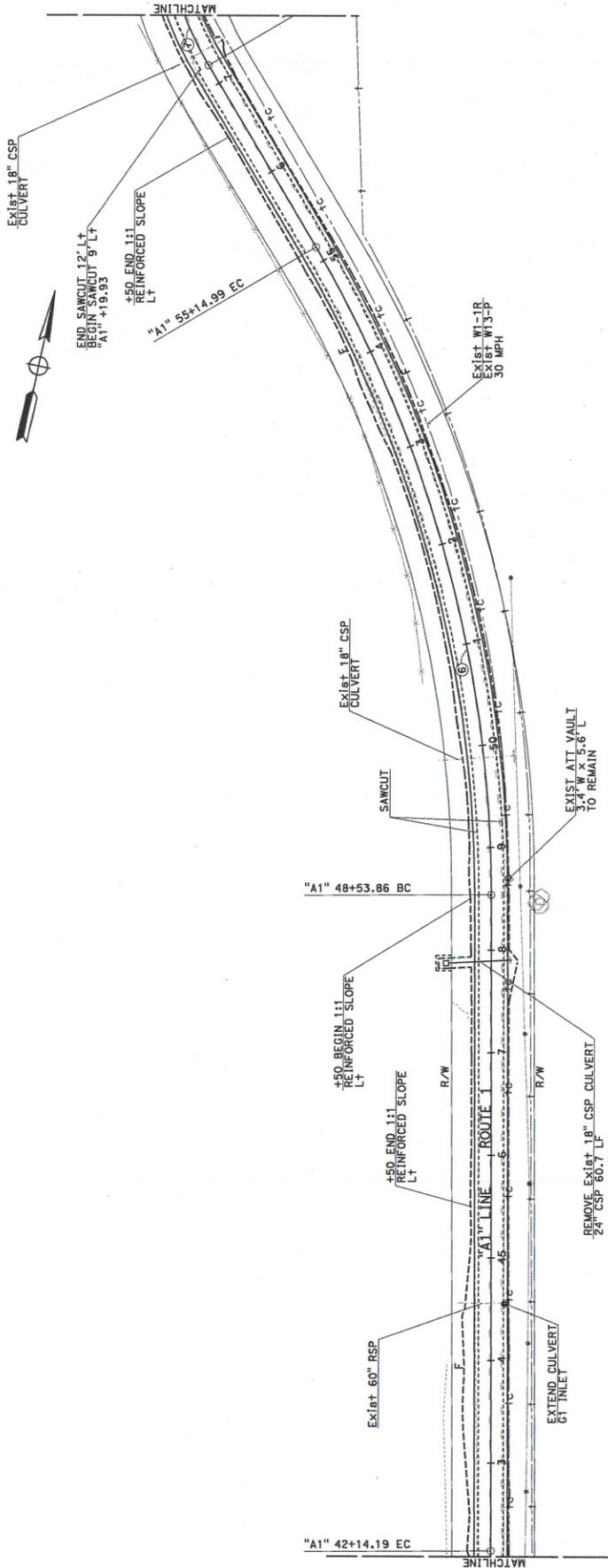
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	STEVE WYATT	CHECKED BY		DATE REVISION	
	DESIGNED BY	BRIAN FULLER				
	CALCULATED BY					

ATTACHMENT C

Dist	County	Location Code	POST MILES	TOTAL PROJECT SHEETS	SHEET NO.
05	Mon		58.3/59.8	6	6



REGISTERED CIVIL ENGINEER DATE
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS
 THE ACCURACY OR COMPLETENESS OF ANY
 PORTION OF THIS PLAN SHEET.



No. @	R	Δ	T	L
(6)	1248.19'	30°20'54"	338.52'	661.14'
(7)	345.00'	30°08'18"	92.89'	181.47'

PRELIMINARY PLANS DRAFT PROJECT REPORT

L-3

SCALE: 1" = 50'

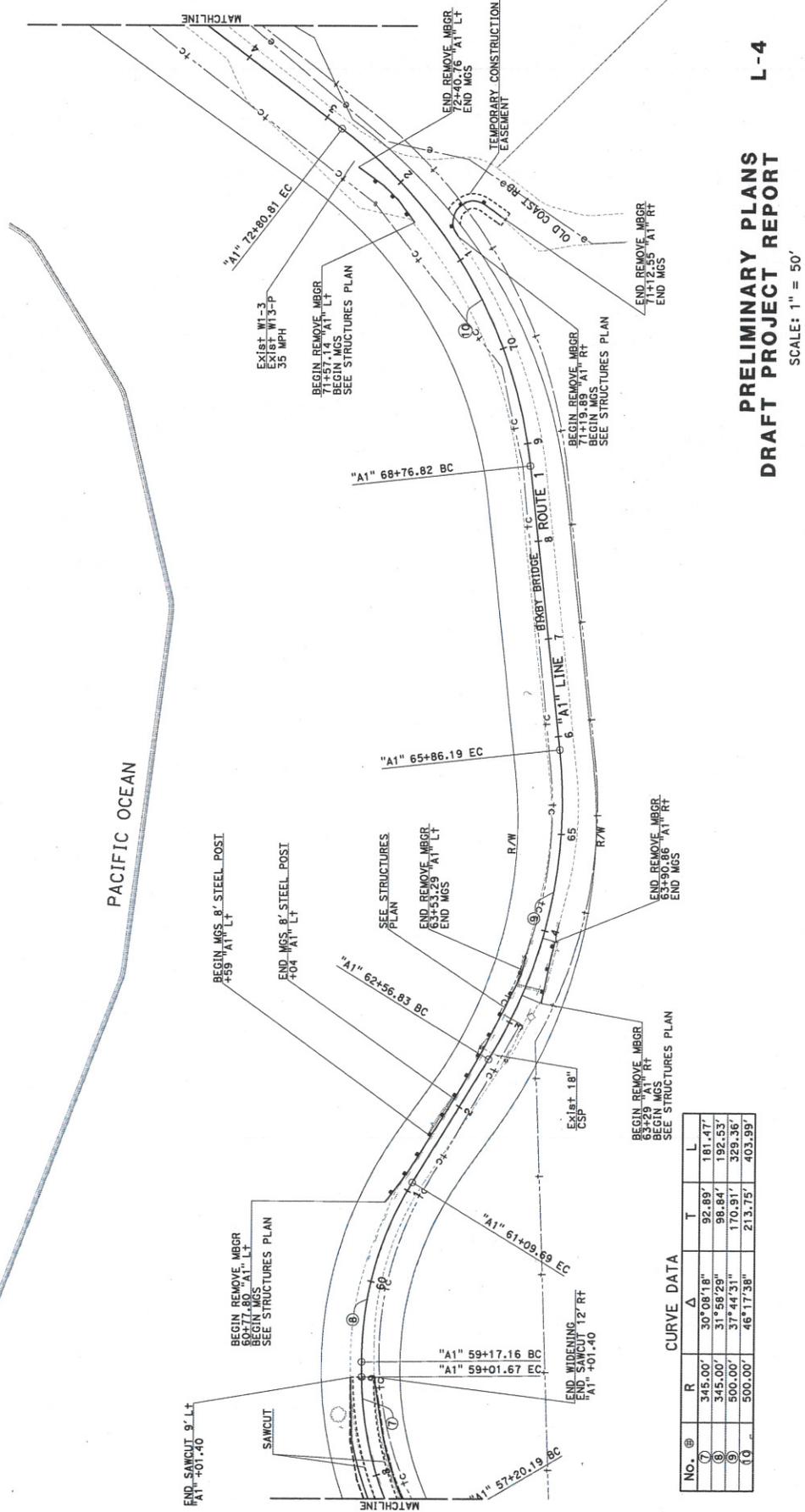
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	STEVE WAIT	CHECKED BY	DATE REVISED
	DESIGNED BY	BRIAN FULLER	REVISOR	

DATE	COUNTY	LOCATION	PROJECT	TOTAL SHEETS	SHEET NO.
05	Mon		58.3/59.8	7	7

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA ON ITS OFFICERS THE ACCURACY OF THE INFORMATION CONTAINED HEREIN IS GUARANTEED TO THE BEST OF HIS KNOWLEDGE AND BELIEF.



CURVE DATA

NO. @	R	Δ	T	L
①	345.00'	30°08'18"	92.89'	181.47'
②	345.00'	31°58'25"	96.84'	192.53'
③	500.00'	37°44'31"	170.91'	329.36'
④	500.00'	46°17'38"	213.75'	403.99'

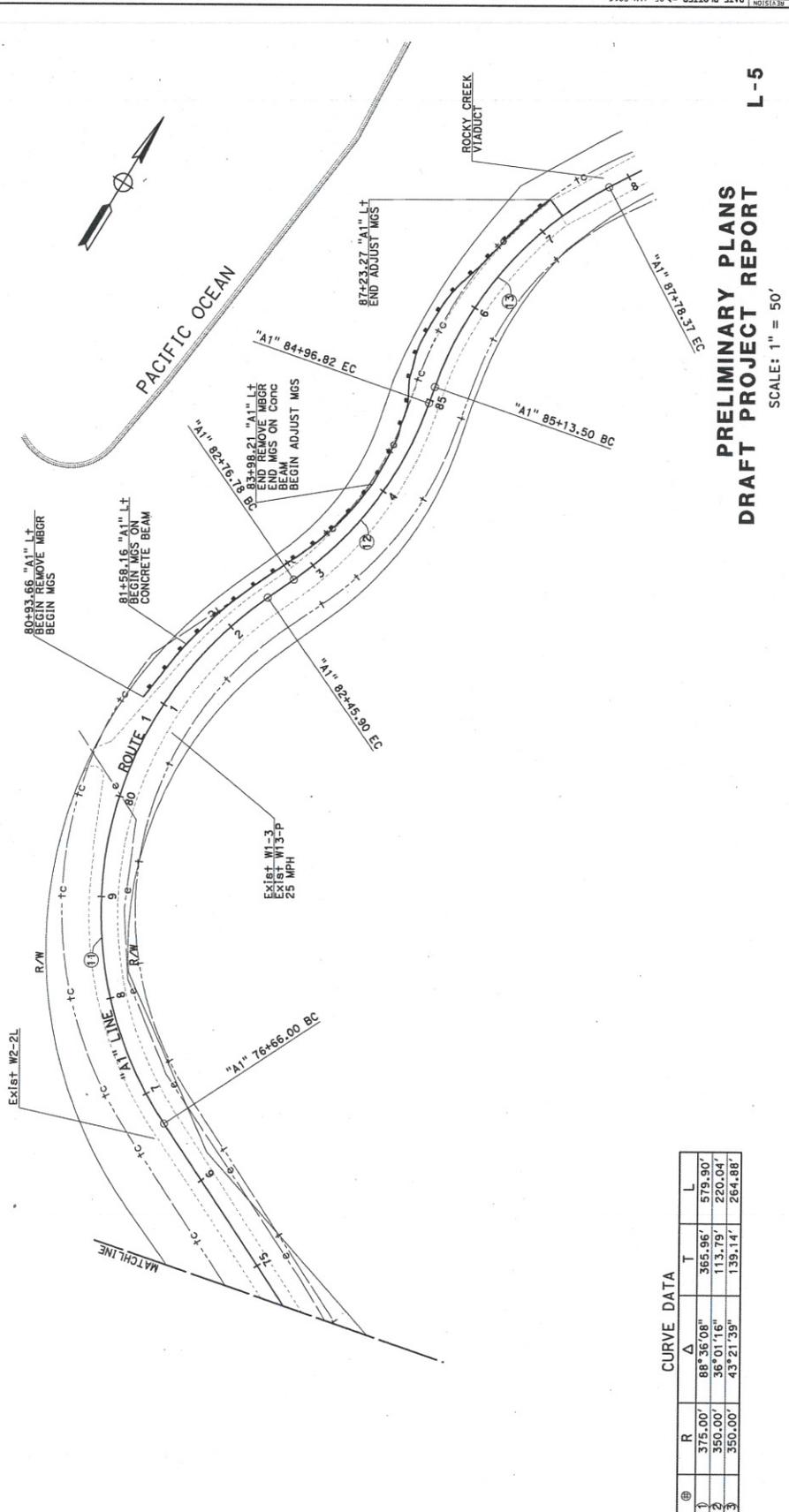
**PRELIMINARY PLANS
DRAFT PROJECT REPORT**

L-4

SCALE: 1" = 50'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	STEVE WATT	CHECKED BY	BRIAN FULLER	DATE REVISID	
BORDER LAST REVISED 7/2/2010	DESIGNED BY		REVISID BY			

DIST	COUNTY	LOCATION CODE	POST MILES	SHEET TOTAL
05	Mon		56.37/59.8	8
REGISTERED CIVIL ENGINEER DATE				
PLANS APPROVAL DATE				
THE CITY OF CALIFORNIA, BY ITS OFFICERS OR AGENTS, SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY INFORMATION CONTAINED ON THIS PLAN SHEET.				



CURVE DATA

No. @	R	Δ	T	L
(1)	375.00'	88°36'08"	365.96'	579.90'
(2)	350.00'	36°01'16"	113.79'	220.04'
(3)	350.00'	43°21'39"	139.14'	264.88'

**PRELIMINARY PLANS
DRAFT PROJECT REPORT**
L-5
SCALE: 1" = 50'

DATE PLOTTED => 05-JAN-2016	LAST REVISION
TIME PLOTTED => 16:17	
PROJECT NUMBER & PHASE	UNIT 0000
RELATIVE BORDER SCALE	1/32 IN INCHES
USERNAME => 13720	DGN FILE => 5160000005.dgn
BORDER LAST REVISED 7/2/2010	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	STEVE WYATT	CHECKED BY		DATE REVISED	
	DESIGNED BY	BRIAN FULLER	CALCULATED BY			

DIST	COUNTY	ROUTE	POST MILES	SHEET TOTAL
5	MON	1	59.37	NO. SHEETS

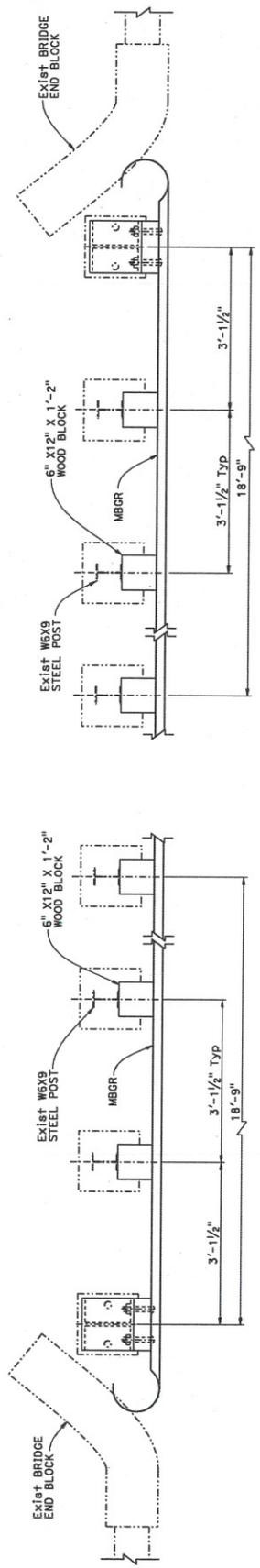
DRAFT

REGISTERED CIVIL ENGINEER DATE _____
 PLANS APPROVAL DATE _____
 I am, I have or I have had the authority or agent of the State of California to certify the correctness of scanned copies of this plan sheet.

LEGEND:
 - - - - - Indicates existing
 _____ Indicates new structure

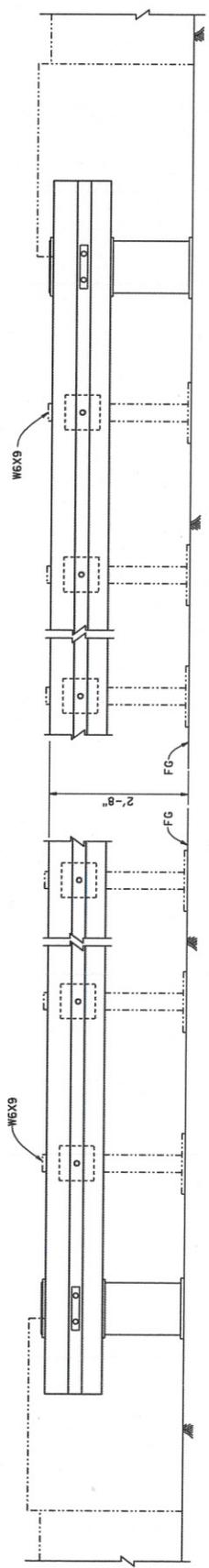
NOTES:

1. Remove existing rail posts, metal box spacers, wood blocks, and MBGRs except the steel posts.
2. For steel post installation and railing section details, see Revised Standard Plan RSP A77L2.
3. For custom made rail post details, see "BIXBY BRIDGE MIDWEST RAIL SYSTEM AT NE CORNER".



PLAN

SE, NW CORNERS GUARD RAIL ALIGNMENT



ELEVATION

NO SCALE

BRANCH CHIEF DAVID NEUMANN	DESIGN BY SHUWEI JIANG	CHECKED BY X	DATE X	SCALE AS SHOWN	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF HIGHWAY SERVICES BRIDGE NO. 44-0019 POST MILE 59.37	BIXBY BRIDGE MIDWEST GUARD RAIL SYSTEM AT SE, NW, SW CORNERS	CONTRACT NO.: 05-1A000	SHEET NO.	
									1	2

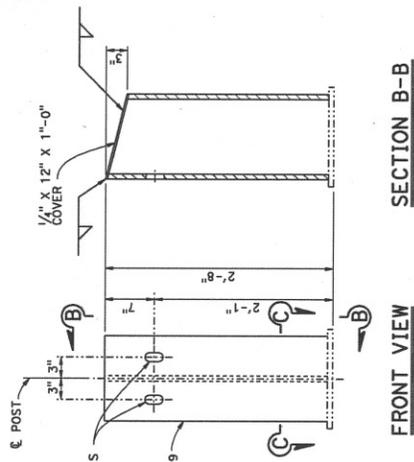
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)
 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS
 UNIT: 3619
 PROJECT NUMBER & PHASE: 050002084-0
 FILE: 05-1A000_080710.dwg
 DATE PLOTTED: 07-AUG-2013
 TIME PLOTTED: 13:08

DRAFT

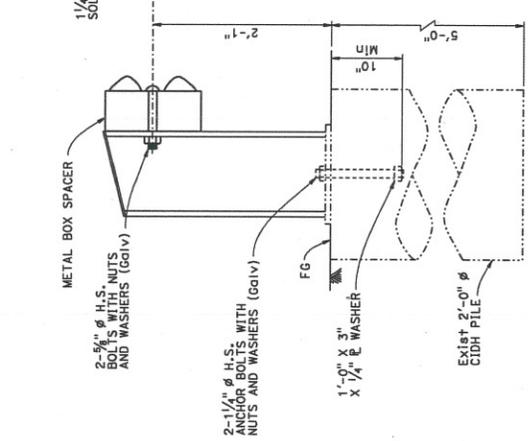
DIST	COUNTY	ROUTE	POST MILES	SHEET TOTAL
5	MON	1	59.37	NO. SHEETS



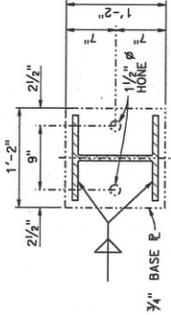
REGISTERED CIVIL ENGINEER DATE _____
 PLANS APPROVAL DATE _____
 The State of California or its officers or agents shall not be held responsible for any errors or omissions or for any consequences of reliance upon any of the plans hereon.



SECTION B-B
FRONT VIEW

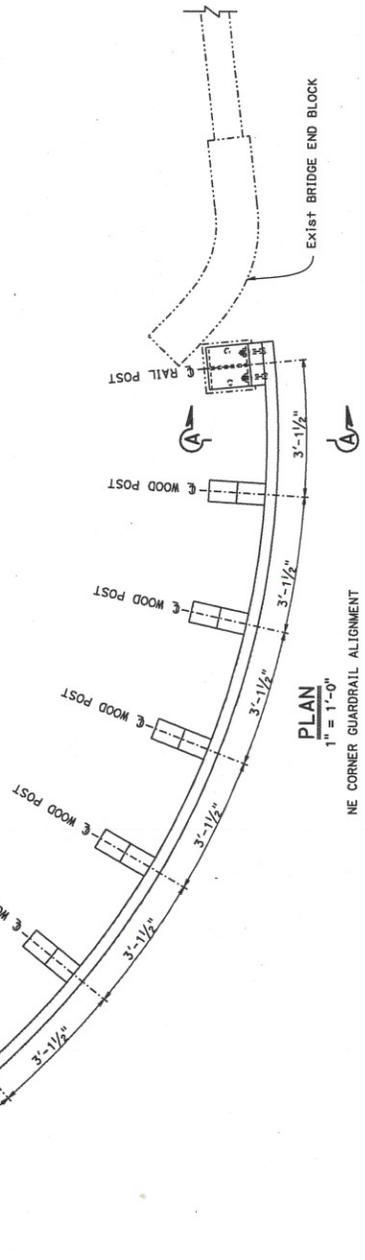


SECTION A-A



SECTION C-C

CUSTOM MADE RAIL POST DETAILS



PLAN
1" = 1'-0"
NE CORNER GUARDRAIL ALIGNMENT

LEGEND:
 - - - - - Indicates existing
 _____ Indicates new structure

NOTES:
 1. Remove existing rail post, metal box spacer, steel post, wood posts and blocks, and MGR.
 2. For wood post installation and railing section details, see revised standard plan RSP AT7L1.

NO SCALE

BRANCH CHIEF DAVID NEUMANN		STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION		BIXBY BRIDGE MIDWEST GUARD RAIL SYSTEM	
DESIGNER YU SONG	CHECKED X	DATE 4-1-2019	PROJECT NO. 44-0019	CONTRACT NO. 05-1A000	SHEET NO. 2
DETAILS SHIMEI JIANG	DESIGNED X	PROJECT NUMBER & PHASES 0500002084-0	FILE NO. 05-1A000-000002084-0	DATE PLOTTED 07-AUG-2019	SHEET OF 2
QUANTITIES	BY SHIMEI JIANG	PROJECT NUMBER & PHASES 0500002084-0	FILE NO. 05-1A000-000002084-0	DATE PLOTTED 07-AUG-2019	SHEET OF 2

ATTACHMENT D

PLANNING COST ESTIMATE



Dist-Co-Rte: 05-MON-1-58.3-59.8
 PM: PM 58.3-59.8
 EA: 05-1A0000
 Program Code: 40.50.201.015

PROJECT DESCRIPTION:

Limits: 05-Mon-1-58.3-59.8

Proposed Improvement: Widen lanes to 12 feet and shoulders to 4 feet and upgrade / install guardrail. Construct embankment and reinforced embankment necessary for widening.
 (Scope of Work)

Alternative: Alt 1 Build

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	Total of Sections 1 - 10 shown above	\$	3,950,000
TOTAL STRUCTURES ITEMS		\$	68,000
	SUBTOTAL CONSTRUCTION COSTS	\$	4,018,000
TOTAL RIGHT OF WAY ITEMS (Not Escalated)		\$	27,600
	TOTAL PROJECT CAPITAL OUTLAY COSTS	\$	4,046,000

Reviewed by
 District Program Manager:

 (Signature)

2/8/2016

 (Date)

Approved by Project Manager:

 (Signature)

3/17/2016

 (Date)

Phone Number:

Form revised 12/01/09

PLANNING COST ESTIMATE



Dist-Co-Rte: 05-MON-1-58.3-59.8
 PM: PM 58.3-59.8
 EA: 05-1A0000
 Program Code: 40.50.201.015

I. ROADWAY ITEMS

<u>Section 1 - Earthwork</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Roadway Excavation	4,600	CY	\$95	\$437,000	
Imported Borrow	1,000	CY	\$100	\$100,000	
Clearing & Grubbing	1	LS	\$30,000	\$30,000	
			Subtotal Earthwork:		\$567,000
<u>Section 2 - Pavement Structural Section*</u>					
Hot Mix Asphalt (RHMA / Type A)	4,000	Ton	\$175	\$700,000	
Class 2 Aggregate Base	2,000	CY	\$65	\$130,000	
Tack Coat	5	Tons	\$1,800	\$9,000	
			Subtotal Pavement Structural Section:		\$839,000
<u>Section 3 - Drainage</u>					
Project Drainage (Extend Culverts / Misc.)	1	LS	\$125,000	\$125,000	
Assume St Section = 0.20' RHMA-G / 0.30' HMA TYPE A / 1.25' CL II Base			Subtotal Drainage:		\$125,000

* Reference sketch showing typical pavement structural section elements of the roadway. Include (if available) T.I., R-Value and date when tests were performed.

PLANNING COST ESTIMATE



Dist-Co-Rte: 05-MON-1-58.3-59.8
 PM: PM 58.3-59.8
 EA: 05-1A0000
 Program Code: 40.50.201.015

<u>Section 4 - Specialty Items</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Geosynthetic Fabric	1	LS	\$70,000	\$70,000	
Midwest Guardrail System	3,000	LF	\$30	\$90,000	
Water Pollution Control	1	LS	\$64,000	\$64,000	
Concrete Beam MGS	1	LS	\$75,000	\$75,000	
Cold Plane AC	13,000	SQYD	\$5	\$75,000	
Lead Compliance Plan	1	EA	\$2,500	\$2,500	
Resident Engineer Office Space	1	LS	\$65,000	\$65,000	
MGS Terminal Section	6	EA	\$3,000	\$18,000	
			Subtotal Specialty Items:		\$460,000
<u>Section 5 - Traffic Items</u>					
Traffic Delineation Items	1	LS	\$15,000	\$15,000	
Temporary Alt Crash Cushion	2	EA	\$15,000	\$30,000	
Roadside / Const Area Signs	1	LS	\$8,000	\$8,000	
Temp. Railing (Type K)	2,000	LF	\$45	\$90,000	
Cozeep	1	LS	\$50,000	\$50,000	
Temp. Signal	1	LS	\$150,000	\$150,000	
Traffic Control Sys for Lane Closure	1	LS	\$190,000	\$190,000	
Maintain Traffic	1	LS	\$30,000	\$30,000	
Portable CMS	1	LS	\$40,000	\$40,000	
			Subtotal Traffic Items:		\$603,000

PLANNING COST ESTIMATE



Dist-Co-Rte: 05-MON-1-58.3-59.8
 PM: PM 58.3-59.8
 EA: 05-1A0000
 Program Code: 40.50.201.015

II. ROADSIDE ITEMS

<u>Section 6 Planting and Irrigation</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Highway Planting	1	LS	\$10,000	\$10,000	
irrigation	1	LS	\$5,000	\$5,000	
Plant Establishment (1 yr)	1	LS	\$15,000	\$15,000	
Subtotal Planting and Irrigation Section:					\$30,000
<u>Section 7: Roadside Management and Safety Section</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Erosion Control	1	LS	\$35,000	\$35,000	
Subtotal Roadside Management and Safety Section:					\$35,000
TOTAL SECTIONS 1 thru 7					\$2,659,000

NOTE: Extra lines are provided for items not listed; use additional lines as appropriate.

PLANNING COST ESTIMATE



Dist-Co-Rte: 05-MON-1-58.3-59.8
 PM: PM 58.3-59.8
 EA: 05-1A0000
 Program Code: 40.50.201.015

III. ROADWAY ADDITIONS

Section 8 - Minor Items

				<u>Item Cost</u>	<u>Section Cost</u>
(Subtotal Sections 1 thru 7)	<u>\$2,659,000</u>	x	<u>0.10</u> (5 to 10%)	=	<u>\$265,900</u>

TOTAL Minor Items: \$265,900

Section 9 - Roadway Mobilization

(Subtotal Sections 1 thru 8)	<u>\$2,924,900</u>	x	<u>0.10</u> (10%)	=	<u>\$292,490</u>
------------------------------	--------------------	---	----------------------	---	------------------

TOTAL Roadway Mobilization: \$293,000

Section 10 - Supplemental Work & Contingencies

Supplemental Work

(Subtotal Sections 1 thru 8)	<u>\$2,924,900</u>	x	<u>0.10</u> (5 to 10%)	=	<u>\$292,490</u>
------------------------------	--------------------	---	---------------------------	---	------------------

Contingencies

(Subtotal Sections 1 thru 8)	<u>\$2,924,900</u>	x	<u>0.15</u> (**%)	=	<u>\$438,735</u>
------------------------------	--------------------	---	----------------------	---	------------------

Supplemental Work & Contingencies: \$732,000

TOTAL ROADWAY ADDITIONS Sections 8 thru 10: \$1,291,000

TOTAL ROADWAY ITEMS: \$3,950,000

(Subtotal Sections 1 thru 10)

Estimate Prepared

by:	<u>Brian Fuller</u>	Phone: <u>805-549-3104</u>	<u>12/01/15</u>
	(Print or Type Name)		(Date)

Estimate Checked

by:	<u>Scott Kirkish</u>	Phone: <u>805-594-6199</u>	<u>12/01/15</u>
	(Print or Type Name)		(Date)

**Use appropriate percentage per PDPM, Part 3 Chapter 20.

<http://www.dot.ca.gov/hq/oppd/pdpm/pdpmn.htm> - pdpm

PLANNING COST ESTIMATE



Dist-Co-Rte: 05-MON-1-58.3-59.8
 PM: PM 58.3-59.8
 EA: 05-1A0000
 Program Code: 40.50.201.015

II. STRUCTURE ITEMS

	STRUCTURE			
	No. 1	No. 2	No. 3	
Bridge Name				
Structure Type				
Width (out to out) - (ft)				
Span Length - (ft)				
Total Area - ft ²	0	0	0	
Footing Type (pile/spread)				
Cost per ft ²	0	0	0	
(incl. 10 % mobilization and 20 % contingency)				
Total Cost for Structure	\$0	\$0	\$0	
SUBTOTAL STRUCTURES ITEMS				\$0
(Sum of Total Cost for Structures)				
Railroad Related Costs (Not incl. in R/W Est)				\$0
				\$0
SUBTOTAL RAILROAD ITEMS				\$0
TOTAL STRUCTURES ITEMS				\$68,000

COMMENTS:

(Sum of Structures items plus Railroad Items)

Structures designed guardrail connections to Bixby bridge. Estimated cost is \$17,000 per location for 4 locations.

Estimate Prepared

by:

Brian Fuller

(Print or Type Name)

Phone: 805-549-3104

09/29/15

(Date)

(If appropriate, attach additional pages as backup)

PLANNING COST ESTIMATE



Dist-Co-Rte: 05-MON-1-58.3-59.8
 PM: PM 58.3-59.8
 EA: 05-1A0000
 Program Code: 40.50.201.015

III. RIGHT OF WAY ITEMS

No. of years for Escalation = 4

	Current Values	Rate (%)	Escalation Factor	Escalated Values
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill	\$6,125	5.0	1.22	\$7,090
B. Utility Relocation / Potholing (State Share)	\$5,000	5.0	1.22	\$5,788
C. Relocation Assistance	\$0	5.0	1.22	\$0
D. Mitigation	\$8,695	5.0	1.22	\$10,066
E. Title and Escrow Fees	\$3,968	5.0	1.22	\$4,593
TOTAL RIGHT OF WAY** ITEMS=	\$23,788			\$27,600 (Escalated Value)

Anticipated Date of Right of Way Certification: 2018
 (Date to which Values are Escalated)

F. Construction Contract Work

Brief Description of Work

Right of Way Branch Cost Estimate for Work* \$0

* This dollar amount is to be included in the Roadway and/or Structures Items of Work, as appropriate. Do not include in Right of Way Items

COMMENTS:

Drainage easement needed for replacement of culvert. Temporary construction easement needed for guardrail connections on the NE corner of Bixby Bridge.

Estimate Prepared by:

Brian Fuller
 (Print or Type Name)

Phone: 805-549-3104

09/21/15
 (Date)

(If appropriate, attach additional pages and backup including Right of Way Data Sheet and Environmental Mitigation and Compliance Cost Estimate Sheet).

ATTACHMENT E

Memorandum

To: Ken Dostalek
PM-SLO

Attn: Brian Fuller
PE-SLO
Steve Wyatt
DM-SLO

Date: 9/25/2015

File: CD 05 EA 1A0000 Alt 1
Co Mon RTE 1

DESCRIPTION:
Shoulder widening, guardrail upgrades, potential retaining wall

From: Department of Transportation
Division of Right of Way Central Region

Subject: RIGHT OF WAY DATA SHEET

We have completed an estimate of the right of way costs for the above-referenced project based on the Right of Way Data Sheet Request Form dated 9/10/2015

The following assumptions and limiting conditions were identified:

Appraisal

Temporary Construction Easements were valued for 2 years.

Utility

The extent of required utility relocation (other than vault lid adjustments) is not fully known at this time. Potholing is being scheduled to determine what UG conflicts may exist. At this time no aerial facilities are anticipated to be in physical conflict with the project. It is anticipated that at least four ATT vault lids will require adjustment to grade. A CDP is required for this project. At this time is not known what, if any, negotiated conditions of approval may result as mitigation to obtain the permit. In particular whether or not undergrounding of aerial facilities may be required, and if that requirement may be determined to be an engineering necessity. ALL utility relocation that may fall within this defined requirement (CDP) will likely be a 100% cost to the project. This is a significant cost risk to the project. When these requirements are determined, the datasheet should be refreshed. If, after potholing is complete, and UG conflicts are determined to exist, the datasheet should be refreshed.

Right of Way Lead Time will require a minimum of 18 months after we receive Certified Appraisal Maps and/or Utility Conflict Plans, obtained necessary environmental clearance and applicable freeway agreements have been approved.



Marshall Garcia, Sr. Right of Way Agent
San Luis Obispo Field Office
(805) 549-3471

Right Of Way Cost Estimate

	Current Year 2015	Contingency Rate	Right of Way Escalation Rate	Escalated Year 2018
Acquisition:	\$6,125	25%	5%	\$7,090
Mitigation:	\$8,695	25%	5%	\$10,066
State Share of Utilities:	\$5,000	25%	5%	\$5,788
Expert Witness:	\$0	25%	5%	\$0
Relocation Assistance:	\$0	25%	5%	\$0
Demolition and Clearance:	\$0	25%	5%	\$0
Title and Escrow:	\$3,968	25%	5%	\$4,593
Ad Signs:	\$0	25%	5%	\$0
Total Current Value:	\$23,788			\$27,537

If RW Cost Est fields are blank, Costs = \$0

Estimated Construction Contract Work (CCW): 0 R/W LEAD TIME/Mo. 18

Pot Hole	4,000
Mitigation	
Land	0
Bank	0
Permit Fees	6,956

RR Involvement

Railroad Facilities or Right of Way Affected?	N
Const/Maint Agreement:	N
Service Contract:	N
Right of Entry:	N
Clauses:	N
Estimated Lead-time	0 Mos.

Parcel Data

# of Parcel Type X:	0		
# of Parcel Type A: less than \$10,000 non-complex	3		
# of Parcel Type B: more than \$10,000 non-complex	0		
# of Parcel Type C: complex, special valuation	0		
# of Parcel Type D: most complex and time consuming	0	# of Duals Needed:	0
Totals:	3	Totals:	0

of Excess Parcels: 0

Misc R/W Work

# of RAP Displacements:	0
# of Clearance/Demos:	0
# of Const Permits:	0
# of Condemnations:	0

Utilities

U4-1: Owner Expense	1
U4-2: State Expense, Conventional no Fed Aid	1
U4-3: State Expense, Freeway no Fed Aid	0
U4-4: State Expense, both with Fed Aid	0
U5-7: Utility verification, no relocation/potholing	1
U5-8: Utility verification, w/ some relocation/potholing	
U5-9: Utility verifications, relocation/potholing required	2

EA: 05-1A0000 ALT: 1

Parcel Area

Total R/W Required:	0
Total Excess Area:	0

General Description of R/W and Excess Lands Required (zoning, use, major improvements, critical or sensitive parcels, etc.):

One small drainage easement from a USFS parcel and two small construction easements from two privately owned homesites for guardrail replacement.

General Description of Utility Involvement:

Mon 1 is designated a conventional highway within the project limits and is located within the Coastal Zone. A CDP is anticipated to be a requirement. Scope of project includes widening shoulders, upgrade guardrail, and possible retaining walls. Existing utilities within the project limits consist of aerial electrical lines, poles, and guys; and aerial and underground telecommunications facilities. Splice vaults are within the paved shoulder and in the dirt shoulder. The historic Bixby Creek Bridge is within the project limits. There are four 6" metal conduits suspended by hangers under the bridge. They appear to be empty and unused.

Is there a significant effect on assessed valuation:

No

Were any previously unidentified sites with hazardous waste or material found:

No

Are RAP displacements required:

No

of single family:

0

of multi-family:

0

of business/nonprofit:

0

of farms:

0

Sufficient replacement housing will be available without last resort housing:

N/A

Are material borrow or disposal sites required:

No

Are there potential relinquishments or abandonments:

No

Are there any existing or potential airspace sites:

No

Are environmental mitigation parcels required:

No

Data for evaluation provided by:

Estimator:	Jim Gentry	9/16/2015
Railroad Liaison Agent:	SWB	9/24/2015
Utility Relocation Coordinator:	Chris Shaeffer	9/16/2015

I have personally reviewed this Right of Way Sheet and all supporting information. I find this Data Sheet complete and current, subject to the limiting conditions set forth.

Date
ENTERED PMCS 9/25/2015
BY: Danny Millsap

Marshall Garcia
Sr. Right of Way Agent, Right of Way

ATTACHMENT F

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



Prepared by the
State of California Department of Transportation

The environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 USC 327.

April 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: May 29th 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

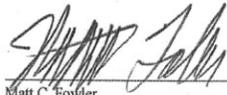
Widen the lanes and shoulders, replace drainage inlets, and construct
or repair guardrail on Route 1 from post miles 58.3 to 59.8 in Big Sur

**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, seacliff 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.

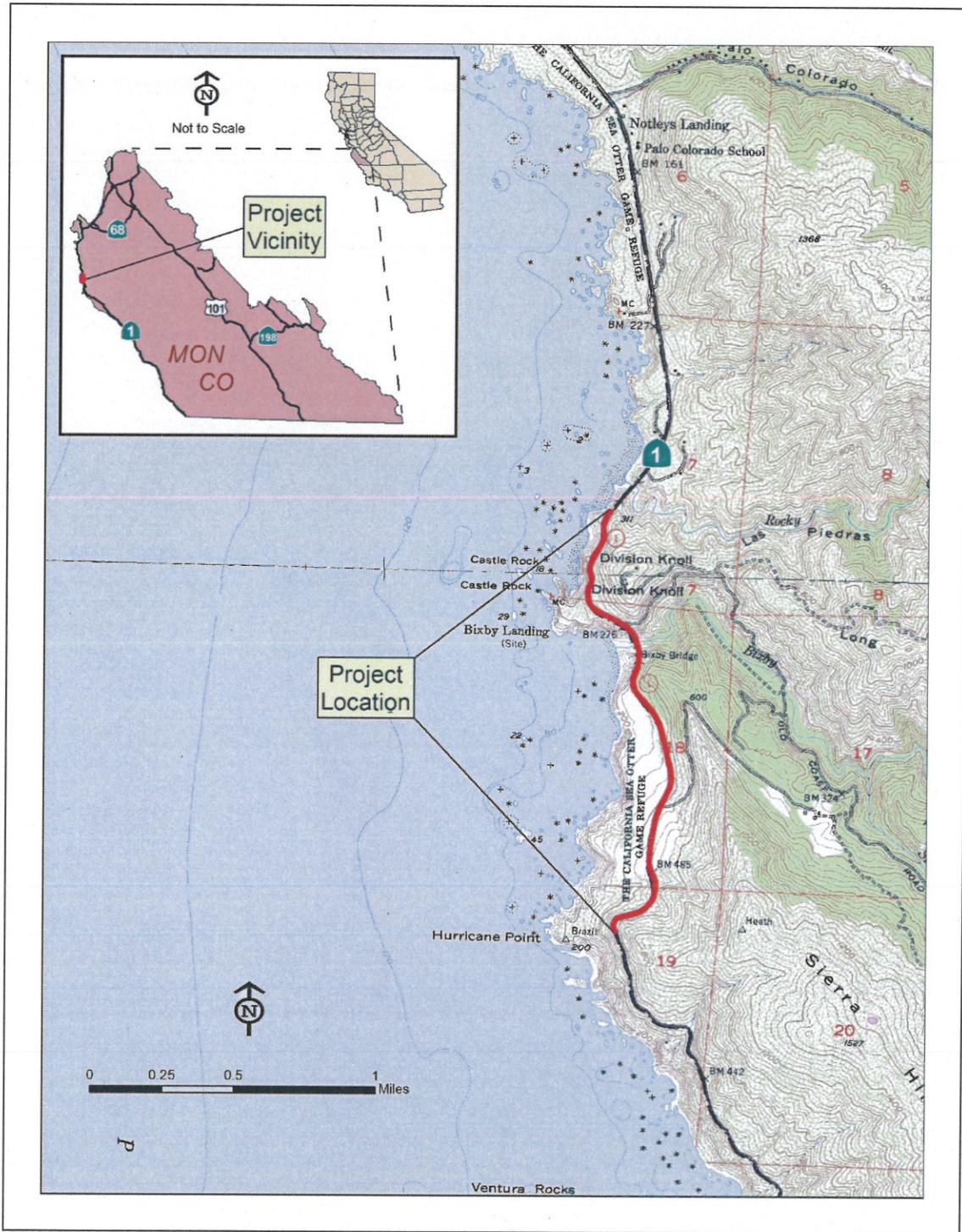
Surface water is an important visual element throughout the region. The Pacific Ocean is visible throughout much of the route and can be seen from the entire project limits. Numerous seasonal streams run throughout the area, though many are blocked from view and not noticeable from a moving vehicle.

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)

Dist.-Co.-Rte.

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Explanation:</i> There is no forest land or timberland in the project area. (Source: Rural Land Use Category map)				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Explanation:</i> There is no farmland or forest in the project area. (Source: Rural Land Use Category map)				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<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)				
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<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)				
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<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)				

	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"/>

Explanation: 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.

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)

e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Explanation: 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)

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"/>
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Explanation: The project would affect potential habitat for Smith's blue butterfly (federally endangered). Further discussion follows this checklist under *Additional Explanations for Questions in the Impacts Checklist*. (Source: Natural Environment Study, December 2015)

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"/>
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Explanation: 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)

	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"/>
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Explanation: 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"/>
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Explanation: 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"/>
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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"/>
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ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Explanation: 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<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)				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Explanation:</i> This project will not contribute to any significant risk in wildland fires. (Source: Draft Project Report, December 2015)				

IX. HYDROLOGY AND WATER QUALITY: Would the project:

a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<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)				
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"/>
<p>X. LAND USE AND PLANNING: Would the project:</p>				
<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
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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"/>
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Explanation: 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"/>
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Explanation: 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"/>
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Explanation: 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"/>
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Explanation: 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"/>
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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"/>
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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"/>
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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"/>
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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"/>
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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"/>
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	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
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<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)				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Explanation:</i> The project would have no effect on air traffic. (Source: Project Description)				
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<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)				
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<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)				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Explanation:</i> The project includes widening the roadway shoulders to 4 feet, which would accommodate cyclists and pedestrians. (Source: Draft Project Report)				

	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.

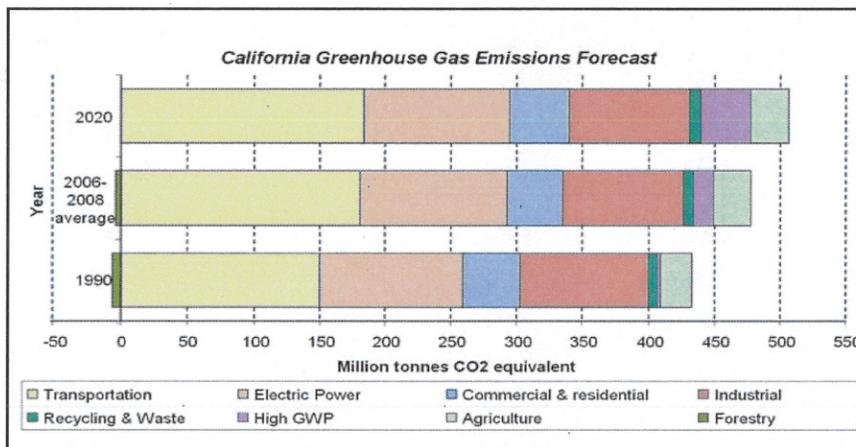
Caltrans Director's Policy 30 (DP-30) Climate Change (approved June 22, 2012): This policy established a department policy to ensure coordinated efforts to incorporate climate change into departmental decisions and activities. This policy contributes to Caltrans' stewardship goal to preserve and enhance 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 25% fly ash cement mix > 50% fly ash/slag mix	1.2 0.36	4.2 3.6
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.

ATTACHMENT G

APPENDIX E

Short Form - Storm Water Data Report



Dist-County-Route: 05-MON-1
Post Mile Limits: 58.3-59.8
Project Type: Shoulder Widening and Guardrail Upgrades
Project ID (EA): 05-0002-0284-0 (05-1A0000)
Program Identification: 201.015
Phase: [] PID [x] PA/ED [] PS&E

Regional Water Quality Control Board(s): Central Coast, Region 3

- 1. Does the project disturb 5 or more acres of soil? Yes [] No [x]
2. Is the project required to implement Treatment BMPs? Yes [] No [x]
3. Will the project generate compliance units? Yes [] No [x]
4. Does the project impact existing stormwater BMPs? Yes [] No [x]

If the answer to any of the preceding questions is "Yes", prepare a Long Form - Storm Water Data Report.

Total Disturbed Soil Area: 1.15 ac New Impervious Surface: 0.6 ac
Estimate Construction Start Date: 5/2018 Completion Date: 11/2018
Risk Level: RL 1 [] RL 2 [] RL 3 [x] WPCP [] NA []

This Short Form - Storm Water Data Report has been prepared under the direction of the following Licensed Person. The Licensed Person attests to the technical information contained herein and the data upon which recommendations, conclusions, and decisions are based. Professional Engineer or Landscape Architect stamp required at PS&E.

[Signature] 11/3/15
Brian Fuller, Registered Project Engineer Date
I have reviewed the stormwater quality design issues and find this report to be complete, current and accurate:

[Signature] 11/3/2015
James Espinosa, Regional SW Coordinator or Designee Date
FOR [Stamp Required for PS&E only]

1. Project Description

- This Project proposes shoulder widening and guardrail replacement on Route 1 in Monterey County from one mile south of the Bixby Bridge to the Rocky Creek Bridge (pm 58.3 – 60.0). This is a safety (O15) project funded through the SHOPP. The intent of the project is to reduce the number and severity of run off the road collisions.
- Work will likely include construction of retaining walls, drainage work, cold planning, asphalt paving, guardrail replacement, utility relocation and earthwork necessary for the construction of the wider shoulders.
- The total DSA for this project includes all areas where construction will disturb soil and staging areas for the contractors use.

Table E-1. Summary of Project Areas, if Applicable

	Area (Acre)
Disturbed Soil Area	1.15
Pre project Impervious Area	5.10
Post project Impervious Area	5.7
Increase in Impervious (NNI) Area	0.6
Amount of Replaced Impervious (RIS) surfaces	PID date pre 7/1/2013
Total New Impervious Surfaces (NNI only)	0.6

- This projects PSSR was signed on 7/23/2012. Therefore it is grandfathered under the new Caltrans NPDES Permit (Order 2012-0011 DWQ). The new Caltrans Permit Order No. 2012-0011-DWQ, effective July 1, 2013 states, under the Project Planning and Design section, that the new permit requirements only apply to new and redevelopment projects that have not completed the project initiation phase by July 1, 2013. Therefore this project will be subject to the requirements contained within the Caltrans 1999 NPDES Permit Order No. 99-DWQ-06
- The receiving water bodies for this project are Bixby Creek, Rocky Creek and the Pacific Ocean. None of these water bodies are on the 2010 303D list.
- The receiving water risk is classified as high because the Bixby Creek has the beneficial uses of SPWN, COLD and MIGR.
- The project is not within an urban MS4.

Agency	Permit/Approval	Status
Ca Coastal Commission	Coastal Development Permit	To be obtained prior to construction

- There are no permanent storm water treatment BMPs within or near this projects limits

- There are no permanent Maintenance stockpile facilities located within this projects limits. There is a Maintenance stockpile facility located south of this project at PM 56.1. The contractor will not be allowed use of this facility unless prior arrangements are made with Chris Chalk, Maintenance Stormwater Coordinator.
- This project is not located within or near an ASBS area. This project discharges to the Monterey Bay National Marine Sanctuary.

2. Construction Site BMPs

- This project proposes to create 1.15 ac of DSA. Therefore this project will require a Storm Water Pollution Prevention Plan (SWPPP) and coverage under the Construction General Permit.
- A preliminary project risk level assessment has determined this project to be a risk level 3. See the attached risk level assessment for more information.
 - The R-Factor is- 82.36
 - The K-Factor is- 0.17
 - The LS Factor is- 15.18
 - The sediment risk is High (212.5 ton/acre)
- The Latitude/Longitude for this project is 36.3665/121.8988
- The cost of construction site BMPs is estimated at 1.5% of the total construction cost.
- 2 acres will be used in the calculation to determine Construction General Permit (CGP) NOI/NOT fees.

1 Number of FYs of construction schedule

2 Additional years for vegetation period or other NOT requirements

3 Total years

\$559 Storm Water Construction Annual Fees for 2 ac

\$1,677 Total NOI/NOT Stormwater CGP fees

- During construction, effective combinations of temporary and permanent erosion and sediment controls will be used. Storm water management for the site will be coordinated through the contractor with Caltrans construction personnel to effectively manage erosion from the DSA's by implementing a Storm Water Pollution Prevention Plan (SWPPP). Selected BMP's that will be included but not limited to the SWPPP for the project are defined as follows:

Temporary Soil Stabilization

- Minimize active DSA's during the rainy season utilizing scheduling techniques.
- Preserve existing vegetation to the maximum extent feasible.
- Implement temporary protective cover/erosion control on all non-active DSA's and soil stockpiles.
- Control erosive forces of storm water runoff with effective storm flow management such as temporary concentrated flow conveyance devices, earthen dikes, drainage swales, lined ditches, outlet protection/velocity dissipation devices, and slope drains as determined feasible.
- Temporary soil stabilization (BFM) will be a contract bid item.

Temporary Sediment Controls

- Implement linear sediment controls such as fiber rolls, check dams, or gravel bag berms on all active and non-active DSA's during the rainy season.
- To further help prevent sediment discharge stabilized construction site entrances, temporary drainage inlet protection, and street sweeping and vacuuming will be necessary.
- Implement appropriate wind erosion controls year round.
- Temporary sediment control (temp fiber rolls) will be a contract bid item.

Non Storm Water Management

- The appropriate non-storm water BMP's will be implemented year-round as follows:
- Water conservation practices are implemented on all construction sites and wherever water is used.
- Paving and Grinding procedures are implemented where paving, surfacing, resurfacing, grinding, or saw cutting may pollute storm water runoff or discharge to the storm drain system or watercourses.
- Procedures and practices designed for construction contractors to recognize illicit connections or illegally dumped or discharged materials on a construction site and report incidents to the Resident Engineer.
- The following activities must be performed at least 100 feet from concentrated flows of storm water, drainage courses, and inlets if within the floodplain and at least 50 feet if outside of the floodplain; stockpiling materials, storing equipment and liquid waste containers, washing vehicles or equipment, fueling and maintaining vehicles and equipment.
- Pile driving operations may be part of the construction activities.
- Concrete curing will be used in the construction of structures such as retaining walls. Concrete curing includes the use of both chemical and water methods. Proper procedures will minimize pollution of runoff during concrete curing.
- The following construction site BMPs are anticipated to be bid items for this project:
 - Job Site Management
 - Prepare Stormwater Pollution Prevention Program
 - Rain Event Action Plan
 - Storm Water Sampling and Analysis Day
 - Stormwater Annual Report
 - Move In/Move Out (Temporary Erosion Control)
 - Temporary Hydraulic Mulch (Bonded Fiber Matrix)
 - Temporary Check Dam
 - Temporary Drainage Inlet Protection
 - Temporary Fiber Roll
 - Temporary Gravel Bag Berm

- Temporary Large Sediment Barrier
- Temporary Construction Entrance
- Street Sweeping
- Temporary Concrete Washout
- Temporary Fence (type ESA)

Supplemental Items

- Water Pollution Control Maintenance Sharing
- Additional Water Pollution Control
- Storm Water Sampling and Analysis
- Annual Construction General Permit Fee (066916 State furnished item)
- Concurrence from Construction regarding the temporary Construction Site BMP implementation strategy and associated quantities will occur during PS&E.

3. Required Attachments¹

- Vicinity Map
- Evaluation Documentation Form
- CGP Risk Level Assessment

¹ Additional attachments may be required as applicable or directed by the District/Regional Design Storm Water Coordinator (e.g. BMP line item estimate, DPP, CS checklists, etc).

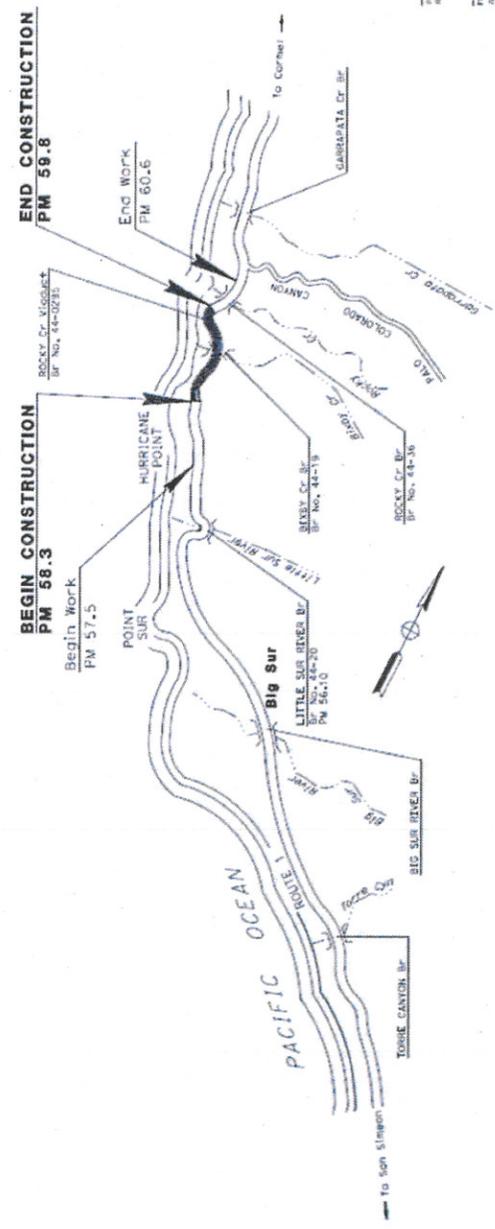
INDEX OF PLANS

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
 PROJECT PLANS FOR CONSTRUCTION ON
 STATE HIGHWAY
 IN MONTEREY COUNTY NORTH OF BIG SUR
 FROM 1 MILE SOUTH OF THE BIXBY CREEK BRIDGE
 TO 0.25 MILES SOUTH OF THE ROCKY CREEK BRIDGE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

STATE	COUNTY	ROUTE	TOTAL SHEETS	SHEET NO.
05	MON	1	58-2/59-6	58-2

Vicinity Map



NO SCALE

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

NO SCALE

CONTRACT NO.	05-1A000K
PROJECT ID	0500020284

PLANS APPROVAL DATE
 BY (NAME AND TITLE)
 COUNTY OF MONTEREY

DATE



APPENDIX E

DATE: 10/23/2015

Project ID (EA): 05-0002-0284-0 (05-1A0000)

No.	Criteria	Yes ✓	No ✓	Supplemental Information for Evaluation
1.	Begin Project evaluation regarding requirement for implementation of Treatment BMPs.	✓		See Figure 4-1, Project Evaluation Process for Consideration of Permanent Treatment BMPs. Continue to 2.
2.	Is the scope of the Project to install Treatment BMPs (e.g., Alternative Compliance or TMDL Compliance)?	✓		If Yes, go to 8. If No, continue to 3.
3.	Is there a direct or indirect discharge to surface waters?	✓		If Yes, continue to 4. If No, go to 9.
4.	As defined in the WQAR, does the Project have: 1. Areas of Special Biological Significance (ASBS), 2. A TMDL area where Caltrans is named stakeholder, or 3. Other Pollution Control Requirements for surface waters within the project limits?		✓	If Yes to any, contact the District/Regional Stormwater Coordinator to discuss the Department's obligations, go to 8 or 5. _____ (Dist./Reg. SW Coordinator initials)
			✓	
			✓	If No, continue to 5.
5.	Are any existing Treatment BMPs partially or completely removed? (ATA condition #1, See PPDG Section 4.4.1)		✓	If Yes, check "Yes" AND continue to 7. If No, continue to 7.
6.	Is this a Routine Maintenance Project?		✓	If Yes, continue to 9. If No, go to 7.
7.	Does the project result in <u>one acre or more</u> of new impervious surface (NIS)?		✓	If Yes, go to 8. <u>0.6</u> ac NIS (NIS=NNI+ RIS) If No, continue to 9.
8.	Project is required to implement Treatment BMPs.	Complete Checklist T-1, Part 1.		
9.	Project is not required to implement Treatment BMPs. <i>PSR</i> (Dist./Reg. SW Coord. Initials) <i>PS</i> (Project Engineer Initials) <u>10/23/15</u> (Date)	Document for Project Files by completing this form and attaching it to the SWDR.		

APPENDIX E

Project Identifier/ EA: 05-0002-0284-0 (05-1A0000)	
Entry	
A) R Factor	
<p>proportional to a rainfall factor composed of total storm kinetic energy (E) times the maximum 30-min intensity (I30) (Wischmeier and Smith, 1958). The numerical value of R is the average annual sum of EI30 for storm events during a rainfall record of at least 22 years. "Isoerodent" maps were developed based on R values calculated for more than 1000 locations in the Western U.S. Refer to the link below to determine the R factor for the project site.</p> <p>http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm</p>	
R Factor Value	82.36
B) K Factor (weighted average, by area, for all site soils)	
<p>transportability of the sediment, and (3) the amount and rate of runoff given a particular rainfall input, as measured under a standard condition. Fine-textured soils that are high in clay have low K values (about 0.05 to 0.15) because the particles are resistant to detachment. Coarse-textured soils, such as sandy soils, also have low K values (about 0.05 to 0.2) because of high infiltration resulting in low runoff even though these particles are easily detached. Medium-textured soils, such as a silt loam, have moderate K values (about 0.25 to 0.45) because they are moderately susceptible to particle detachment and they produce runoff at moderate rates. Soils having a high silt content are especially susceptible to erosion and have high K values, which can exceed 0.45 and can be as large as 0.65. Silt-size particles are easily detached and tend to crust, producing high rates and large volumes of runoff.</p> <p>Site-specific K factor guidance</p>	
K Factor Value	0.17
C) LS Factor (weighted average, by area, for all slopes)	
<p>The effect of topography on erosion is accounted for by the LS factor, which combines the effects of a hillslope-length factor, L, and a hillslope-gradient factor, S. Generally speaking, as hillslope length and/or hillslope gradient increase, soil loss increases. As hillslope length increases, total soil loss and soil loss per unit area increase due to the progressive accumulation of runoff in the downslope direction. As the hillslope gradient increases, the velocity and erosivity of runoff increases. Use the LS table located in separate tab of this spreadsheet to determine LS factors. Estimate the weighted LS for</p> <p>LS Table</p>	
LS Factor Value	15.18
Watershed Erosion Estimate (=R_xK_sLS) in tons/acre	212.538216
Site Sediment Risk Factor Low Sediment Risk: < 15 tons/acre Medium Sediment Risk: >=15 and <75 tons/acre High Sediment Risk: >= 75 tons/acre	High
Prepared By: Pete Riegelhuth 10/23/2015	
Checked By:	

APPENDIX E

Project Identifier/EA: 05-0002-0284-0 (05-1A0000)		Entry	Score
A. Watershed Characteristics		yes/no	
A.1. Does the disturbed area discharge (either directly or indirectly) to a 303(d)-listed water body impaired by sediment? For help with impaired water bodies please check the attached worksheet or visit the link below: 2006 Approved Sediment-impaired WBs Worksheet http://www.waterboards.ca.gov/water_issues/programs/tmdl/303d_lists2006_epa.shtml OR		yes	High
A.2. Does the disturbed area discharge to a water body with designated beneficial uses of SPAWN & COLD & MIGRATORY? http://www.ice.ucdavis.edu/geowbs/asp/wbquse.asp			

		Sediment Risk		
		Low	Medium	High
Receiving Water Risk	Low	Level 1	Level 2	
	High	Level 2		Level 3
Project Sediment Risk:		High		
Project RW Risk:		High		
Project Combined Risk:		Level 3		



<http://water.epa.gov/pollwaste/mpdes/stormwater/LEW-Results.cfm>

Water: Stormwater

You are here: [Water](#) » [Pollution Prevention & Control](#) » [Permitting \(NPDES\)](#) » [Stormwater](#) » LEW Results

LEW Results

Rainfall Erosivity Factor Calculator for Small Construction Sites

Facility Information

Start Date: 6/19/2018
 End Date: 6/6/2019
 Latitude: 38.3865
 Longitude: -121.8754

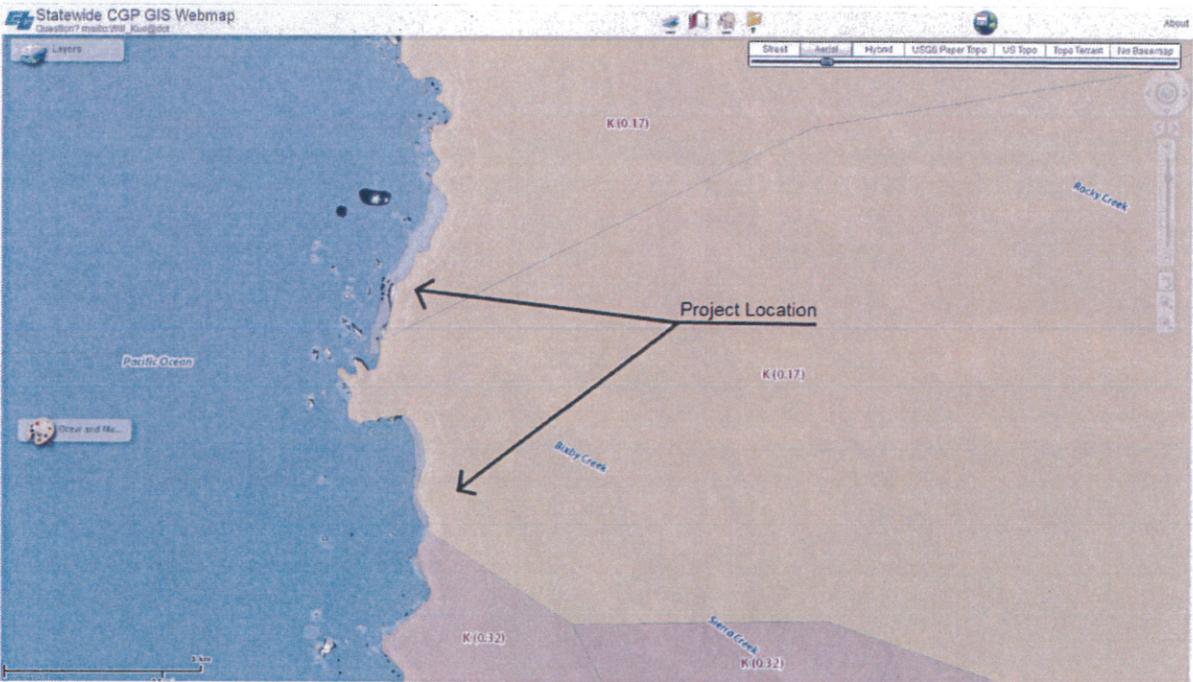
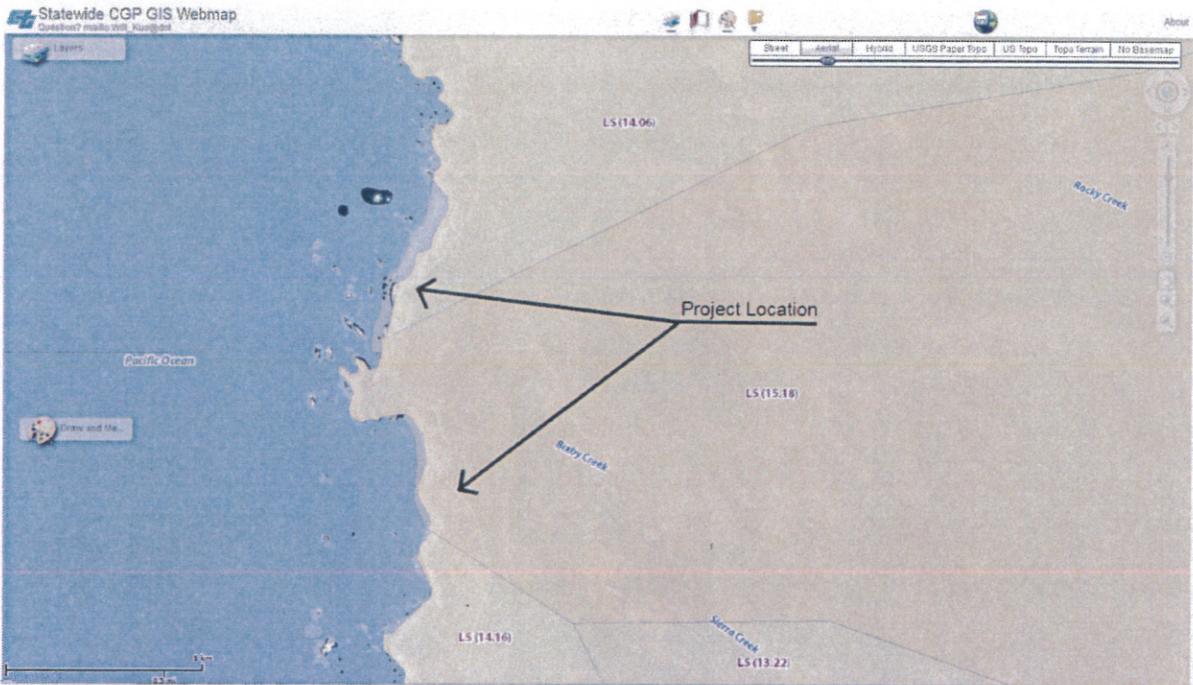
Erosivity Index Calculator Results

AN EROSIIVITY INDEX VALUE OF 82.36 HAS BEEN DETERMINED FOR THE CONSTRUCTION PERIOD OF 6/19/2018 - 6/6/2019.

A rainfall erosivity factor of 5.0 or greater has been calculated for your site and period of construction. You do NOT qualify for a waiver from NPDES permitting requirements.

[Start Over](#)

APPENDIX E



ATTACHMENT H

ATTACHMENT I

DISTRICT 5

TRANSPORTATION MANAGEMENT PLAN DATA SHEET/CHECKLIST

District / EA / EFIS: 05/1A0001
 Project Engineer: Brian Fuller
 Date Prepared: 12/2/2015

Co.-Rte-PM: Mon-1-58.3/59.8
 Description: Widen shoulders, replace MBGR
 Working Days: 85 days; 20 with temporary signal

Check each box and reference your attachments to the item(s) number(s) shown on the list.

1.0 Public Information

- 1.1 Public Awareness Campaign
- 1.2 Other Strategies

Required	Recommended	Not required	COMMENTS
x			Estimate \$6000
		x	

2.0 Motorist Information Strategies

- 2.1 Changeable Message Signs - Portable
- 2.2 Construction Area Signs
- 2.3 Highway Advisory Radio (fixed and mobile)
- 2.4 Planned Lane Closure Web Site
- 2.5 Caltrans Highway Information Network (CHIN)

Required	Recommended	Not required	COMMENTS
x			Estimate \$200/day per unit - \$35,000
x			
		x	
x			Construction to provide information to TMC
x			Construction to provide information to TMC

3.0 Incident Management

- 3.1 COZEEP (during k-rail moving & work in live traffic)
- 3.2 Freeway Service Patrol

Required	Recommended	Not required	COMMENTS
	x		Estimate \$125/hour days; -\$250/hour nights
		x	

4.0 Traffic Management Strategies

- 4.1 Lane/Ramp Closures Charts
- 4.2 Total Facility Closure/ Number of days?
- 4.3 Coordination with adjacent construction
- 4.4 Contingency Plan
 - 4.4.1 Material/Equipment Standby
 - 4.4.2 Emergency Detour Plan
 - 4.4.3 Emergency Notification Plan
- 4.5 Speed Limit Reduction Request
- 4.6 Special Days:
- 4.7 Other items:
 - Provide 5 days advance notification of delays
 - Maximum 10 minute delay
 - Include funds in Maintain Traffic - \$7500
- 4.8 Bicycle and Pedestrian Accommodations*

Required	Recommended	Not required	COMMENTS
x			Provided during PS&E
x			Limit full closures to a period of one week
x			
x			Standard SSP
x			Construction/Contractor to provide
x			Construction/Contractor to provide
x			Construction/Contractor to provide
		x	
x			Lifecycle AIDS Ride, Amgen Tour of CA
x			
x			
x			
x			

**Planning for all road users must be included in this process. Bicyclists and Pedestrians shall not be led into direct conflicts with mainline traffic, work site vehicles, or equipment moving through or around the TTC zone. Contact Dario Senor w/ questions.*

5.0 Anticipated Delays

- 5.1 Lane Closure Review Committee (for anticipated delays over 30 minutes)
- 5.2 Planned freeway closures

Required	Recommended	Not required	COMMENTS
		x	
x			

5.3 Minimal delay anticipated -
no further action required

yes no If no, explain additional measures on attached sheet.

6.0 Placement of CMS

Required	Recommended	Not required	COMMENTS
x			Per RE
			Place CMS units at decision points during construction for full closures.

Shayne Sandeman
 District 5 TMP Coordinator

ATTACHMENT J

Memorandum

*Flex your power!
Be energy efficient!*

To: STEVE WYATT
Senior Design Engineer
Office of Design II, Branch D

Date: February 13, 2012

File: 05-Mon-001-58.8/60.0
EA 05-1A000K
Project ID 0500020284

Attn: Brian Fuller, Design Engineer

From: DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
GEOTECHNICAL SERVICES

Subject: District Preliminary Geotechnical Report

Introduction

A District Preliminary Geotechnical Report (DPGR) is provided for the above referenced project. The project proposes to widen shoulders and add guardrail on State Route 1 to meet current design standards and improve safety. Review of published geologic data and reports, field reconnaissance, and identification of geotechnical design considerations were performed as part of the geotechnical investigation.

The purpose of this report is to document geotechnical conditions and recommend preliminary design and construction criteria.

Pertinent Reports and Investigations

The following publications were used to assist in the assessment of site conditions:

1. *Big Sur Coast Highway Management Plan*. California Department of Transportation, District 5; March 2004.
2. Manson M.W. *Reconnaissance Engineering Geologic Assessment of Bixby Creek Landslide Complex, Highway 1, P.M. 59.5/60.1 MON*. California Geological Survey, March 2004.

Existing Facilities and Proposed Improvements

State Route 1 within the project limits consists of (2) 10 to 11-foot wide asphalt concrete paved lanes with 0 to 2-foot paved shoulders. Slopes above and below the highway vary from 0.5:1 to 2:1 (horizontal:vertical) and are generally performing well and globally stable. Two retaining structures from Station 37+60 to 44+90 and Station 49+10 to 56+80 are proposed to widen the southbound shoulder where insufficient width currently exists. The remaining shoulder widening proposed within the project limits will be within the existing roadway bench; the required width and alignment will be achieved by paving the existing unpaved shoulders and shifting centerline.

Field Observations

Preliminary field observation and identification of important geotechnical features was performed in February of 2012. From the beginning of the project limits to approximately Station 58+40, the highway traverses a coastal plain with a relatively wide road bench available for use in shoulder widening. From approximately Station 58+40 to the end of the project limits, the terrain is much more mountainous with steeper slopes above and below the road. The width of the road narrows as the highway approaches Bixby Creek Bridge and winds through tight curves as it gains elevation, then drops down toward Rocky Creek Bridge at the northern project limit. Shoulder widening is not proposed in the existing narrow sections of the highway, where tall retaining structures would be required to gain the desired roadway width. Refer to Attachments 2 and 3, preliminary plans and cross-sections provided by Design for the limits of widening and guardrail construction.

Geotechnical Engineering Considerations

Regional Geology

Geologic maps of the project area indicate that the project limits cross several distinct geologic boundaries. From the southern limit of the project to approximately Station 60+00, the highway crosses a coastal plain comprised of granular debris flow and landslide deposits. As the highway winds through the series of turns to the south of Bixby Creek, the primary geologic unit is the Sur Complex, which is comprised of variable metamorphic and igneous rocks. The Sur Complex rocks weather to a dark reddish brown color, which can be observed in the cut slopes on either side of Bixby Creek. Bixby Creek is separated from Rocky Creek by Division Noll, a 320-foot tall rounded hill composed of Sur Complex rocks to the south and the Cretaceous-aged tonalite to the north. Tonalite is a white and grey to dark greenish gray, coarsely crystalline, slightly to highly foliated igneous rock (Manson, 2004). Tonalite comprises slopes above and below the highway near Rocky Creek. Refer to Attachment 4 for a geologic map of the project area.

Groundwater

Groundwater is not expected to be encountered in excavations for the proposed retaining structures from Station 37+60 to 44+90 and Station 49+10 to 56+80. Groundwater is not expected to influence the shoulder widening or guardrail installation. Groundwater levels will be measured and the results provided after completion of the subsurface investigation.

Corrosion Evaluation

Bulk samples obtained in the subsurface investigation will be collected and submitted to the District Materials Laboratory for evaluation of corrosion potential.

Retaining Wall Stability

A subsurface investigation utilizing penetration testing to determine soil relative density will be initiated when Foundation Reports or a Geotechnical Design Report is requested. The results of the penetration testing will be used to verify the stability of the proposed retaining walls.

Slope Stability

Temporary slopes and shoring for the construction of the retaining walls and support of the roadway above excavations shall be proposed and designed by the contractor as required. Global stability of existing slopes in the widening portion of this project is not anticipated to be affected.

The project limits include the landslide to the south of Rocky Creek that occurred in 2011. The project to construct a viaduct over the landslide is anticipated to begin construction in September of 2012. Improvements within the viaduct project limits are not proposed.

Evidence of existing slope instability has been identified at an existing crib wall near Station 81+00. The proposed improvements in this area, consisting of adding metal beam guardrail along the southbound shoulder, are not expected to influence the slope stability at this location.

Preliminary Recommendations

Construction of retaining walls is expected to be feasible at both proposed locations where retaining structures will be required to widen the southbound shoulder. The following alternatives should be considered. Closure of the southbound lane during construction is anticipated for all alternatives.

Type 1 Cast-In-Place Cantilevered Walls

Type 1 Standard Plan retaining walls are a viable alternative. Excavation of the temporary back-slopes to excavate and form the footing and rear face of the retaining wall may require shoring and closure of the southbound lane of the highway during construction. Minimum vertical cover of 1-foot and minimum horizontal cover of 4-feet above the top of the toe side of cast-in-place cantilevered retaining wall footings shall be provided at locations where the foundations will be constructed on slopes.

Reinforced Concrete Crib Walls

Standard Plan gravity-type retaining structures, such as reinforced concrete crib walls, are also a feasible alternative. However, due to the minimum required width of the standard plan structure to resist sliding and overturning, the temporary back-slope excavation or shoring would likely encroach into both lanes of the highway. Full highway closures would likely be required for the construction, therefore reinforced concrete crib walls are not a recommended alternative.

Steel Crib Walls

Standard Plan steel crib walls are a feasible alternative. Consideration of corrosion potential may require additional steel thickness and corrosion resistant coatings and/or materials due to the proximity of the Pacific Ocean. Visual impacts should also be considered. Temporary slopes or shoring will be required into the southbound lane to construct steel crib walls.

Cantilevered Soldier Pile Walls

Cantilevered soldier pile walls are a feasible alternative. The walls could consist of steel H-piles in cast-in-drilled-hole (CIDH) concrete piles with timber lagging. Maintaining traffic in the northbound lane is expected to be possible during construction of the walls. Observation of the field conditions and slopes indicates that construction of a bench in front of the wall alignment would be possible and the majority of the wall construction could take place from benches in front of the walls. Drilling and placement of the piles from the roadway is also possible depending upon the reach of the contractor's drilling equipment, due to the location of the retaining wall layout lines outside of the existing roadway bench.

Faced Reinforced Soil Slopes

Reinforced soil slopes are a feasible alternative. A wide variety of wall facings are available, including timber, vegetated, or mortar-less masonry block faces. Facing slope angles from nearly vertical to 1:1 are possible depending upon the type of facing. Excavation into the southbound lane would be required to construct the wall from the base up in compacted lifts. For preliminary purposes a width to height ratio of 1:1 should be assumed. Closure of the southbound lane and construction of temporary slopes or shoring adjacent to the northbound lane would likely be required during construction.

Realignment and Paving

At the time of this report a detailed ground survey was not available. Site observation and field measurements indicate that slight realignment of the highway to the east and paving the existing unpaved shoulder and ditch area to the east of the northbound lane may provide the proposed highway width without construction of a retaining structure on the west side of the highway. A detailed ground survey should provide Design with more information about the existing roadway bench geometry and can be used to determine the need for retaining structures.

Construction Considerations

Varied materials from hard rock to loose soils may be encountered in excavations. Slope angles and soil properties for temporary slopes or shoring systems should be proposed by the contractor and approved by the Engineer.

Auger excavations or post driving for guardrail posts may encounter rock at shallow depth, especially along the northbound shoulder, where rock slopes border the highway.

Estimated Geotechnical Services Time Required

The following resource estimate is issued pursuant the “Memo to Designers” 1-35 (Revised 3/98). The estimated time is based upon the following assumptions:

- 1) The District will provide all information required by Geotechnical Services.
- 2) The Department will provide the appropriate resources (funding, staff, and equipment) for the project.
- 3) The District will provide the necessary permits and clearances for drilling the site.

Four power borings will be required to assess subsurface conditions of for the proposed retaining wall foundations. Estimated depths of the borings are 40 feet.

Table 5 below presents the Geotechnical Services (GS) resource estimate to complete the project. It includes cost centers such as 296 (Drafting), 316 (Geotechnical Support), 322 (Drilling Services), and 323 (Geotechnical Design North). This is based on the current scope of the project. Please note that if scope changes occur, revision to the estimated hours will be necessary.

Table 1. Resource Estimate

	Unit	100	150	160	185	230	240	250	255	270	275	285	290	Totals
Drafting	296	0	0	0	0	24	24	0	0	0	0	0	0	48
GS	316	0	0	0	0	40	40	0	0	0	0	0	0	80
Drilling	322	0	0	0	0	240	240	0	0	0	0	0	0	480
GDN	323	0	0	0	0	80	80	0	0	16	16	0	0	192
Totals (hours)		0	0	0	0	344	344	0	0	16	16	0	0	720

Mr. Steve Wyatt
February 13, 2012
Page 6 of 7

District Preliminary Geotechnical Report
Shoulder Widening
Project ID 0500020284

If you have any questions or comments, please contact Ryan Turner at (805) 549-3750, or Michael Finegan at (805) 549-3194.



Handwritten signature of Ryan Turner in blue ink.

RYAN TURNER, P.E.
Transportation Engineer Civil
Geotechnical Design – North
Branch D

Handwritten signature of Michael S. Finegan in blue ink.

MICHAEL S. FINEGAN, P.E.
Branch Chief
Geotechnical Design – North
Branch D

c: Ken Dostalek / Project Manager
GS Corporate (email Mark_Willian@dot.ca.gov)
Andrew Tan / PCE
Douglas Lambert / DME

LIST OF ATTACHMENTS

Project Vicinity Map	Attachment 1
Preliminary Plans	Attachment 2
Preliminary Typical Cross Sections	Attachment 3
Geologic Map	Attachment 4

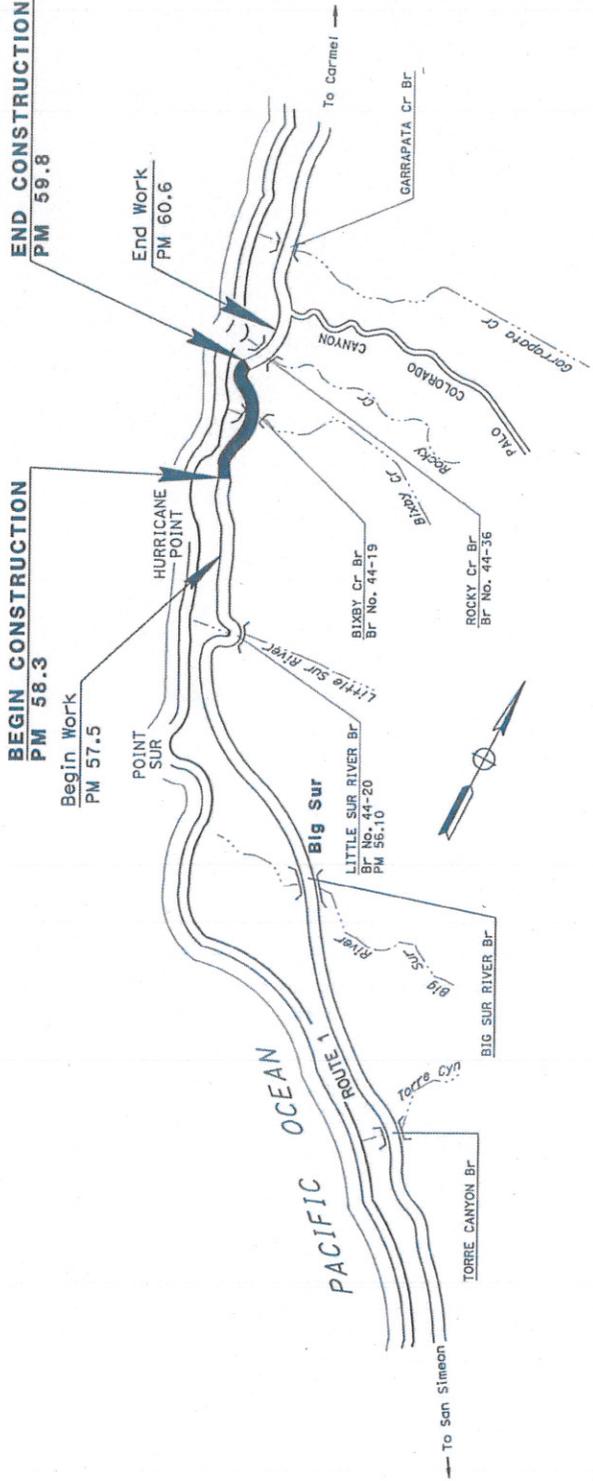
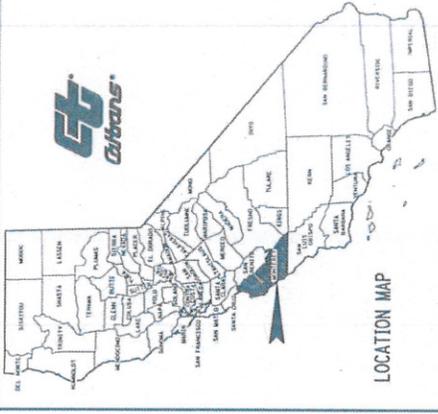
INDEX OF PLANS

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION PROJECT PLANS FOR CONSTRUCTION ON STATE HIGHWAY

IN MONTEREY COUNTY NORTH OF BIG SUR FROM 1 MILE SOUTH OF THE BIXBY CREEK BRIDGE TO 0.25 MILES SOUTH OF THE ROCKY CREEK BRIDGE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL NO. SHEETS
05	Mon	1	58.3/59.8	



NO SCALE

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

BORDER LAST REVISED 7/2/2010 | CALTRANS WEB SITE IS: [HTTP://WWW.DOT.CA.GOV/](http://www.dot.ca.gov/)

DESIGN ENGINEER	STEVE WYATT
PROJECT MANAGER	KEN BOSTALEK

PROJECT ENGINEER REGISTERED CIVIL ENGINEER

DATE

PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS
OFFICIALS OR AGENTS SHALL NOT BE
LIABLE FOR DAMAGES OF ANY KIND
INCLUDING REASONABLE ATTORNEY'S
FEES AND COSTS OF SUIT OR
COMPLETION OF THIS PLAN SHEET.

CONTRACT NO.	05-1A000K
PROJECT ID	0500020284

UNIT 1450 PROJECT NUMBER & PHASE 0500020284

RELATIVE BORDER SCALE 0 1 2 3
USERNAME → 8125345
DATE PLOTTED → 05-14-2012

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	STEVE WATTS	CHECKED BY	DATE REVISED
		DESIGNED BY	BRIAN FULLER	REVISOR	DATE REVISED

BORDER LAST REVISED 7/2/2010
 ORDER NO. 05-1A000K
 ORDER FILE NO. 05-1A000K
 ORDER FILE NO. 05-1A000K

05_1a000k_ea_00_ALT1.dgn 1/9/2012 11:25:01 AM



DATE	DESCRIPTION	BY
05/18/08	1	58.1/59.8
1	7	

REGISTERED CIVIL ENGINEER DATE

PLEASE ADDITIONAL DATE

FOR STATE OF CALIFORNIA THE ENGINEER HAS REVIEWED AND APPROVED THIS PLAN FOR CONSTRUCTION OF THIS PROJECT IN ACCORDANCE WITH THE CALIFORNIA ENGINEERING PROFESSIONAL ACT.

BUILD

PROJECT NUMBER & PHASE 05-1A000K

UNIT 1450



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	STEVE WATY	CHECKED BY		DATE REVISED	
		DESIGNED BY	BRIAN FALKER	REVISOR BY			



BUILD

DATE	COUNTY	APPROVED DATE	APPROVED PROJECT	APPROVED SHEET
05	Mon	1	58-3759.0	2

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVED DATE

IN THE STATE OF CALIFORNIA ON THE 12th DAY OF APRIL 2012, I, STEVE WATY, CIVIL ENGINEER, DO HEREBY CERTIFY THAT I AM THE REGISTERED CIVIL ENGINEER FOR THIS PLAN SHEET.

DATE	COUNTY	ISSUE NO.	ISSUE DATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
05	MOH	1	04.3/2008		3	7

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA ON ITS OFFICE AND COUNTY OF MOHAVE COUNTY FOR THE COUNTY OF MOHAVE COUNTY OF THIS PLAN SHEET.

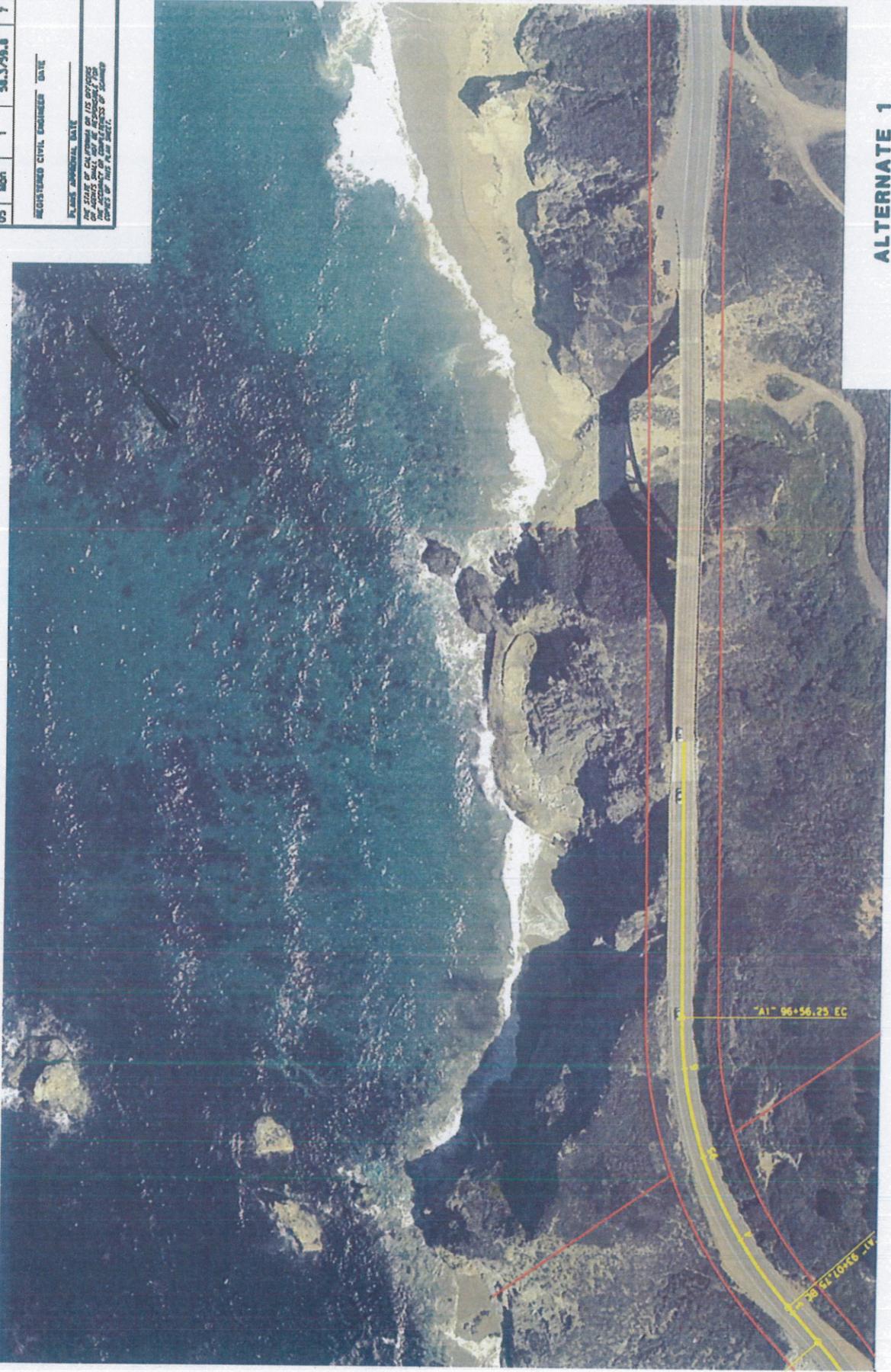


BUILD

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	STEVE WATTS	CHECKED BY	BRIAN FALLER	DATE REVISION	DESIGN
APPROVED 03/19/2012	DESIGNED BY		REVISION			
PROJECT NUMBER & PHASE	UNIT	DATE	FILE	TIME	DATE	TIME
05-1A000K	1450	1/9/2012	02_ALT1.dgn	11:26:31 AM		

REVISION	DATE	BY	DESCRIPTION

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	STEVE WATTS	FUNCTIONAL SUPERVISOR	REVISOR	DATE REVISOR
		BRIGGS FALKER	CHECKED BY		
			DESIGNED BY		
			CALCULATED-		



ALTERNATE 1

BORDER LAST REVISED 7/2/2010

DATE 05-11-2012 11:26:50 AM

05_1a000k_ea_06_ALT1.dgn

RELATIVE HORIZONTAL SCALE
1" = 100'

0 1 2 3

UNIT 1450

PROJECT NUMBER & PHASE

05-1A000K

DATE	DESCRIPTION	BY
05	MON	1
		58.3.759.0
		7
		7

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

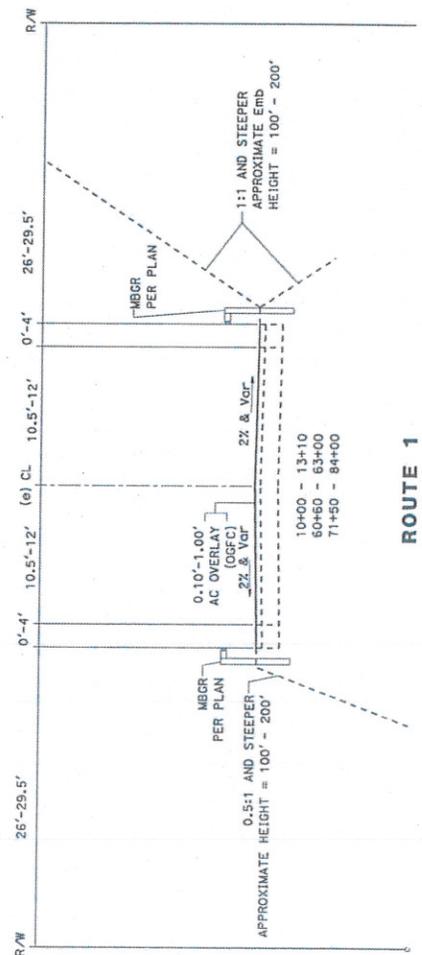
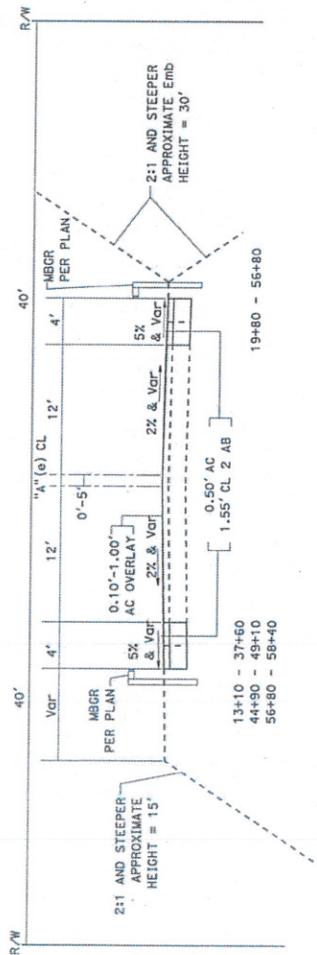
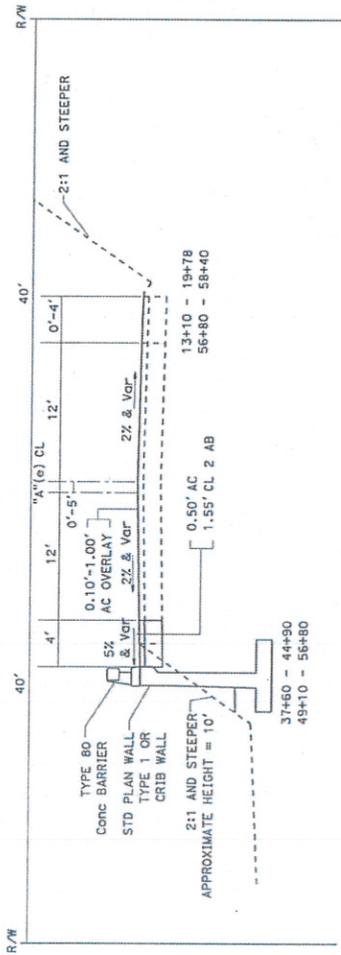
BY STATE OF CALIFORNIA OR ITS OFFICE
OF HIGHWAYS SHALL NOT BE RESPONSIBLE FOR
CONSEQUENCES OF THIS PLAN SHEET.

05	Mon	1	58.3/59.8	SHEET TOTAL PROJECT NO. SHEETS
----	-----	---	-----------	--------------------------------

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA BY ITS OFFICERS
THE COUNTY OF CALIFORNIA BY ITS OFFICERS
COPIES OF THIS PLAN SHEET.



DESIGN DESIGNATION:

ADT (2009) = 4,050
 ADT (2033) = 3,275
 DHV (2033) = 538
 ESAL = 35,100
 D = 60%
 T = 1%
 V = 45 MPH
 T1 (20 YR OUTSIDE LANES) = 6
 T1 (20 YR SHOULDER) = 5

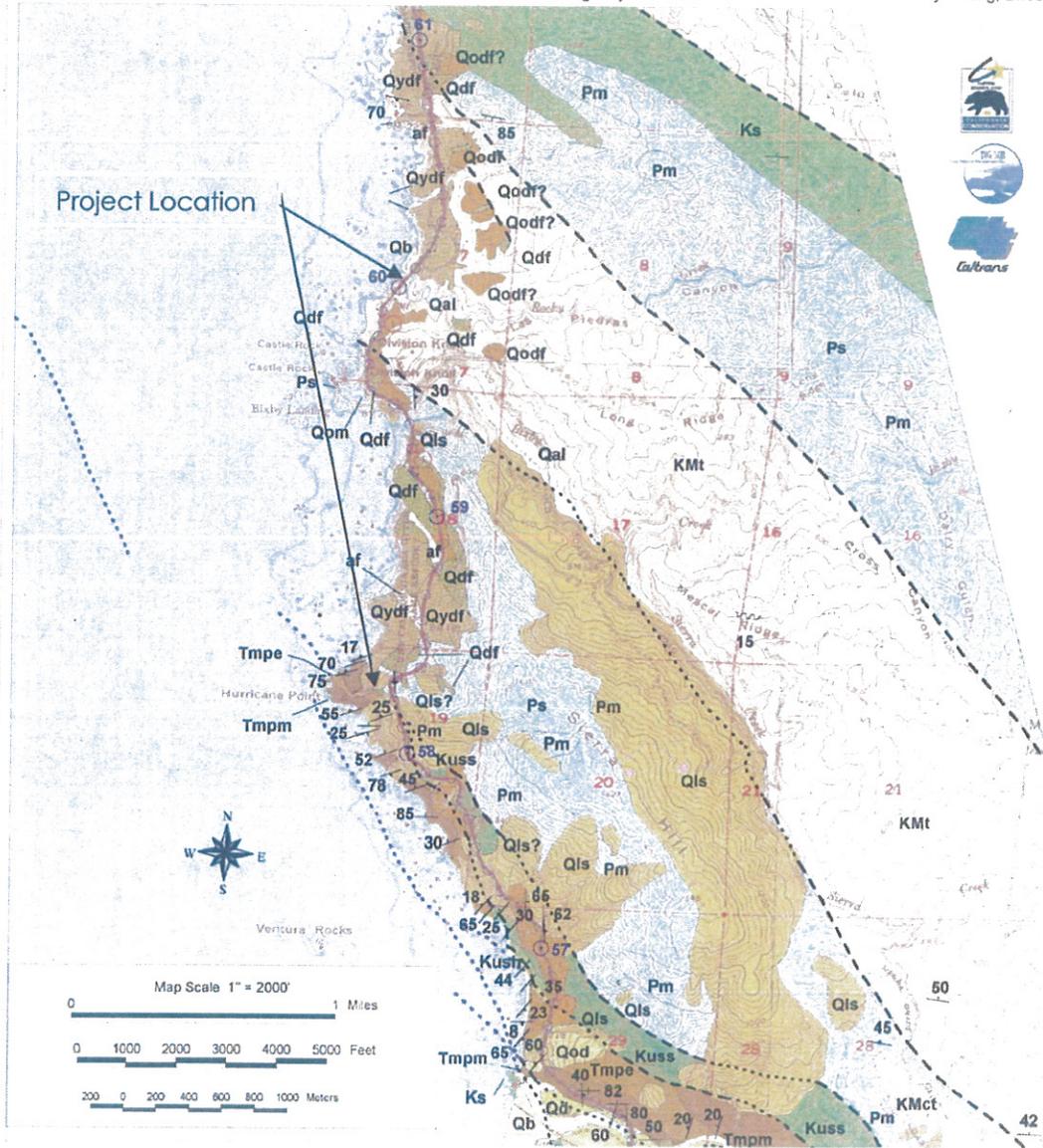
TYPICAL CROSS SECTIONS
BUILD

ROUTE 1

California Geological Survey
James F. Davis, State Geologist

State of California
The Resources Agency

California Department of Conservation
Darryl Young, Director



Geologic Units

Structural Symbols

af	Artificial Fill
Qal	Alluvium
Qb	Beach deposit
Qdf	Youngest (active) debris fans
Qls	Landslide deposits
Qydf	Young debris fans
Qodf	Older Debris fan
Qom	Marine terrace deposit, undifferentiated
KMt	Charnockitic tonalite equivalent?
Ps	Sur complex undifferentiated

---	Fault, approximately located
.....	Fault, concealed
30	Inclined Foliation

Attachment 4

ATTACHMENT K

PR DOC DISTRIBUTION

Point here for instructions		CENTRAL REGION PROJECT REPORT DISTRIBUTION LIST				
Division / Program / Office	Project Type	D5	D6	D10		
FHWA	Resubmitted right profile projects only. Refer to Stewardship Agreement	Dominic Hoang	Dominic Hoang	Dominic Hoang	1	
HQ Division of Design	All Projects	Design Report Routing	Design Report Routing	Design Report Routing	1	
HQ Division of Engineering Serv	All Projects	Division of Engineering Services (electronic copy OK)	Division of Engineering Services	Division of Engineering Services	3	
HQ Environmental	All Projects	Kirsten Helton	Kirsten Helton	Kirsten Helton	1	
HQ Maintenance	HA22	Leo Mahserelli	Ron Jones	Ron Jones		
	HA21	Roger Hunter	Roger Hunter	Roger Hunter		
	HA42, HA23	Gerald Kracher	Daniel Irvine	Gerald Kracher		
	STIP	Patti-jo Dickinson	Patti-jo Dickinson	Patti-jo Dickinson		
HQ Traffic Operations	HB4N, HB4C	Matthew Friedman	Matthew Friedman	Matthew Friedman	1	
HQ Traffic Ops/Traffic Safety Pgm	HB1	ABDEL BESHAR	ABDEL BESHAR	ABDEL BESHAR		
HQ Traffic Ops/Traffic Safety Pgm	HB711	Darold Heikens	Darold Heikens	Darold Heikens		
HQ SHOPP Program Advisor	For other prog	HQ Advisors List	HQ Advisors List	HQ Advisors List		
Project Manager	All Projects	Project Manager	Project Manager	Project Manager	1	
Design Manager	All Projects	Design Manager	Design Manager	Design Manager	2	
Resident Engineer	All Projects	Resident Engineer	Resident Engineer	Resident Engineer	1	
District Maintenance	All Projects	Lance Gorman	John Liu	Alvin Mangindin		
	D6 Eastern Kern		Craig Holste		1	
SHOPP	All Projects	Kelly McClain			0	
	For other prog				1	
District Traffic Management	All Projects	Jacques Van Zeverter	Joel Aguilar	Wilmar Kuhl		
District Traffic Safety	201.010 & 201.015	Deb Larson				
District Traffic Safety	Mon	Mark Ballentine				
District Traffic Safety	SLO/SBT	Steve Talbert			0	
District Traffic Safety	SB/SCR	Scott Morris				
Region Materials	All Projects	Doug Lambert	Ted Mooradian	Dave Dhillon	1	
Region Environmental	All Projects	Susan Schilder	Susan Schilder	Susan Schilder	1	
Region Right of Way	All Projects	Connie Shellooe	Nick Dumas	Michael Rodrigues	1	
District Planning	All Projects	Claudia Espino	Steve Curti	Ken Baxter	1	
District SFP	All Projects	No Copy	No Copy	No Copy	0	
PPM	All Projects	Linda Araujo	Andrea Nason	Andrea Nason	1	
District Surveys	All Projects		Hanna Kassis	Hanna Kassis	0	
	All Projects	Jeremy Villegas	(electronic copy only)	(electronic copy only)		
	Mon/SC/SBT	Bob Fredricks				
	SB/SLO	Nick Tatarian				
HQ DES/OPPM	Proj w/Structures	Andrew T S Tan	Peggy Lim	Peggy Lim	1	
District Records	All Projects	Pat Duty (electronic copy only)	Victoria Pozuelo	Guadalupe Sandoval	0	
CR PJD Support	TOTAL COPIES	District 5 = 21	District 6 = 20	District 10 = 19		
		Last Revised 06-10-2015				