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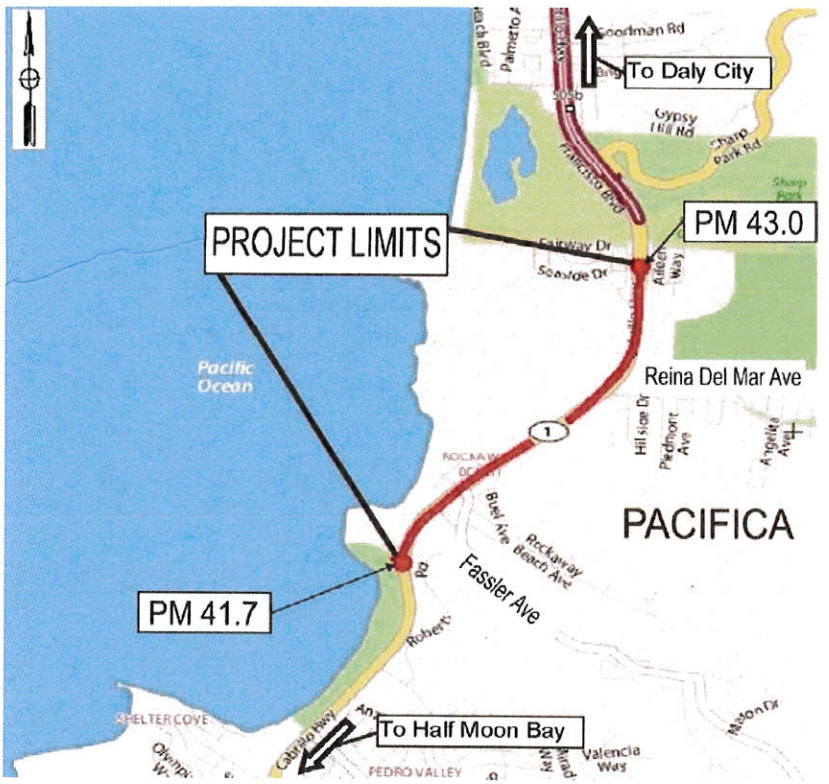
July 2013

PROJECT REPORT
Highway 1/Calera Parkway Project



On Route 1 in the city of Pacifica from south of Fassler Avenue to north of Reina Del Mar Avenue

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

8-2-13

Mark L. Weaver — *DATE*
DEPUTY DISTRICT DIRECTOR
RIGHT OF WAY AND LAND SURVEYS

APPROVAL RECOMMENDED:

8/2/13

Mohammad Suleiman — *DATE*
PROJECT MANAGER

PROJECT APPROVED:

8/2/13

FOR Helena "Lenka" Culik-Caro — *DATE*
DEPUTY DISTRICT DIRECTOR - DESIGN

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

Brad Leveen
Registered Professional Engineer
Mark Thomas & Company, Inc.

7/26/13
Date

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1. INTRODUCTION

The San Mateo County Transportation Authority (SMCTA), in conjunction with Caltrans and the city of Pacifica, is proposing to widen a portion of State Route 1 (Highway 1) in the city of Pacifica, in San Mateo County, to provide operational improvements and decrease congestion along this segment of the highway.

The preferred alternative would widen Highway 1 from four lanes to six lanes from approximately 1,500 feet south of Fassler Avenue (PM 41.7) to approximately 2,300 feet north of Reina Del Mar Avenue (PM 43.0), a distance of 1.3 miles. The preferred alternative would provide a barrier-protected, landscaped median between San Marlo Way and Reina Del Mar Avenue. The total escalated cost estimate for the preferred alternative is $51.8 million which includes $35.0 million for construction, right of way and environmental mitigation; $11.6 million for support costs; and $5.2 million for escalation. The cost estimate was updated in June 2013.

The project will be funded from SMCTA Measure A and State Transportation Improvement Program (STIP) funds, with potential Federal funding if it becomes available. Construction is anticipated to begin in 2016. This project has been assigned the project development category 4A because it requires substantial new right of way acquisition. A Project Location Map is included in Attachment A.

2. RECOMMENDATION

It is recommended that the project be approved using the preferred alternative and that the project proceed to the PS&E design phase with a cooperative agreement for design. The affected local agencies (city of Pacifica and SMCTA) have been consulted regarding this recommended plan, their views have been considered, and they are in general accord with this plan as presented.

It is also recommended that the 2013 Transportation Improvement Program (TIP) be updated to reflect the latest preferred alternative cost and schedule.

3. BACKGROUND

A. Project History

In 1988, the voters of San Mateo County approved a 20-year half-cent sales tax measure known as Measure A. The approval of Measure A also created the SMCTA to manage and administer the sales tax generated. Measure A funds have been allocated to projects throughout the County, including transit, local streets, para-transit programs and highway improvements. Providing improvements along Highway 1 in Pacifica is specifically

mentioned in Measure A as an essential priority project. In 2004 San Mateo County voters reauthorized Measure A for an additional 25 years (2009-2033).

A Project Study Report (PSR) to widen Highway 1 from south of Fassler Avenue to north of Reina Del Mar Avenue was approved in July 1999. The PSR alternative proposed to widen Highway 1 from four lanes to six lanes from approximately 600' south of Fassler Avenue to 700' north of Reina Del Mar Avenue, with a 46' wide median from San Marlo Way to Reina Del Mar Avenue. The construction and right of way cost at that time was estimated at approximately $6 million. The current preferred alternative is similar to the one proposed in the 1999 PSR with respect to widening Highway 1 from four lanes to six lanes, but would extend the widening further north and south of the Fassler Avenue and Reina Del Mar Avenue intersections and provide additional lane configurations and project conform locations in order to provide operational improvements until design year 2035. The 1999 PSR alternative impacted wetlands with the wide 46' median and straight alignment along Highway 1 between Fassler Avenue and Reina Del Mar Avenue. The current preferred alternative has narrower medians and curved alignments along Highway 1 to avoid any impacts to delineated wetlands.

In 2005 and 2006, additional traffic studies, preliminary engineering studies, and preliminary environmental studies were conducted by SMCTA. In February 2007, the SMCTA Board approved funds to begin the Project Approval/Environmental Document (PA/ED) phase of the project. The Draft Project Report was approved on July 29, 2011. No right of way has been acquired yet, but approximately 117,000 square feet of right of way acquisition and easements are required within project limits for the preferred alternative. A State historic building exists on the east side of Highway 1 immediately south of Reina Del Mar Avenue, but it would not be impacted by right of way acquisition or the proposed project improvements.

B. Community Interaction

The preferred alternative has the support of the two local agencies involved in the project (city of Pacifica and SMCTA) and is consistent with the voter approved Measure A expenditure plan. There have been numerous meetings with the California Coastal Commission (CCC), U.S. Fish & Wildlife Service (USFW) and California Department of Fish and Game (CDFG) between 2005 and 2011. A California Environmental Quality Act (CEQA) Notice of Preparation (NOP) of an Environmental Impact Report (EIR) was circulated to local, regional, State and Federal agencies from February 12, 2010 through March 17, 2010. Coordination with these agencies has led to additional analysis and alignment adjustments reflected in the preferred alternative.

In 2010 two public meetings were held in Pacifica regarding the proposed project. The first was a Public Environmental Scoping Meeting held on March 3, 2010, and the second was a public informational meeting held on June 22, 2010. Both meetings were well attended, with approximately 100 residents and other interested parties attending each meeting, including officials from Caltrans, SMCTA and the city of Pacifica.

At the March 3rd Environmental Scoping Meeting the viable alternatives were presented to the public along with a brief history of the project development and traffic analysis. Responses to the project were mixed with a number of residents asking for more information on the other alternatives that were studied. Residents specifically asked that additional ideas be considered, including increased public transit, increased school bus service, and reversible lanes with moveable barriers or cones.

In response to the concerns raised at the March 3rd meeting a second informational meeting was held on June 22nd, and the official scoping comment period was extended from March 15, 2010 to July 22, 2010. At the June 22nd meeting, all of the alternatives that had been considered and evaluated were presented to the public along with a more detailed explanation of the traffic forecast numbers and the results of the traffic operations analysis. Responses at the second meeting were also mixed, ranging from those completely opposed to any type of widening of Highway 1, to others who favored widening with grade-separated interchanges to eliminate delays at the signalized intersections. Those in favor of the viable alternatives liked the idea of reduced congestion/air pollution and better emergency access along Highway 1, which provides the only north-south access through the entire city of Pacifica.

A few of the comments received raised concerns about impacts to wetlands and/or native species habitat. The preferred alternative would not impact wetlands, but would encroach into special status species habitat areas along the west side of the existing Highway 1 alignment. Multiple comments were made that alternatives to increase transit bus and school bus services should be implemented instead of widening the roadway, but these alternatives were found to not be feasible, either because they were cost prohibitive and/or because they were ineffective at reducing traffic congestion, as discussed further in Section 5B, "Rejected Alternatives."

There were also questions and concerns about maintaining/improving pedestrian and bicycle access through the project limits. As discussed in Section 5B, "Rejected Alternatives," a pedestrian overcrossing structure was considered but eliminated because of safety concerns arising when pedestrians do not want to take the time/effort to climb the overcrossing. Pedestrians choosing to take the shorter and more direct at-grade roadway crossing instead of the overcrossing would not be provided crosswalk or signal protection. The preferred alternative would provide widened outside shoulders along the project for safer bicycle travel, would improve the existing Class 1 path between Reina Del Mar Avenue and Mori's Point Road, would provide a new continuous sidewalk between Fassler Avenue and Reina Del Mar Avenue with greater separation from Highway 1, and would upgrade intersections to be ADA compliant.

The Draft Environmental Impact Report/Environmental Assessment (EIR/EA) was made available for public review and comment from August 8, 2011 to October 22, 2011. The public comment period was extended from October 7 to October 22 at the City's request. The public hearing was held on September 22, 2011 in Pacifica and was attended by more than 100 members of the public. A brief summary of the public hearing is presentenced in

Section 7A, "Public Hearing Process." Full responses to public comments are presented in the Final EIR/EA.

On June 25, 2012, the city of Pacifica City Council approved a motion to give direction to City staff to participate in the Project Development Team (PDT) to encourage the selection of the landscaped median alternative as the preferred alternative. On July 18, 2012, the PDT identified the landscaped median alternative as the preferred alternative.

C. Existing Facility

Highway 1 through the project limits is currently designated as part of the California Freeway and Expressway System in accordance with the State Streets and Highways Code, Section 253.2 (e). Highway 1 to the north of the project limits is a 4-lane, divided freeway from Westport Drive (city of Pacifica) to Interstate 280 (city of Daly City). Highway 1 to the south of the project is a 4-lane, divided conventional highway which eventually transitions to a 2-lane conventional highway south of Linda Mar Boulevard near the southern city limit of Pacifica. The Devil's Slide Highway 1 tunnel is located about half a mile south of the southern city limit and was opened in March 2013.

Within the project limits, Highway 1 currently consists of 2 lanes in each direction separated by a concrete median barrier, except in the vicinity of the two signalized intersection locations at Fassler Avenue/Rockaway Beach Avenue and Reina Del Mar Avenue. The existing inside shoulders along Highway 1 generally vary from 2' to 4' wide, while the outside shoulders generally vary from 4' to 8' wide. The posted speed limit along Highway 1 within project limits is 45 mph.

There is an existing Class 1 two-way bike/pedestrian path that extends along the west side of the highway from the northern project limit at Mori's Point Road down to Reina Del Mar Avenue, where it leaves the highway alignment and turns westerly and continues as a Class 1 path that follows Calera Creek down to the Pacific Ocean, eventually connecting with the Rockaway Beach neighborhood. From the south side of the Rockaway Beach neighborhood the Class 1 path begins again and runs south roughly parallel to, but separated from, the westerly side of Highway 1 to the southerly limit of the project, continuing to the Pacifica State Beach near Linda Mar Boulevard. An existing path/sidewalk runs along the east side of the project, from just north of Harvey Way to Reina Del Mar Avenue.

A 400' long concrete box culvert conveys Calera Creek under Highway 1 just north of Reina Del Mar Avenue. Existing wetlands run adjacent to Highway 1 along a portion of the project limits to the west, and at spot locations throughout. Commercial and residential properties front portions of the east side of Highway 1. The only sections of access control within project limits are along the west side of Highway 1, north of Reina Del Mar Avenue, and along the east side of Highway 1, north of Mori's Point Road. Right of way width varies from 100' to 575'.

4. PURPOSE AND NEED

A. Problem, Deficiencies, Justification

The purpose of the proposed project is to improve traffic operations by decreasing traffic congestion and improving peak-period travel times along this congested segment of Highway 1 within the city of Pacifica.

Overall, Highway 1 experiences substantial delay and congestion through the study area. The current morning (AM) peak period congestion along Highway 1 occurs between 7:00 am and 9:00 am, primarily in the northbound (NB) direction with traffic queues extending up to 1.15 miles from the Reina Del Mar Avenue intersection south to Crespi Drive. Morning queues also extend east on Fassler Avenue as much as 2,500 feet and east on Reina Del Mar Avenue as much as 1,000 feet for local traffic trying to enter Highway 1 from these cross streets. The evening (PM) peak period congestion occurs between 4:00 pm and 6:00 pm, primarily in the southbound (SB) direction with traffic queues extending up to 2.06 miles on Highway 1 from Fassler Avenue intersection to north of Sharp Park Road. With no improvements to the project area, congestion in the area is projected to increase both in magnitude and duration. Specifically, the traffic projections forecast that by year 2035 the peak period maximum queues would be expected to grow, nearly doubling from 1.15 miles to 2.28 miles in the AM peak period and increasing from 2.06 miles to 2.80 miles in the PM peak period.

For existing conditions in the AM peak period, the preferred alternative offers substantial traffic improvements compared to the No-Build alternative. Both the Fassler Avenue and Reina Del Mar Avenue intersections would experience a Level of Service (LOS) improvement of at least one letter grade, operating within the LOS D threshold maintained by the City. One hundred percent of traffic would be served, compared to 93 percent currently served under the No-Build Alternative. In addition, maximum vehicle queues at Fassler Avenue intersection would decrease by approximately 80 percent compared to the No-Build alternative. Overall travel time would improve by 31 percent, or 1.6 minutes. The overall average network-wide delay would be 42 seconds of delay per vehicle in the AM peak hour, approximately one-third of the 127 seconds of delay under the current No-Build conditions, resulting in significant savings in road user delay costs.

For existing conditions in the PM peak period, the preferred alternative would also provide significant improvements compared to the No-Build alternative. Queues at the Reina del Mar Avenue intersection would clear within each signal cycle, meaning that 100 percent of traffic would be served, compared to approximately 90 percent currently under No-Build conditions. Travel times through the corridor would be reduced by 61 percent, or 5.1 minutes. The vehicle delay at the Reina del Mar Avenue intersection would be reduced by 77 percent, an improvement from LOS F to LOS C. The vehicle delay at the Fassler Avenue intersection would be reduced by 68 percent, an improvement from LOS F to LOS D. The overall average network-wide delay would be 35 seconds of delay per vehicle in the PM peak hour, compared to 128 seconds under the current No-Build conditions, a reduction of 73 percent.

By adding lanes and widening shoulders, the preferred alternative will provide geometric and operational improvements that would reduce traffic congestion, congestion-related accidents, air pollution, CO2 emissions, and peak hour travel times. The preferred alternative would improve safety for Highway 1 traffic by allowing more room for emergency maneuvering, parking, and emergency vehicle by-pass during congested peak travel times. More room would also be provided for bicyclists, allowing them to further separate themselves from motorized vehicles.

B. Regional and System Planning

1) Identify Systems

Within the project limits, Highway 1 is functionally classified as "Urban - Other Principal Arterial", and is part of the California Freeway and Expressway System in accordance with the State Streets and Highways Code. This segment of Highway 1 is also part of the Federal-Aid National Highway System (NHS). Highway 1 is considered an eligible State scenic highway, but is not an officially designated State scenic highway within project limits.

2) State Planning

The preferred alternative is consistent with the Route Concept Report (RCR) of 1985 which defines the concept for development of this segment of Highway 1 as a four to six-lane freeway. While the preferred alternative would not create a fully access-controlled freeway facility with grade separated interchanges at the local street intersections within project limits, the preferred alternative would upgrade some of the existing facility features to freeway/expressway standards.

A Corridor Plan (CP) for Highway 1 will eventually replace the RCR, but the CP is not currently available. The Caltrans District 4 District System Management Plan (DSMP) is being revised to replace the currently outdated one. The project is listed in and consistent with the Caltrans District 4 Transportation System Development Plan (TSDP).

All of Pacifica west of and including Highway 1 is part of the Coastal Zone and subject to the regulatory requirements of the California Coastal Act of 1976. The preferred alternative is consistent with the California Coastal Act by continuing to provide coastal access and recreational opportunities, minimizing impacts to sensitive natural and biological resources, and minimizing impacts to runoff and water quality.

3) Regional Planning

Providing improvements along Highway 1 in Pacifica is specifically mentioned in Measure A as an essential priority project. The project is listed in and consistent with the adopted Metropolitan Transportation Commission's (MTC) *Transportation 2035*, which is the long-range regional transportation plan (RTP) for the San Francisco Bay Area. The project

is identified in the RTP as ID #98204 with a project cost of $44.4M. The project is included in the proposed MTC *Plan Bay Area 2040* RTP with a revised cost of $53.25M.

The project is also included in the adopted 2011 Transportation Improvement Program (TIP) for the San Francisco Bay Area and is discussed further is Section 8A, "Programming." Both the current adopted RTP and TIP conform to the San Francisco Bay Area's approved Federal Air Quality Plan, which is also referred to as the State Implementation Plan (SIP).

The preferred alternative improves LOS within project limits and is consistent with the 2011 City/County Association of Governments of San Mateo County (C/CAG) Congestion Management Program, which lists this segment of Highway 1 as having a lower non-exempted LOS than the LOS standard established for this roadway.

4) Local Planning

The preferred alternative is consistent with the Pacifica General Plan adopted in 1980 by improving safety for vehicular traffic and improving both safety and access for pedestrians and bicyclists. The General Plan is in the process of being updated, but the preferred alternative is also consistent with the elements and issues presented in the 2010 General Plan update project.

The General Plan recommended that a local frontage road be developed along the west side of Highway 1 between Mori's Point Road and Old County Road. A similar frontage road connection between Reina Del Mar Avenue and Dondee Way (Alternative G) was studied but eliminated as discussed in Section 5B, "Rejected Alternatives." The frontage road proposed by the General Plan would have created even more environmental impacts with a higher project cost than the rejected Alternative G because of the large hillside between Mori's Point Road and Reina Del Mar Avenue. The roadway widening proposed by the preferred alternative eliminates the need for this frontage road.

The General Plan was prepared in tandem with the Pacifica 1980 Local Coastal Land Use Plan. This Local Coastal Land Use Plan is both a standalone document and a part of the General Plan. Local Coastal Programs (LCP) consist of land use plans, coastal access policies and zoning ordinances, and must be prepared by every jurisdiction that is wholly or partly within the Coastal Zone. The preferred alternative is consistent with the Pacifica Local Coastal Land Use Plan by providing safety and operational improvements (including emergency vehicle access), erosion control and landscaping, and improving multi-modal access.

The preferred alternative is consistent with the 2009 Rockaway Beach 5-year Implementation Plan by providing infrastructure improvements necessary to accommodate safe vehicular and pedestrian access and circulation to the project area, and the 2000

Pacifica Bicycle Plan by providing improved bicycle and pedestrian facilities as described in Section 5, "Alternatives, Non-Motorized and Pedestrian Features."

5) Transit Operator Planning

Design of the project is being coordinated with San Mateo County Transit District (SamTrans), which has local bus stops along Highway 1 in Pacifica. There are currently four bus stops within the project limits - two SB stops just south of Fassler Avenue and Reina Del Mar Avenue intersections, and two NB stops just north of both of these intersections. The preferred alternative would provide new bus stops with wider than existing sidewalks located at the approximate locations of the existing bus stops.

Additional transit service, additional bus routes, increased headway on existing bus routes, and additional school bus service were all evaluated as potential alternatives to widening, but none of them made significant improvement without incurring significant capital cost and unsustainable operating costs, as discussed in Section 5B, "Rejected Alternatives."

C. Traffic

1) Current and Forecasted Traffic

The approved Final Traffic Operations Report for Highway 1/ Calera Parkway Project was prepared in July 2008, with subsequent addenda dated December 2009, June 2010, and April 2011. A growth rate of 0.75% was determined to represent a reasonable and conservative annual growth rate for background traffic along Highway 1, which is consistent with recent traffic counts, the Metropolitan Transportation Commission (MTC) model, and future development in coastal San Mateo County. Because the Fassler Avenue area east of Highway 1 can accommodate future growth, the background traffic growth for Fassler Avenue was assumed to be the same as the total growth in Pacifica's housing supply at 0.4%. It was assumed there would be no background traffic growth on Reina Del Mar Avenue or Rockaway Beach Avenue because those areas are already built out.

Traffic models were based on vehicles traveling the posted speed limit of 45 mph, with a distribution of +/- 5 mph. Reduced speed zones were placed on turns at intersections to reflect the effect turning vehicles have on through traffic, and the vehicle mix was adjusted to include 2% heavy vehicles.

The existing (2007) Average Annual Daily Traffic (AADT) along Highway 1 within project limits is 45,800 vehicles per day, and the forecasted design year (2035) AADT is 59,300 vehicles per day. Existing and forecasted AM (7:30 to 8:30) and PM (5:00 to 6:00) peak hour traffic volumes on Highway 1 at both Fassler Avenue and Reina Del Mar Avenue intersections are shown in Tables 1 and 2.

Table 1 - Intersection of Highway 1 at Fassler Avenue

Direction of Traffic	Exist 2007 Peak Hr (vehicles/hr)		2035 Peak Hr (vehicles/hr)	
	AM	PM	AM	PM
Highway 1 NB (left-turn)	4	25	44	48
Highway 1 NB (through)	1708	1016	2564	1431
Highway 1 NB (right-turn)	10	15	12	19
Highway 1 SB (left-turn)	434	956	493	1103
Highway 1 SB (through)	687	1674	829	2011
Highway 1 SB (right-turn)	40	43	72	85
Fassler Avenue Westbound (left-turn)	21	48	26	55
Fassler Avenue Westbound (through)	7	15	12	18
Fassler Avenue Westbound (right-turn)	914	339	1058	436
Rockaway Beach Ave Eastbound (left-turn)	41	65	69	104
Rockaway Beach Ave Eastbound (through)	15	22	17	52
Rockaway Beach Ave Eastbound (right-turn)	2	46	14	66

Table 2 - Intersection of Highway 1 at Reina del Mar Avenue

Direction of Traffic	Exist 2007 Peak Hr (vehicles/hr)		2035 Peak Hr (vehicles/hr)	
	AM	PM	AM	PM
Highway 1 NB (left-turn)	7	11	89	24
Highway 1 NB (through)	2480	1330	3425	1867
Highway 1 NB (right-turn)	176	79	177	80
Highway 1 SB (left-turn)	138	244	139	246
Highway 1 SB (through)	1037	2594	1263	3089
Highway 1 SB (right-turn)	44	5	56	29
Reina Del Mar Ave Westbound (left-turn)	122	75	123	75
Reina Del Mar Ave Westbound(through)	0	4	1	4
Reina Del Mar Ave Westbound (right-turn)	292	110	295	112
Reina Del Mar Ave Eastbound (left-turn)	5	3	18	19
Reina Del Mar Ave Eastbound (through)	33	4	33	4
Reina Del Mar Ave Eastbound (right-turn)	2	4	8	35

The existing levels of performance at both the Fassler Avenue and Reina Del Mar Avenue intersections are presented in Table 3 for both the No-Build (no project construction) and the preferred alternative. The 2015 future levels of performance for both intersections is

presented in Table 4, while Table 5 presents the 2035 future levels of performance for both intersections.

Table 3 – Highway 1 Intersections Performance - Existing Conditions

Location (Option)	AM Peak Hour			PM Peak Hour		
	Delay (sec)	LOS	Peak Hour Served	Delay (sec)	LOS	Peak Hour Served
Fassler Avenue (No-Build)	195	F	93%	117	F	88%
Fassler Avenue (preferred alternative)	41	D	100%	38	D	100%
Reina Del Mar (No-Build)	66	E	93%	138	F	89%
Reina Del Mar (preferred alternative)	43	D	100%	32	C	100%

Table 4 - Highway 1 Intersections Performance - year 2015

Location (Option)	AM Peak Hour			PM Peak Hour		
	Delay (sec)	LOS	Peak Hour Served	Delay (sec)	LOS	Peak Hour Served
Fassler Avenue (No-Build)	345	F	91%	124	F	85%
Fassler Avenue (preferred alternative)	60	E	100%	54	D	100%
Reina Del Mar (No-Build)	68	E	91%	202	F	86%
Reina Del Mar (preferred alternative)	51	D	100%	34	C	100%

Table 5 - Highway 1 Intersections Performance - year 2035

Location (Option)	AM Peak Hour			PM Peak Hour		
	Delay (sec)	LOS	Peak Hour Served	Delay (sec)	LOS	Peak Hour Served
Fassler Avenue (No-Build)	389	F	75%	112	F	78%
Fassler Avenue (preferred alternative)	90	F	93%	73	E	93%
Reina Del Mar (No-Build)	70	E	77%	251	F	77%
Reina Del Mar (preferred alternative)	69	E	93%	53	D	93%

For the No-Build alternative:
While LOS for both intersections would stay the same for both AM and PM peak hours during existing, 2015, and 2035 conditions, the peak hour demand served would continue to drop in both peak periods at both intersections. The existing delay along Highway 1 at Fassler Avenue would double in the 2035 AM peak, while the existing delay along Highway 1 at Reina Del Mar Avenue would almost double in the 2035 PM peak. The AM peak hour delay at Reina Del Mar Avenue would remain similar between existing and 2035 due to the metering effect of the upstream Fassler Avenue intersection.

For the Preferred Alternative:
The preferred alternative would offer substantial overall improvements to traffic operations for both existing conditions and year 2015 versus the No-Build option. At both intersections during both peak hour periods, the preferred alternative would improve all LOS and delays compared to the No-Build option. Peak hour demand served would also substantially increase to 100% for the preferred alternative versus the No-Build for both intersections during both peak hour periods.

The preferred alternative would also offer overall improvements to traffic operations in the design year (2035) versus the No-Build option. At the Fassler Avenue intersection, the LOS would improve from F to E in the PM peak, while at the Reina Del Mar Avenue intersection, the LOS would improve from F to D in the PM peak. The preferred alternative would improve AM peak hour travel times by over 40% compared to No-Build, while PM peak hour travel times would improve in 2035 even compared to existing

conditions. Peak hour demand served would also substantially increase to 93% for the preferred alternative versus the No-Build for both intersections during both peak hour periods in 2035.

2) Accident Rates

Accident data from the Caltrans Traffic Accident Surveillance and Analysis System (TASAS) Table B was evaluated for Highway 1 from 1,500 feet south of Fassler Avenue/Rockaway Beach Avenue (PM 41.7) to approximately 2,300 feet north of Reina Del Mar Avenue (PM 43.0). Table 6 summarizes this TASAS data from April 1, 2008 to March 31, 2011. There is no Table C accident concentration data on record from Caltrans Traffic division for this segment of Highway 1 during this time period. TASAS records consider this portion of Highway 1 a conventional highway instead of an expressway.

Table 6 – Accident History on Highway 1 (April 1, 2008 to March 31, 2011)

Location/ Post Mile	Number of Accidents			Actual Accident Rate			Average Accident Rate		
				(Accidents / million vehicle miles for mainline) and (Accidents / million vehicles for intersections)					
	Total	**Fatal**	**F + I**	**Total**	**Fatal**	**F + I**	**Total**	**Fatal**	**F + I**
Highway 1/ 41.7 to 43.0	38	1	29	0.58	**0.015**	0.44	1.51	0.011	0.63
Sea Bowl Dr (Coast Ln) Intersection / 41.9	2	0	2	0.04	0	0.04	0.18	0.001	0.07
Fassler-Rockaway Ave Intersection / 42.0	17	0	12	**0.29**	0	**0.20**	0.27	0.001	0.11
San Marlo Wy Intersection / 42.1	4	1	2	0.08	**0.019**	0.04	0.18	0.001	0.07
Reina Del Mar Ave Intersection / 42.6	9	0	7	0.16	0	**0.12**	0.27	0.001	0.11
Mori Point Rd Intersection / 42.9	2	0	2	0.04	0	0.04	0.15	0.002	0.07

Source: Caltrans TASAS data, November 2012
Bold text shows Actual Accident Rates that are higher than Average Accident Rates

Along Highway 1 within project limits, TASAS data indicates that the total and the F+I (fatal + injury) actual accident rates were lower than the average statewide accident rates for similar facilities, but the fatal actual accident rate was higher due to a fatal accident at San Marlo Way. The majority of the accidents (60.5%) occurred in the SB direction, but

the hour of day for accident rates were scattered, with the majority occurring around 7 a.m. (13.2%) and 8 a.m. (13.2%). The primary collision factor was speeding (50.0%), and the predominant type of collision was rear end (57.9%). Most of the collisions were located in left (42.1%) versus right (28.9%) lanes, with proceeding straight (81.6%) and/or stopped (50%) as the main movements preceding collision.

Since the proposed project would provide geometric and operational improvements along Highway 1, the overall number of accidents within this roadway segment is expected to be reduced. Additional lanes combined with wider shoulders for the preferred alternative as compared to the No-Build (existing conditions) are expected to increase safety by allowing additional room for emergency maneuvering to reduce rear end collisions, and would provide more room for emergency vehicles to bypass stop and go traffic.

Hit objects accounted for 10.5% of collision types along Highway 1, or 4 out of the 38 total accidents. Most of the hit object types were dike/curb, median barrier or guardrail, with one occurrence where the struck object was a fence. No trees, signs, utility poles, signal poles or light poles were struck. No accidents involved going over the roadway embankment. Three accidents involved bicycles, and as mentioned previously, the project proposes to widen outside shoulders to a standard width of 10' which should enhance safety for bicyclists using these shoulders.

The project increases the length of all existing turn pockets, provides standard 120' tapers to the turn pockets, and provides additional separation between right-turn pockets and through-lanes along Highway 1 at the Fassler/Rockaway Beach Avenue intersection. The existing double left-turn lane pocket on SB Highway 1 at Fassler Avenue will be lengthened by approximately 140', in addition to extending one of the left-turn lanes all the way north to the Reina Del Mar Avenue intersection. The SB Highway 1 left-turn lane pocket at Reina Del Mar Avenue intersection will also be lengthened by approximately 230'. These increases to left-turn capacities are expected to help separate Highway 1 turning traffic from through traffic. Since the majority of accidents were located in left lanes which are adjacent to the left-turn lanes, the proposed geometric improvements are expected to reduce accident rates at these locations.

At the Sea Bowl Drive (Coast Lane) intersection, the accident rates are below the statewide average for this type of intersection, with only 2 accidents occurring during the 3-year record period. 1 accident occurred on the NB side of Highway 1, and 1 occurred on the SB side (the SB accident is not intersection related because Hwy 1 is concrete barrier separated at this location). The primary collision factor was speeding which accounted for both accidents. One accident was rear end, and the other is classified as "other". Because of the relatively low number of accidents, and fairly even spread of collision factors, it's difficult to attribute any particular geometric factor to accident causes. The project is expected to improve safety at this intersection by providing a longer deceleration and storage for Hwy 1 to Coast Lane right-turn, a bike lane between the right-turn and thru lanes, and a stop versus the existing yield control for Coast Lane entrance to Hwy 1.

At the Fassler/Rockaway Beach Avenue intersection, there were a total of 17 accidents, of which 12 involved injuries. The total and F+I actual accident rates for this intersection are slightly higher than statewide rates for similar intersections while the fatal accident rate is lower. Accidents rates occurred almost equally along both the NB and SB sides of Highway 1, while 23.5% of accidents occurred in left lanes and 35.3% of accidents occurred in right lanes. Primary collision factors were speeding (29.4%), influence of alcohol (23.5%), "other" violations (23.5%), and improper turning (11.8%). Major types of collisions at this intersection include rear end (41.2%), with sideswipe, broadside and hit object all at 17.6%. Three of the accidents involved bicyclists and one accident involved a pedestrian that was not in the roadway. Rear end, sideswipe and broadside collision types could be related to the poor existing corner sight distance along the east side of this intersection, but direction of travel for these collision types is not indicated in TASAS information. The project is expected to improve safety at this intersection by providing standard corner sight distance for vehicles entering Hwy 1 from WB Fassler Avenue, improving bike lane markings at the intersection, widening sidewalks, and adding a pedestrian crosswalk refuge in the median.

At the San Marlo Way intersection, there were 4 accidents, including 1 fatality. The total and the F+I (fatal + injury) actual accident rates were lower than the average, but the fatal actual accident rate was higher due to a fatal accident at this intersection. Three of the 4 accidents occurred on the SB side of Highway 1, and 1 occurred on the NB side (the NB accident is probably not intersection related because Hwy 1 is concrete barrier separated at this location). The primary collision factor was speeding which accounted for 2 accidents followed by improper turn and following too close with 1 accident each. Three accidents were rear end, and one accident was head-on. Rear end collision types could be related to the poor existing corner sight distance at this intersection for vehicles trying to enter Hwy 1. The project is expected to improve safety at this location by converting San Marlo Way from a two-way road to an exit only from Hwy 1, which would prohibit vehicles from entering Hwy 1and related corner sight distance issues.

At the Reina Del Mar Avenue intersection, there were a total of 9 accidents, of which 7 involved injuries. The total and fatal actual accident rates for this intersection are lower than statewide rates for similar intersections while the F+I accident rate is slightly higher. Six of the accidents occurred on the SB side of Highway 1, while 3 occurred on the NB side. The primary collision factor was speeding which accounted for 3 accidents, followed by improper turning and "other" violations with 2 accidents each and following too close and failure to yield with 1 accident each. Four of the accidents were rear end, 3 were auto-pedestrian, and 2 were sideswipe. Two of the auto-pedestrian accidents were on the crosswalk while one was crossing the road but not on a crosswalk. Because of the relatively low number of accidents and fairly even spread of collision factors, it's difficult to attribute any particular geometric factor to accident causes. The project is expected to improve safety at this intersection by widening sidewalks and adding a pedestrian crosswalk refuge in the median.

At the Mori's Point Road intersection, the accident rates are below the statewide average for this type of intersection, with only 2 accidents occurring during the 3-year record period. One accident occurred on the SB side of Highway 1, and one occurred on the NB side (Hwy 1 is concrete-barrier separated at this location, so the NB accident is associated with the access opening at Shelldance Nursery). The primary collision factor was speeding for one accident and improper turn for the other. One accident was rear end, and the other was a hit object accident. Because of the relatively low number of accidents and fairly even spread of collision factors it's difficult to attribute any particular geometric factor to accident causes. The project is expected to improve safety at this intersection by realigning Mori's Point Road closer to a 90 degree intersecting angle with Hwy1, providing reduced 35 foot radii at the curb returns, and striping a pedestrian crosswalk. The project is expected to improve safety at the Shelldance Nursery access opening by providing a right-turn pocket along NB Hwy 1 and improving the corner sight distance by widening.

5. ALTERNATIVES

Two viable build alternatives (Alternatives C3 & C4) were presented in the Draft Project Report in addition to the No-Build alternative. The two viable build alternatives would both have widened Highway 1 from four lanes to six lanes from approximately 1,500 feet south of Fassler Avenue to approximately 2,300 feet north of Reina Del Mar Avenue, a distance of 1.3 miles, and were identical in regards to traffic operations, overall geometric design, and proposed improvements except that Alternative C4 included a landscaped median between San Marlo Way and Reina Del Mar Avenue.

Features specific to Alternative C3

Between San Marlo Way and Reina Del Mar Avenue, Highway 1 would have a 22' wide median with 10' inside shoulders and a concrete barrier. Roadway widening of up to 60' would be required, primarily on the west side of Highway 1, to accommodate the additional lanes and widened shoulders. On the east side of Highway 1 from Harvey Way to about 1,200' north, pavement would be widened up to 40' to avoid impacts to wetlands on the west side of Highway 1.

Features specific to Alternative C4

Between San Marlo Way and Reina Del Mar Avenue, Highway 1 would have a 40' wide median with 10' inside shoulders and a raised 16' wide landscaped median between two concrete barriers. Roadway widening of up to 70' would be required, primarily on the west side of Highway 1, to accommodate the additional lanes, widened median, and shoulders. On the east side of Highway 1 from Harvey Way to about 1,500' north, pavement would be widened up to 50' and the highway alignment shifted slightly to avoid impacts to wetlands on the west side of Highway 1.

Features specific to No-Build Alternative

The No-Build alternative assumes no project improvements would be constructed and therefore Highway 1 would remain in its current 4-lane configuration within project limits for the foreseeable future.

After completion of the Draft Project Report and circulation of the draft environmental document the Project Development Team (PDT), at a PDT Meeting held on July 18, 2012, identified viable Alternative C4 (with a barrier-separated, landscaped median) as the preferred alternative for the following reasons.

The preferred alternative satisfied the project's purpose and need by improving traffic operations, decreasing traffic congestion and delay, and improving peak-period travel times while the no-build alternative would not have satisfied the project's purpose and need. Both viable build alternatives would have provided similar benefits, had similar impacts, and incorporated similar avoidance and minimization measures for most environmental resource areas, but the preferred alternative (Alternative C4) provided additional enhancements to the visual character of the corridor and improved aesthetics for the project. The vegetation planted within the landscaped median will soften the visual experience of the corridor within project limits and provide a visual break in the widened roadway pavement, as well as partially screening commercial and residential development adjacent to the roadway for motorists.

The preferred alternative would be slightly more compatible with the city of Pacifica Local Coastal Land Use Plan by including landscaping with the highway improvements to enhance coastal views. The wider median of the preferred alternative would allow for more flexibility in the design of the facility by allowing the northbound and southbound sides of the highway to follow different profiles to better match the terrain, thereby reducing retaining wall heights, opening up coastal views for northbound traffic, and further minimizing visual impacts due to the addition of hardscape within the project area. And finally, the landscaping within the wider median would provide glare screening for headlights of oncoming traffic in both the southbound and northbound directions.

A. Preferred Alternative

Alternative C4, the preferred alternative, will widen Highway 1 from four lanes to six lanes from approximately 1,500 feet south of Fassler Avenue (PM 41.7) to approximately 2,300 feet north of Reina Del Mar Avenue (PM 43.0), a distance of 1.3 miles, and will add a 16' wide landscaped median between concrete barriers from San Marlo Way to Reina Del Mar Avenue. The following sections further describe the preferred alternative. See Attachments B and C for a site map and Geometric Approval Drawing (GAD) of the preferred alternative.

1) Proposed Engineering Features

The preferred alternative will provide three 12' wide lanes in each direction with 4' to 10' wide inside shoulders and 10' wide outside shoulders within project limits for a distance of

approximately 1.3 miles. Along NB Highway 1, a third lane will be added to the outside, beginning approximately 1,500' south of Fassler Avenue and ending approximately 1,600' north of Reina Del Mar Avenue. Along SB Highway 1, a third lane will be added to the inside (with the two existing lanes pushed out on a widened highway), beginning approximately 1,300' north of Reina Del Mar Avenue and continuing south to Fassler Avenue. This new SB inside lane will be marked as a through-lane north of Reina Del Mar Avenue, but will become a left-turn lane to Fassler Avenue south of Reina Del Mar Avenue. A new concrete barrier west of the existing barrier alignment will separate NB and SB lanes along the length of the project, except at the signalized intersections. The existing nonstandard vertical curves along Highway 1 north and south of Reina Del Mar Avenue will be adjusted to provide for a design speed of 55 mph.

North of the Reina Del Mar Avenue intersection a new pavement section up to 60' wide will be constructed west of the existing pavement edge of Highway 1. The widening will require excavation at a 2:1 slope into an existing hillside and man-made embankment, with a section of retaining wall to prevent impacts to the nearby perched wetlands. The series of existing horizontal broken back curves along this section of Highway 1 will be consolidated into one curve, with a widened 13' inside shoulder in the NB direction to provide standard horizontal stopping sight distance.

The existing two-way Class 1 bike/pedestrian path adjacent to the westerly edge of Highway 1 between Reina Del Mar Avenue and Mori's Point Road will be reconstructed further west of the widened highway, and widened from 8' to 12'. A new fence between the path and Highway 1 will be installed to provide a physical barrier, and the new path will have a 16' separation from the edge of traveled way of the highway, improving upon the existing 9' separation. The remainder of the existing two-way bike/pedestrian path on the west side of Highway 1, south of Reina Del Mar Avenue, will not be impacted or changed by the highway widening.

Between Fassler/ Rockaway Beach Avenue and Reina Del Mar Avenue, San Marlo Way will be converted to a one-way exit from SB Highway 1. On the north side of Rockaway Beach Avenue, the entrance to Old County Road at the intersection will be converted to one-way only in the NB direction. A continuous sidewalk along the east side of Highway 1 will be added, along with a new 10' wide planting strip between Harvey Way and Reina Del Mar Avenue to create a 20' separation buffer between the Highway 1 traveled way and the sidewalk. A new retaining will extend along the east side of Highway 1 from Harvey Way to about 900' north. Along the west side of Highway 1, a new retaining wall to prevent encroachment into wetlands will be constructed for approximately half the distance between San Marlo Way and Reina Del Mar Avenue. Just north of San Marlo Way, a bridge will be constructed on SB Highway 1 over a small wetland "finger" extending from an existing cross culvert outfall that would otherwise be impacted by the highway widening.

South of the Fassler/ Rockaway Beach Avenue intersection, Highway 1 will be widened up to 15' along the east side with a retaining wall south of Coast Lane and cut excavation

elsewhere, and up to 40' on the west side with a retaining wall along the widening to prevent impacts to the adjacent Old County Road street parking and nearby wetlands.

Approximately 4,100' of retaining walls will be constructed along hillsides and embankments to prevent encroachment into environmentally sensitive areas and/or to contain improvements within the existing State right of way. In general, Caltrans Type 1 or Type 5 retaining wall types will be used. Soil nail walls are proposed for the retaining walls along NB Highway 1 south of Coast Lane and south of the Shelldance Nursery access road, as well as the retaining wall on SB Highway 1 north of Reina Del Mar Avenue. All retaining walls will include an aesthetic treatment that is consistent with the highway corridor.

In addition to other miscellaneous roadway improvements including barriers, lighting, signage, utility relocations and drainage systems, the existing intersection traffic signals and equipment at both the Fassler Avenue and Reina Del Mar intersections will be replaced. Access control within the project limits will not be altered from the existing condition. Right of way acquisition up to 120' wide on the west side of Highway 1 near San Marlo Way and up to 20' wide on the east side north of Harvey Way will be required.

2) Nonstandard Mandatory and Advisory Design Features

The following design features for the preferred alternative within the project limits do not conform to the mandatory and advisory design standards of the Caltrans Highway Design Manual. The Fact Sheet for exceptions to advisory design standards for the preferred alternative was approved on February 15, 2013. The Fact Sheet for exceptions to mandatory design standards for the preferred alternative was approved on March 4, 2013.

Within project limits, the posted speed limit along Highway 1 is 45 mph and the design speed is assumed to be 55 mph. Design exceptions are based on urban expressway standards.

Exceptions to the Mandatory Design Standards:

Feature M1 – The existing sag vertical curve along Highway 1 south of Fassler Avenue from Sta 25+85 to 29+55 has a headlight stopping sight distance of 250' which provides for a design speed of V=35 mph, not the required project design speed of V=55 mph. This existing feature is proposed to be maintained.

Feature M2 – There are 2 proposed horizontal curves along Highway 1 within the project limits that do not have the standard superelevation rates required. The R=10,000' horizontal curve (Sta 23+70 to 30+44) has an existing superelevation rate that transitions from approximately 7% to -2% crown, but a 2% superelevation rate is required. The R=2,200' horizontal curve (Sta 79+85 to 83+17) has an existing -2% crown, but a 5% superelevation rate is required. These existing superelevation rates are proposed to be maintained.

Feature M3 – The existing grade along Highway 1 from approximately Sta 18+00 to 26+00 is 7% instead of the required maximum 4%. This existing feature is proposed to be maintained.

Feature M4 – Inside (left) shoulder widths along some portions of Highway 1 are proposed to be a minimum of 0' to 4' in width, with increased widths of up to 13' for horizontal stopping sight distance and at lane transition areas for left turn pockets. The required standard inside through-lane shoulder width for this type of facility is 10'. Outside (right) shoulder widths along almost all of Highway 1 are proposed to be the standard 10' width, with the exception of an isolated section at the north end of the project (SB Sta 78+00 to 81+00) which has a proposed 5' wide outside shoulder.

Feature M5 – Highway 1 has proposed median widths that are nonstandard at all locations where the inside shoulder width is less than 10' as listed in mandatory design exception Feature M4 (shoulder width) discussed above. The minimum median width required for this type of facility is 22', requiring at least both inside shoulders to have a minimum width of 10' each in addition to a 2' wide median concrete barrier.

Feature M6 – Highway 1 has proposed minimum horizontal clearance to fixed objects in the median (i.e. median concrete barrier, in-line crash cushions and curbed median islands) that are nonstandard at all locations where the inside shoulder width is less than 10' as listed in mandatory design exception Feature M4 (shoulder width) discussed above. The minimum horizontal clearance to fixed objects required for this facility is the same as the standard shoulder width of 10'.

Feature M7 – The existing one-way Harvey Way frontage road along the east side of Highway 1 to the north of the Fassler Avenue intersection varies in width from 18' to 24'. Urban frontage roads require a total width of 32'. This existing feature is proposed to be maintained.

Features M8 & M9 – The Class 1 path along the west side of Highway 1 is proposed to have a design speed of 5-15 mph and stopping sight distances from 90' to 125' at the horizontal curves near Reina Del Mar Avenue and Mori's Point Road. The minimum design speed for bike paths is 20 mph, and the minimum stopping sight distance is 125'.

Exceptions to the Advisory Design Standards:

Feature A1 – There are 7 existing driveway access openings along Highway 1 within 300' of the Fassler Avenue and Reina Del Mar Avenue intersections that are considered access openings that do not meet the requirement of being spaced a minimum distance of 300' away from median openings. All of these existing driveway access openings are proposed to be maintained except for the driveway at Sta 56+40 south of Reina Del Mar Avenue intersection, which is proposed to be eliminated.

Feature A2 – There are 3 proposed horizontal curves along Highway 1 within the project limits that do not follow standard superelevation transition and runoff requirements. The

nonstandard superelevation transition for the R=10,000' horizontal curve (Sta 23+70 to 30+44) is an existing condition that is proposed to be maintained. For the R=1,600' horizontal curve (Sta 58+58 to 72+10), this is an existing condition that is being improved upon by providing standard superelevation rate. For the R=2,200' horizontal curve (Sta 79+85 to 83+17), there is no existing superelevation transition within the curve. The existing cross slope within the R=2,200' horizontal curve is a -2% crown section throughout, which is proposed to be maintained.

Feature A3 – The existing vertical curve along Highway 1 with L=370' from Sta 25+85 to 29+55 doesn't meet the 10V (L=550') requirement. This existing feature is proposed to be maintained.

Feature A4 – There are 16 existing access openings along Highway 1 that are less than the minimum requirement of one-half mile (2,640') spacing from an adjacent public road intersection or another private access opening that is wider than 30 feet. All of these existing access openings are proposed to be maintained except for the driveway at Sta 56+40 which is proposed to be eliminated, and driveways at Sta 53+45 and Sta 55+25 which are proposed to be combined into one driveway centered at Sta 54+40.

Feature A5 – Within project limits along the outside of Highway 1, there are existing fixed objects within the 30-foot clear recovery zone. These objects are proposed to be moved at least 20' away from the proposed edge of traveled way or shielded.

Feature A6 – The existing one-way Harvey Way frontage road along the east side of Highway 1 to the north of the Fassler Avenue intersection has a 10' to 16' separation from the ETW of Highway 1, less than the minimum required urban separation distance of 26'. The separation is proposed to be increased to a minimum of 16'.

Feature A7 – The existing Reina Del Mar Avenue intersection has a 69° angle on the west side of Highway 1, and a 47° angle on the east side of Highway 1. These intersection angles are less than the required minimum 75° angle, and are proposed to be maintained.

Feature A8 – A single curb ramp is proposed at the SE corner of the Highway 1/Fassler Avenue intersection. This is less than the required 2 curb ramps that should be installed at each curb corner.

Feature A9 – There are proposed median pedestrian refuge and sidewalk curbs at various locations along Highway 1 within project limits. Curbs should be avoided along facilities with posted speeds greater than 40 mph.

Feature A10 – A 16' wide landscaped median with concrete barriers is proposed for approximately 1,650' along Highway 1 between San Marlo Way and Reina Del Mar Avenue (Sta 39+50 to 56+00). Median planting should not be permitted on freeways. Exceptions for the planting of freeway/expressway medians are approved by the District

Director if the planting can be safely maintained. Refer to Section 7E (Other Agreements) for median landscaping maintenance responsibilities.

3) Interim Features

There are no interim features for this project, as there are no plans to supersede this segment of Highway 1 with a freeway facility.

4) High Occupancy Vehicle (HOV) (Bus and Carpool) Lanes

Highway 1 does not have any HOV lanes, and this project is not proposing to add any.

5) Ramp Metering

Highway 1 does not have any ramp metering, and this project is not proposing to add any.

6) CHP Enforcement Areas

CHP Enforcement Areas are not being proposed for this project because there are no existing or proposed facilities that require enforcement areas.

7) Park and Ride Facilities

There are no existing or proposed Park and Ride facilities within the project limits because of the proximity of two other Park and Ride facilities about 1 mile south of Fassler Avenue. The Crespi Park and Ride lot, with 87 parking spaces and 10 bike lockers, is located at the intersection of Highway 1 and Crespi Drive. This facility is operated and maintained by the city of Pacifica. The Linda Mar Park and Ride lot, with 160 parking spaces, is near the intersection of Highway 1 and Linda Mar Boulevard. This facility is operated and maintained by SamTrans.

8) Highway Planting

Detailed planting plans will be developed during final design. The preferred alternative will generally revegetate any new cuts or embankments created by the project. Vegetation will be preserved within the project limits where no construction is planned. Existing planting removed by construction operations within the project limits will be replaced according to Caltrans policy to the maximum extent possible.

The proposed planting and irrigation systems will be designed to achieve a balance between aesthetics, safety, maintainability, cost effectiveness and resource conservation. Within the project limits replacement planting will be compatible with existing landscaping and mulch shall be applied to reduce weed growth, conserve moisture and minimize maintenance operations. Tree, shrub and groundcover species will be selected for their drought tolerance and disease resistance characteristics.

A landscaped median will be constructed between San Marlo Way and Reina Del Mar Avenue. The general planting scheme for this median will provide a visual oasis of vegetation to help break up the NB and SB paved sections of Highway 1, but still provide views toward the Pacific Coast to the west for travelers on the NB side of Highway 1. This calls for a more informal, naturalistic planting with scattered tree groupings and low ground cover to preserve the views while enhancing the visual character of the surroundings.

An automated irrigation system with low volume irrigation heads will be provided. Irrigation water source options for the project include a future recycled water line that could be constructed north of the Calera Creek Water Recycling Plant, or existing waterlines along the east side of Highway 1 between Fassler Avenue and Reina Del Mar Avenue. New water meters will be required to connect to these water sources, and ongoing coordination with the local North Coast County Water District (NCCWD) and city of Pacifica Calera Creek Water Recycling Plant will continue. In order to provide a separate water source and meter for the new project median landscaping, the proposed project irrigation system will not connect to the existing Caltrans median irrigation system along Highway 1 north of the project limit at Westport Drive. There are no other existing irrigation facilities along Highway 1 within project limits.

At the southeast corner of the Highway 1/Fassler Avenue intersection, removal of some established trees will be required to satisfy corner sight distance requirements. Along the west side of Highway 1 extending north of San Marlo way about 1,200', removal of established trees will be required to accommodate the widened roadway. Tree removal will take place before the start of the nesting season for raptors and migratory birds to avoid and minimize impacts to birds that are protected under the Migratory Bird Treaty Act (MBTA).

Highway planting work having an estimated cost of $200,000 or more, in conjunction with or resulting from a roadway construction project, must be accomplished through a separate contract. The separate landscape project will be funded by the parent project and will include a minimum three-year plant establishment period.

The proposed landscaped areas will total approximately 4 acres including new and replacement planting area. Lump sum costs for 'Highway Planting and Irrigation', '3-Year Plant Establishment Period' and 'Irrigation Crossovers' are included in the project cost estimates presented in Attachment D per Caltrans policy. A more detailed breakdown estimate for proposed highway planting and irrigation work is as follows:

	Cost Estimate
New & Replacement Planting	$200,000
Irrigation System	$100,000
Water Meters (new or relocated)	$170,000
Water Assessment Fees	$ 10,000
Electrical Service (Irrigation)	$ 80,000

Plant Establishment Period (3 Years)	$120,000
Irrigation Crossovers	$120,000
Total	**$800,000**

The above summarized costs do not include mobilization or contingency. Of the $800,000 total estimate, $300,000 is for replacement planting and irrigation, $260,000 is for new planting and irrigation, and the remainder is for plant establishment and irrigation crossovers. These planting and irrigation costs do not include any mitigation planting costs, which are included separately in the environmental mitigation costs as discussed in Section 6E, "Environmental Issues."

9) Erosion Control/Water Pollution Control

The project will need to comply with the conditions of the new National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance (Order No. 2009-0009-DWQ), and the Construction General Permit (CGP) which was adopted by the State Water Resources Control Board (State Water Board) on September 2, 2009, and is effective July 1, 2010. These permits require addressing the potential for impacts to existing water quality resulting from temporary construction activities and permanent post-construction water quality conditions.

To address the temporary water quality impacts, special provisions for water pollution control will be included in the contract provisions, which will require the contractor to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP). To address post-construction water quality impacts, incorporation of Best Management Practices (BMPs) into the design and operations of all highway projects is also required under Section 4.4 of the Storm Water Management Plan (SWMP), which implements the Caltrans statewide NPDES permit.

Erosion control for permanent treatments to slopes and disturbed soil areas would involve the typical treatments of mulch chips, blankets and mats, tree and shrub planting, and hydro-seed applications. Water pollution control would consist of various temporary measures implemented during construction to control sedimentation, erosion, and other pollutants. Both erosion control and water pollution control will be required for this project.

The approved Storm Water Data Report (SWDR) for the project recommends biofiltration swales and strips for permanent treatment BMPs. Biofiltration swales/strips are vegetated areas that will be used throughout the project to remove pollutants from stormwater runoff as it flows through the vegetation. Removal mechanisms include filtration and infiltration. Roadway runoff will typically be captured in drain inlets and routed to the swales, while strips will receive sheet flow directly from the pavement. Swales are conveyance channels where stormwater flow passes through grass. Strips are broad surfaces with a grass cover that allows stormwater to flow in relatively thin sheets. The proposed planting strip

between the east side of Highway 1 and the sidewalk (south of Reina Del Mar Avenue) may be a candidate for a biofiltration swale/strip, or some other type of low ground cover that would not easily collect garbage.

10) Noise Barriers

A Noise Study Report was prepared for the project to comply with the requirements of Title 23, Part 772 of the Code of Federal Regulations, "Procedures for Abatement of Highway Traffic Noise," and Caltrans' noise analysis procedures described in the Caltrans Traffic Noise Analysis Protocol (TNAP).

The Caltrans TNAP states that traffic noise impacts may be considered significant under CEQA if the project is predicted to result in a substantial increase in traffic noise. A substantial noise increase is defined as an increase of 12 dBA above existing conditions. The Noise Study Report shows that typical noise level increases resulting from the preferred alternative ranged from 1 to 3 dBA above existing conditions throughout the study area. This noise level increase from the project would not be substantial. However, noise levels at many Category B receivers would continue to approach or exceed the Noise Abatement Criteria (NAC) of 67 dBA, thereby requiring the consideration of noise abatement.

Noise abatement in the form of sound walls was assessed for receivers where noise levels approached or exceeded the NAC. Two potential sound barriers were evaluated, but as recommended in Section 6H, "Noise Abatement Decision Report," later in this report, it is recommended that no sound walls be constructed as part of this project.

11) Non-Motorized and Pedestrian Features, etc.

Since this project is not a Capital Preventative Maintenance (CAPM) project, Design Information Bulletin (DIB) 81-01 regarding ADA requirements does not apply, but the project would be in full compliance with ADA standards listed in DIB 82-04. This includes standard surfaces, clearances, widths, grades, ramps, cross slopes, curb ramps, landings, detectable warning surfaces, bus stops, and pedestrian access areas maintained during construction. The project will provide features that are readily accessible to and usable by individuals with disabilities, and improve pedestrian accessibility and connectivity within project limits.

The new sidewalk proposed along Harvey Way will provide accessibility for pedestrians where currently there is none. Just to the north of Harvey Way, the existing asphalt path with a steep 6% grade will be replaced with a much flatter sidewalk adjacent to the grade of Highway 1, providing a continuous ADA compliant connection between Fassler Avenue and Reina Del Mar Avenue intersections. This sidewalk will have a 20' separation from the edge of traveled way of Highway 1, including a 10' wide planting strip. This increased separation will increase pedestrian safety and enjoyment of the facilities.

At the southeast corner of the Fassler Avenue intersection, a new curb ramp will be provided where there is currently none, and the steep 6% sidewalk grade along the south side of Rockaway Beach Ave near Old County Road will be replaced with an ADA compliant ramp leading to the southwest corner of the Fassler Avenue intersection.

New wider sidewalks at the Fassler Avenue and Reina Del Mar Avenue intersections are proposed to improve access at the bus stops along Highway 1, and to provide landing areas for curb ramps at the crosswalks. Highway 1 median pedestrian refuges with protective noses will be provided at both the Fassler Avenue and Reina Del Mar Avenue crosswalks. Because both of these intersections are proposed to be widened to accommodate additional lanes on Highway 1, extra time for crossing will be designed into the new pedestrian crossing signals. The cost for all of these ADA improvements is $220,000.

The existing two-way bike/pedestrian Class 1 path adjacent to the westerly edge of Highway 1 between Reina Del Mar Avenue and Mori's Point Road will be reconstructed further west of the widened highway, and widened from 8' to 12'. A new fence between the path and Highway 1 will be installed to provide a physical barrier, and the new path will have a 16' separation from the edge of traveled way of the highway, improving upon the existing 9' separation. The remainder of the existing two-way bike/pedestrian path on the west side of Highway 1, south of Reina Del Mar Avenue, will not be impacted by the highway widening.

There is an existing Class II bicycle lane along the shoulder of both sides of Highway 1 from Crespi Drive to Fassler Avenue. The remainder of Highway 1 within project limits is currently a Class III bicycle route with narrow shoulders that provide minimal accommodation for bicycles. The project will maintain this Class III designation north of Fassler Avenue, but will provide wider 10' shoulders as compared to the existing 4' to 8' wide shoulders. Bicyclists will benefit from these wider outside shoulders, as well as the proposed bike pocket delineations at the Fassler/Rockaway Beach Avenue and Coast Lane intersections.

12) Needed Roadway Rehabilitation and Upgrading

Pavement along Highway 1 within project limits is generally in good condition, with patches of recent pavement overlay constructed within the past 10 years.

Since pavement joints are susceptible to water intrusion and early fatigue failure the project will provide a minimum 0.20' HMA overlay on existing pavement next to new widening sections to eliminate visible pavement joints. The minimum overlay will consist of 0.10' OGFC over 0.10' RHMA-G (with additional HMA overlay at proposed slope and profile correction areas). The project does not propose pavement rehabilitation to other roadways within the project limits, including cross streets, driveways or adjacent frontage roads.

13) Needed Structure Rehabilitation and Upgrading

There are no structures within the project limits that need rehabilitation or upgrading. The existing culvert running underneath Highway just north of San Marlo Way (Station 37+00) will be extended as a bridge structure to accommodate the widening of Highway 1 to the west.

14) Cost Estimates

Costs were based on current average adjusted unit prices for projects in Caltrans District 4 between 2010 and 2012, with quantities similar to those for this project. A 15% contingency was used for all roadway items, 20% contingency was used for right of way items, and 25% contingency was used for structure items. Total escalated project costs shown in the following table were assumed at 3.5% until mid-year of construction (2016). See Attachment D for the preferred alternative cost estimate.

The Life Cycle Cost Analysis (LCCA) was approved on March 14, 2012 with a revision dated May 1, 2013 approved on June 26, 2013. The LCCA recommends the 40-year pavement section which includes 0.10' OGFC, 0.20' RHMA-G, 0.30' HMA (Type A), 0.25' ATPB, 0.50' AB (Class 2) and 1.15' AS (Class 2). The proposed pavement section includes a layer of ATPB to match existing pavement based on the recommendation from the geotechnical engineer, using a 40-year design life with ESAL of 2,410,400 (equivalent TI value of 10.0) for the more conservative "outside lanes" location. See the Pavement Strategy Checklist, "Attachment I," for further pavement selection information.

Summary of Project Cost Estimate
Preferred Alternative

Capital Outlay Costs

Roadway & Structure Items	$24,700,000
Right of Way & Utilities	$7,100,000
Environmental Mitigation	$3,200,000
Total Project Capital Outlay Cost	$35,000,000

Support Costs

PA/ED & Preliminary Engineering (12% Roadway)	$3,000,000
PS&E & Design Survey (13% Roadway)	$3,200,000
Program Management (5% Roadway)	$1,200,000
R/W Appraisals/Acquisition Services (10% ROW)	$500,000
Construction Management (15% Roadway)	$3,700,000
Total Support Cost	$11,600,000

Total Cost	$46,600,000
TOTAL ESCALATED COST (3.5% per year 2013 to 2016)	**$51,800,000**

15) Right of Way Data

See Section 6D, "Right of Way," for a more detailed description of right of way requirements for the preferred alternative and Attachment E for the Right of Way Data Sheet. The Right of Way Data Sheet provides information on the cost of right of way acquisition and utility relocations as well as clearance (demolition), relocation, hazardous material and project scheduling information.

The cost breakdown for right of way and utility relocations is as follows:

	Cost Estimate
Right of Way	$4,428,000
Utilities Relocations	$2,642,000
Total (Rounded)	**$7,100,000**

16) Effect of Projects Funded by Others on State Highway

The proposed project is partially locally funded by SMCTA Measure A funds. By adding lanes and widening shoulders, the project will provide operational improvements which will reduce traffic congestion, congestion-related accidents, congestion-related air pollution, and peak hour travel times. Wider shoulders will also improve safety by allowing more room for emergency parking, more room for bicyclists, and allow emergency vehicle by-pass during congested stop-and-go traffic conditions.

The existing (2007) Average Annual Daily Traffic (AADT) along Highway 1 within project limits is 45,800 vehicles per day, and the forecasted design year (2035) AADT is 59,300 vehicles per day. The current morning (AM) peak period congestion along Highway 1 occurs between 7:00 am and 9:00 am, primarily in the NB direction with traffic queues extending up to 1.15 miles from the Reina Del Mar Avenue intersection south to Crespi Drive. Morning queues also extend east on Fassler Avenue as much as 2,500 feet and east on Reina Del Mar Avenue as much as 1,000 feet for local traffic trying to enter Highway 1 from these cross streets.

The evening (PM) peak period congestion occurs between 4:00 pm and 6:00 pm, primarily in the SB direction with traffic queues extending up to 2.06 miles on Highway 1 from Fassler Avenue intersection to north of Sharp Park Road. With no improvements to the project area, congestion in the area is projected to increase both in magnitude and duration. Specifically, the traffic projections forecast that by year 2035 the peak period maximum queues would be expected to grow, nearly doubling from 1.15 miles to 2.28 miles in the AM peak period and increasing from 2.06 miles to 2.80 miles in the PM peak period.

The preferred alternative will offer substantial overall improvements to traffic operations in year 2015 versus the No-Build option. At both intersections during both peak hour periods, the preferred alternative will improve all LOS and delays compared to the No-Build option. Peak hour demand served will also substantially increase to 100% for the

preferred alternative versus the No-Build for both intersections during both peak hour periods in 2015.

The preferred alternative will also offer overall improvements to traffic operations in the design year (2035) versus the No-Build option. At the Fassler Avenue intersection, the LOS will be improved from F to E in the PM peak, while at the Reina Del Mar Avenue intersection, the LOS will be improved from F to D in the PM peak. The preferred alternative will improve AM peak hour travel times by over 40% compared to No-Build, while PM peak hour travel times will improve in 2035 even compared to existing conditions. Peak hour demand served will also substantially increase to 93% for the preferred alternative versus the No-Build for both intersections during both peak hour periods in 2035.

B. Rejected Alternatives

Other alternatives were investigated and developed after the Highway 1/ Calera Parkway Project Study Report (PSR) was approved in 1999. Each alternative was evaluated based on its ability to meet the project's purpose and need, environmental impacts, and design standards, but was rejected for various reasons. Following is a brief description of the rejected alternatives and the reasons they were rejected.

No-Build:

The No-Build alternative assumes no project improvements would be constructed, and therefore Highway 1 would remain in its current 4-lane configuration within project limits for the foreseeable future. This alternative would not reduce congestion or peak hour travel times, and would not improve safety. Maintaining existing conditions into the future would lead to ever increasing queues within project limits, and the LOS at both the Fassler Avenue and Reina Del Mar Avenue intersections would continue to deteriorate.

Alternative A: *Widen Highway 1 from Four to Six Lanes for 0.8 mile*

This alternative would widen Highway 1 from four to six lanes for 0.8 miles, extending from 460 feet south of Fassler Avenue to 660 feet north of Reina Del Mar Avenue. Under this alternative, the highway would have 12-foot wide lanes, ten-foot inside and outside shoulders, and a 46-foot wide median. The 46-foot median would extend from approximately 600 feet north of Fassler Avenue to just south of Reina del Mar Avenue. This was the alternative studied in the 1999 PSR.

This alternative was primarily rejected because it would result in impacts to coastal wetlands and would provide considerably less traffic benefits as compared to the preferred alternative. The added third lane in each direction would not extend far enough south of the Fassler Avenue intersection or far enough north of the Reina Del Mar Avenue intersection to provide adequate merge space.

Alternatives B1 and B2: *Widen Highway 1 from Four to Six Lanes for 1.0 mile*

These alternatives would widen Highway 1 from four to six lanes for 1.0 mile from 500 feet south of Fassler Avenue to 1,700 feet north of Reina Del Mar Avenue. These alternatives are variations on the previous Alternative A, with the widening of Highway 1 extending further at both ends of the project. Alternative B2 varied from B1 by splitting northbound and southbound directions of Highway 1 through the Quarry Site (north of Fassler Avenue, south of Reina Del Mar Avenue) to minimize impacts to existing wetlands.

These alternatives were primarily rejected because they would result in impacts to special status species habitat and wetlands, and would provide considerably less traffic benefits as compared to the preferred alternative. The added third lane in each direction would not extend far enough south of the Fassler Avenue intersection or far enough north of the Reina Del Mar Avenue intersection to provide adequate merge space.

Alternatives C1 and C2: *Widen Highway 1 from Four to Six Lanes for 1.3 miles with Calera Creek Restoration*

These alternatives would involve widening Highway 1 from four to six lanes for 1.3 miles, extending from 1,500 feet south of Fassler Avenue to 2,300 feet north of Reina Del Mar Avenue. With these alternatives, the third southbound lane would be added on the outside and dropped at Fassler Avenue, and the alignment would shift east to avoid wetland impacts.

Both Alternatives C1 and C2 included restoration of the existing Calera Creek culvert undercrossing with a new bridge structure, but this was determined to not have a meaningful positive impact to local sensitive animal species since Calera Creek extends into populated areas east of Highway 1 and travels through many extended, covered, culvert sections which would not support habitat or migration.

Alternative C2 included a pedestrian overcrossing at Reina Del Mar Avenue, but the overcrossing would not appreciably enhance traffic operations. Providing a pedestrian overcrossing in a suburban or semi-rural setting does not necessarily mean pedestrians would use it, as it creates a less direct crossing route that takes extra time and effort to climb versus crossing the roadway directly. Crossing the roadway at-grade is a more direct and tempting route for pedestrians, especially during non peak traffic hours when there may be a perception that traffic is light. This creates a safety issue however, because pedestrians crossing at-grade would not be protected by a crosswalk or signal delay. The pedestrian overcrossing would also create an undesirable visual impact along this scenic highway.

These alternatives were primarily rejected because they would have an impact to both wetlands and cultural resource sites, present pedestrian safety issues (Alt C2), and would

be more expensive to construct compared to the preferred alternative while only providing the same traffic benefits.

Alternative D: *Widen Highway 1 at Reina Del Mar Avenue*

This alternative would widen Highway 1 from four to five or six lanes for short distances north and south of the Reina Del Mar Avenue intersection. There would be no improvements at the Fassler Avenue intersection under this alternative. Several variations of this alternative were analyzed, which considered different amounts of lane widening and different lengths of widening along Highway 1 at the Reina Del Mar Avenue intersection.

- four to five lanes for 800 feet (NB right-turn lane in/out of Reina Del Mar Avenue);
- four to six lanes for 1,100 feet;
- four to six lanes for 1,700 feet; and
- four to six lanes for 2,300 feet.

This alternative would improve operations at the Reina Del Mar Avenue intersection, but would shift the traffic congestion bottleneck south to the Fassler Avenue intersection. This alternative was primarily rejected because it would provide considerably less traffic benefits as compared to the preferred alternative.

Alternatives E1, E2 and E3: *Grade Separation at Reina Del Mar Avenue*

These alternatives would shift the Highway 1 alignment west and on top of the existing embankments at Reina Del Mar Avenue to separate Highway 1 over Reina Del Mar Avenue. With these alternatives, Highway 1 would also be widened north and south of the Fassler Avenue/Rockaway Beach Avenue intersection. These alternatives also include restoration at the Calera Creek crossing. The following design features are specific to each alternative:

Alternative E1: A compact diamond interchange with east side business driveways accessing the northbound Highway 1 off-ramp, which merges with the one-way frontage road Harvey Way.

Alternative E2: Similar to the compact diamond Alternative E1, except the northbound Highway 1 off-ramp is barrier separated from the east side businesses and one-way frontage road Harvey Way until about 500’ south of the Reina Del Mar intersection.

Alternative E3: Similar to Alternatives E1 and E2 on the west side of the interchange. On the east side of the interchange, the northbound off-ramp is a hook ramp that exits Highway 1 north of Reina Del Mar Avenue and loops back into a two-way frontage road that has a cul-de-sac at the south end about 1,000’ south of Reina Del Mar Avenue.

The grade separation provided by these alternatives would provide the best traffic operations benefit for the project, but the benefit would only be marginally better than that

provided by the preferred alternative. These "E" Alternatives would require on and off-ramps with controlled access to prevent driveways from accessing the ramps directly, and would require additional retaining walls to minimize wetland and right of way impacts.

Alternative E1 was rejected because Caltrans policy does not allow driveway access directly to on and off-ramps. Alternative E3 was rejected because the city of Pacifica is not supportive of the additional northbound "out of direction" burden required to access businesses along the east side of Highway 1 south of the hook off-ramp.

All of the "E" alternatives were also rejected because of impacts to wetlands and high cost. These alternatives are on the order of double the cost for the preferred alternative, with Alternative E2 being the most expensive at around $65M (without support costs). Because of the high cost of these alternatives, they would likely not be able to secure funding for construction. The raised interchange concept for these alternatives would also create additional visual and noise impacts along this scenic highway.

Alternative F: *Roundabout*

This alternative would install roundabouts along Highway 1 at both the Fassler Avenue/Rockaway Beach Avenue and Reina Del Mar Avenue intersections in place of standard signalized intersections, and would involve widening Highway 1 from 4 lanes to 6 lanes for the same extents as the "C" Alternatives. Roundabouts with two and three lanes were analyzed for this alternative. Roundabouts with three lanes at both intersections would meet the traffic demand for design year 2035, with additional right-turn bypass lanes needed at the roundabout intersections.

This alternative was primarily rejected because the enlarged intersections required for roundabouts would impact nearby businesses and require additional right of way take as compared to the preferred alternative. Safety concerns for bikes and pedestrians attempting to cross these large three-lane roundabouts were another primary reason for rejection of this alternative, especially with the close proximity of the elementary school along Reina Del Mar Avenue.

Alternative G: *Frontage Road on West Side of Highway 1*

This alternative would construct a two-way frontage road through the Quarry property on the west side of Highway 1, from Dondee Way to Reina Del Mar Avenue. The frontage road would create a new connection between the Rockaway Beach area and the Vallemar neighborhoods parallel to Highway 1.

This alternative was primarily rejected because it provides minimal traffic benefits within project limits and would result in greater environmental impacts to the sensitive species habitat (California red-legged frog and San Francisco garter snake) and wetlands west of Highway 1 compared with the preferred alternative. Additionally this alternative would

result in right of way impacts to the Quarry Site from San Marlo Way to Reina Del Mar Avenue.

Alternative H: *Signal Interconnect & Signal Timing Improvements*

This alternative would install signal interconnect cable between the Fassler Avenue/Rockaway Beach Avenue and the Reina del Mar intersection signals to coordinate timing of green phases. A variation of this alternative would also include widening to add a third lane in the northbound direction.

This alternative was primarily rejected because it would not provide an appreciable traffic benefit due to the distance between the two signals. Traffic signal retiming may achieve some benefit to overall traffic congestion in the near term, but the benefit would be considerably less than the preferred alternative, particularly in future years.

Alternative I: *Increased or Modified Transit Service*

The ability to meet the purpose of the project by providing additional transit access through the site, including bus, light rail, and/or train access was also considered and evaluated. This alternative would consist of providing increased transit service to areas and points both north and south via additional bus routes, increased bus headways (more buses), additional park-and-ride lots, and additional feeder shuttles. The existing transit and bus service (Routes 14, 16, 100, 112, 294, CX and DX) through the area currently run well below capacity, with an average ridership of 50 percent of available capacity in the morning peak period and 40 percent in the evening peak period

Additional transit analysis evaluated how much transit service would be required to induce drivers to switch to transit such that the existing roadway could accommodate 100 percent of the forecasted demand through the project corridor. In order to accomplish this, an additional 88 buses per hour would be required in the AM peak hour and an additional 77 buses per hour would be required in the PM peak hour. These increases would be comparable to a completely new transit system, not just minor service increases, and would likely require substantial new ongoing funding for operations and maintenance costs.

Increasing bus routes or headway times by more realistic amounts would provide only a nominal increase in ridership. Based on: 1) the existing land use and commute patterns through this area; 2) the locations of destination uses (residential and employment areas); 3) the low transit ridership through this corridor; and 4) the minimal amount of right-of-way available, it is unlikely that service updates in this area could achieve a similar level of congestion relief as the preferred alternative, and these options were not considered feasible. This alternative was primarily rejected because of the high operating cost over time, the high initial cost for some transit options, and because if implemented at more realistic levels, would only provide minimal improvement in congestion relief.

Alternative J: *School Bus Service to Elementary School at Vallemar*

This alternative would provide increased school bus service to the elementary school on Reina Del Mar Avenue. The anticipated traffic benefits for this alternative would primarily be in the AM peak hour. The existing bus service is well-used, but is not over capacity. Increased service would likely have only a marginal improvement, and would likely be very expensive to operate. Finally, it is important to note that school-related traffic congestion primarily affects the AM peak commute period. The evening congestion in the area generally occurs well after school hours. This alternative could provide a small benefit for a portion of AM peak commute congestion (northbound), but not enough to significantly reduce backups through the corridor.

This alternative was primarily rejected because it would not provide considerable benefit for the AM or PM commute period congestion (northbound or southbound).

Alternative K: *Moveable Cones or Barrier*

This alternative would involve installing a moveable concrete barrier to provide three lanes in the peak hour direction and one lane in the off-peak hour direction. Variations of this alternative include using moveable cones instead of a barrier, and widening Highway 1 to five lanes with movable cones/barrier (providing a 3/2 lane split).

While the five lanes with movable cones/barrier variation would likely provide adequate traffic congestion relief, it presents two of the same problems associated with installing a moveable barrier along the existing roadway without widening:

1. Providing adequate signage, roadway striping, and traffic signal infrastructure to safely indicate the operation of turn lanes at varying times of the day would likely result in a highly confusing situation and would likely be considered a safety concern.

2. This alternative would require a steady revenue stream to pay for the ongoing operations and maintenance costs. The moveable barrier would be required to shift at least twice per day, and perhaps up to four times per day. This operation is labor-intensive and requires specialized equipment.

This alternative was primarily rejected because it would be very difficult to implement at the signalized intersections, and may result in a safety concern due to the complexity of signage and/or striping required. Because this design would require both an initial capital investment for the widening and ongoing operations, the cost of this alternative would be much higher than the proposed Build Alternatives. There would also be traffic impacts in the off-peak direction if a fifth lane is not added.

6. CONSIDERATIONS REQUIRING DISCUSSION

A. Hazardous Waste

An Initial Site Assessment (ISA) was prepared for the project in January 2009, and an addendum to the ISA was prepared in May 2010 to address the addition of the landscaped median alternative. A second addendum to the ISA was prepared in June 2013 to ascertain whether any additional hazardous materials incidents had occurred within the project site since the May 2010 addendum. The June 2013 addendum concluded that no additional incidents had been reported and that no substantive changes were required to either the original January 2009 ISA or the May 2010 addendum.

The ISA recommends developing a soil and ground water management plan to establish management practices for the appropriate management and disposal of impacted soil and groundwater prior to the initiation of the project. The soil and ground water management plan should also establish procedures for the management and handling of buried structures or impacted materials that currently are unknown or unanticipated as a precautionary measure and to help limit potential construction delays. A health and safety plan should also be prepared to provide general guidance to the work hazards that may be encountered during site construction activities in these areas. For parcels subject to demolition, the property should be surveyed for unidentified underground storage tanks (USTs) and/or abandoned septic tanks and their associated underground piping.

Soil and ground water sampling along the project corridor near areas of probable or suspect contamination and near areas of reported hazardous material users should be performed to establish conditions prior to construction activities. The following table summarizes the reported on-site and nearby hazardous materials spills within the project limits:

Facility Name	Address	Potential for Impact
Calera Creek WWTP	700 Coast Hwy	*No significant impact is anticipated.* The UST was shown to have located several hundred feet to the west of Highway 1 and reported area of impacted soil and ground water are not anticipated to extend to the project site. (The LUST case is closed.)
Joe's Autobody	2085 Coast Hwy	*No significant impact is anticipated.* The UST was shown to have located approximately 100 feet to the southwest of Highway 1 and impacted soil and ground water are not anticipated to extend below the project site. (The LUST case is closed.)
Pacifica Alliance, formerly Vallemar Beacon (Active Station)	2095 Coast Hwy	*Potential impacts are anticipated.* Impacted soil and/or ground water have been reported within existing Caltrans right of way located to the northwest of the gas station where earthwork activities are being proposed. (This is an open LUST case.)

Facility Name	Address	Potential for Impact
Vallemar Station & Restaurant	2125 Cabrillo Hwy	*No significant impact is anticipated.* This property is a historic landmark. Dust and wed suppression chemicals, such as waste oil, may have been sprayed along the railroad line.
Chevron	4115 Highway 1	*No significant impact is anticipated.* The USTs were shown to have located approximately 50 feet to the southwest of Highway. No significant impacts to soil and ground water were reported. (The LUST case is closed.)
Caltrans right of way	4460 Highway 1	*Potential impacts are anticipated.* Impacted soil and/or ground water from a former gas service station have been reported in the area where earthwork activities are being proposed. Caltrans purchased this property in 1987. (This is an open LUST case.)
Shell Station (Active Station)	4475 Coast Hwy	The USTs and fuel islands are located within 20 feet of the Caltrans right of way. Borings were advanced within approximately 5 to 10 feet of the Caltrans right of way. Impacted soil and/ or ground water were reported at low concentrations mainly at depths of approximately 10 to 15 feet. The "zone of impact" could extend beneath the Caltrans right of way. Near the station, the proposed work is mainly repaving. Only shallow excavations are anticipated, thus the potential for the Shell facility to impact the project site appears low. (The LUST case is closed.)

A man-made embankment was placed in the early 1960s along the west side of Highway 1 extending to the north and south of the Reina Del Mar Avenue intersection. The embankment material was reportedly obtained from a highway construction to the north. The planned widening of Highway 1 will require excavation into the side of the embankment. An evaluation of the soil quality (including asbestos content) should be performed prior to initiation of the project since details regarding the source and quality of fill material are unknown.

Lead in excess of California's hazardous waste criteria is sometimes found adjacent to older and heavily used traveled highways in California primarily due to historical leaded gasoline use. An evaluation of the soil within the project limits for aerially deposited lead (ADL) should be performed in general conformance with Caltrans ADL Lead Testing Guidance dated March 2001 prior to initiation of the project. Because Highway 1 was built prior to the phase-out of lead as a gasoline additive, elevated concentrations of lead are likely to be present in the soil along the highway.

Other potential hazardous materials within the project limits that may require testing are naturally occurring asbestos from sheared rock containing serpentinite within the southern portion of the project and lead paint/asbestos containing material from the buildings located on parcels at 4408 and 4430 Highway 1 which are presumed to be demolished following acquisition by Caltrans. A survey of all existing ground water monitoring wells located within the project limits (in addition to those identified at 4460 and 2095 Hwy 1)

should be conducted to determine which wells to properly abandon or relocate in coordination with the San Mateo County Department of Environmental Health.

B. Value Analysis

A four day long Value Analysis (VA) study was conducted in December 2009, with a VA Study Summary Report prepared afterwards that lists the key findings and alternatives developed by the VA team. Following are the VA alternative numbers and title descriptions developed, with a summary of reasons regarding whether these alternatives were accepted or rejected.

Alternative 1.1: *Curvilinear alignment with 10' median to improve wetland buffer*

The curvilinear alignment provides a less desirable roadway geometry for drivers which must be justified by a significant offsetting benefit.

A landscaped median may provide such an offsetting benefit for the community. An additional buffer space between high value wetlands could also be such an offsetting benefit. At the project location however, the adjacent wetland ditch is an isolated wetland close to a roadway and some distance from Calera Creek. It is not such a high value as a creek or a year-round pond for example. Also, the retaining wall and barrier proposed along the west edge of the highway act as a type of buffer from the wetland already.

Right of way impacts on properties east of highway (e.g. Church property) would increase. Additional retaining wall and/or cut would be necessary on the east side. Multiple utility lines under the existing sidewalk and shoulder (east of highway) would have to be relocated. Cost would increase significantly due to these factors.

Because of these reasons, this alternative was rejected.

Alternative 1.2: *Curvilinear alignment with 22' median to provide 10' inside shoulders*

This alternative may become feasible if a design exception for nonstandard inside shoulders cannot be approved. However, this alternative creates compromises in the geometry, increases cost, and creates other impacts as discussed in Alt 1.1 above.

Alternative 2.1: *Grade separated compact diamond ramps at Reina Del Mar shifted west*

A grade separation at Reina Del Mar Avenue was explored during preliminary studies and ultimately found not feasible due to high cost, wetland impacts, and business access impacts. Following are additional comments on this specific variation:

- The impact to the "perched" wetlands on the old embankment is a difficult problem to overcome. California Coastal Act does not allow direct impacts to identified wetlands with some very rare exceptions. An earlier approach was to consider removing the box culvert and "restoring" the Calera Creek crossing under the highway. The perched

wetlands would have been eliminated with this process but the justification would have been that they were been restored with a higher value wetland in the same place as well as greatly improving the connectivity for wildlife and endangered species between the two sides of the highway. A separate box culvert "wildlife crossing" above the creek elevation would not likely have this same justifying value since it is not creating restored or enhanced wetland.

- The impact to the gas station on the northeast corner of the Reina Del Mar Avenue intersection would be significant with this variation of a grade separation.

- This version of a grade separation would lower cost to the extent that it allows for a more balanced cut/fill on the project. However, it would move the elevated embankment for the overcrossing closer to the existing businesses east of Hwy 1 at Reina Del Mar which would be less desirable than moving the highway on top of the existing 1960's embankments.

- It is not clear how a one-way frontage road would work very well for access to the businesses south of Reina Del Mar.

- This alternative proposes eliminating the third NB lane to reduce overall width of highway between Fassler and Reina Del Mar. While it is true that the third lane is not needed going over the overcrossing at Reina Del Mar, a third lane would need to be carried some minimum distance north of Fassler Avenue to provide the needed traffic benefit for the third lane through the intersection there. Initial estimates from the traffic consultant during preliminary study of a grade separation alternative suggested on the order of 600 feet to 1,000 feet for the third lane before it can drop down to two lanes. An additional 660 feet would be required for the lane drop from 3 to 2.

- Police station access directly on to the highway where the Reina Del Mar NB on-ramp was merging on would not likely be allowed by Caltrans.

Because of these reasons, this alternative was rejected.

Alternative 2.2: *Grade separated compact diamond SB ramps at Reina Del Mar with one-way NB frontage road*

Comments are similar to response on Alt 2.1 above with the following highlights:

- As noted in Alt 2.1, three through lanes must be provided through the Fassler Avenue intersection to handle the projected traffic volumes and must be carried for at least 1,300 feet north of Fassler on Hwy 1 before it can drop back to two lanes, so the exit to NB frontage road would have to be more like a slip off-ramp configuration north of Harvey Way.

- It is unclear how the Harvey Way access would be affected by the proposed frontage road. If the frontage road is replacing Harvey Way, then new driveway access openings are being introduced directly onto the highway for some distance north of Fassler Avenue

until the frontage road can fully separate from the highway. Caltrans would strongly oppose new driveway access openings, especially so close to the intersection.

Because of these reasons, this alternative was rejected.

Alternative 2.3: *Grade separated SPUI at Reina Del Mar with one-way NB frontage road*

Response is similar to Alts 2.1 and 2.2 above. There does not appear to be a clear benefit provided with a Single Point Urban Interchange (SPUI) configuration, and would significantly increase cost with the additional bridge structure area.

Because of these reasons, this alternative was rejected.

Alternative 3.0: *Harvey Way Cul-de-Sac accessed via Donaldson Avenue to close access to Highway 1*

The idea of closing the access from Harvey Way directly on to Highway 1 has some merit, but it is doubtful that the access could include passage through the private gas station property. There is likely not sufficient room for a cul-de-sac or turn-around at the south end of Harvey Way, and there is not sufficient room for a two-way frontage road section.

A one-way northbound Harvey Way with access in from Hwy 1/Fassler intersection, but access out from Donaldson Avenue, could be a possibility. It would be difficult to gain public approval from local residents for such a change in traffic patterns with the Harvey Way business traffic being placed on a local residential street though. Connection of Harvey Way to Donaldson Avenue would require a large retaining wall immediately south of the church and additional right of way acquisition.

Because of these reasons, the Cul-de-Sac alternative was rejected.

Alternative 4.0: *MSE Wall on west side Sta 55 to 57to avoid excavation into the Midden fill site.*

Excavation into the Midden fill site has now been approved by Caltrans Cultural staff and the State SHPO office. The wetland shown on the plans is actually a large clump of isolated Willow trees, so the value of protecting these trees is not as acute as if it were high value wetland habitat, and therefore the corresponding need for a wall here has gone down. The cost to place a wall at this location rather than excavate a standard cut slope would be more expensive, and would add another fixed object adjacent to the roadside.

Because of these reasons, this alternative was rejected.

Alternative 5.1: *Shave hillside at SE corner of Fassler Avenue intersection to improve corner sight distance*

Since the VA Study, further adjustments in geometry and the proposed removal of trees, signs, and a utility pole at the southeast corner of Hwy 1 and Fassler Avenue allow for standard sight distance without the need to cut into the hill.

The curb line at the Shell gas station was moved out, causing the cross walk (and therefore the corresponding location of the stopped vehicle at the crossroad) to be moved closer to the highway traveled way. Additional field studies identified trees, roadside signs, and a utility pole to be the last remaining obstacles to standard site distance. The City has concurred on removing the trees. The utility pole and signs will be relocated further back behind the line of sight.

Because of these reasons, this alternative is no longer required.

Alternative 5.2: *Shave hillside at SE corner of Fassler Avenue intersection to improve corner sight distance, and add 3rd left-turn lane from SB Hwy 1 to EB Fassler Avenue*

As explained in Alt 5.1 above, the standard sight distance is now provided at Fassler Avenue, so therefore the corresponding need to shave the hillside back has gone away.

Although there would likely be some traffic benefit by adding a third southbound left-turn lane, the additional impacts and costs do not justify the benefit for following reasons:

- Adding a third lane on Fassler would require additional right of way take and a very large cut into the hillside, greatly increasing project costs.

- The extra lane would increase the pedestrian crossing distance by another 12 feet.

- The City does not want to make the intersection area any larger than necessary for aesthetic reasons. Rockaway beach is a small tourist destination and shopping district and would lose some of its character with a very large intersection area.

- The additional widening for a third lane would push the west side of the highway so close to Old County Road that it would be almost impossible for southbound traffic on Hwy 1 to turn right onto Rockaway Beach Avenue and then right again onto Old County Road.

Because of these reasons, this alternative was rejected.

Alternative 6.0: *New wetlands and buffer on west side from Sta 48 to 55*

The proposed wetlands creation is in a low value wetland area, and is not an ideal location for habitat improvement. Habitat improvement/mitigation further away from the highway creates a higher value location for protected species. This proposed wetland and buffer location would also conflict with a needed bioswale water treatment area proposed at this site.

Because of these reasons, this alternative was rejected.

Alternative 7.0: *Reduce wall on the east side from Sta 15 to 18*

The project design will minimize the length of wall necessary for roadway widening. The existing hillside at this location is already at a 2:1 slope, with the State right of way located at the ridge of the hillside. Any additional cut into the hillside would extend all the way up the hill and daylight beyond the existing right of way, as cuts steeper than a 2:1 slope are generally not allowed for slope stability reasons.

Because of these reasons, this alternative was rejected.

C. Resource Conservation

The proposed project will minimize the use of energy and nonrenewable resources by maximizing the use of in-place facilities and salvaging reusable items such as metal beam guard railing, signs, etc. wherever possible. The existing pavement structural section would be left in place and incorporated into the design as much as possible to reduce resource consumption and lower project costs. Materials selection and construction techniques to reduce the use of nonrenewable materials would be designated during the final design and construction phase. Asphalt pavement removed as part of grinding operations for overlay, slope correction and widening would be recycled or salvaged for future use. The proposed use of bioswales/strips in place of standard landscaped areas would minimize future irrigation needs and reduce pollutant runoff.

By improving traffic operations through this section of Highway 1, the project would improve the efficiency of traffic flow, thereby minimizing the amount of idling traffic unnecessarily consuming fuel and emitting pollutants.

D. Right Of Way

1) Right of Way Required

A Right of Way Data Sheet was prepared for the preferred alternative and is included as Attachment E. The preferred alternative affects 27 parcels.

On the west side of Highway 1 there are a total of 12 parcels affected. Between Rockaway Beach Avenue and San Marlo Way there are full takes of 11 parcels. The southernmost of these parcels (APN 022-022-200) is owned by the State of California. Two of these parcel takes are improved with commercial buildings: (1) APN 022-022-120 is improved with an occupied restaurant/office/residential structure; and (2) APN 022-022-190 is improved with a restaurant structure (vacant Kentucky Fried Chicken). North of San Marlo Way there is a partial take of a strip of vacant "Special Area" (per City General Plan) land (APN 018-150-150) planned for a variety of uses. This parcel also requires a Temporary Construction Easement (TCE).

On the east side of Highway 1 there are a total of 15 parcels affected, including a parcel owned by the State of California (Parcel 28797) and a parcel owned by a Lutheran Church (APN 018-140-090). Five of the parcel takes are required for utility easements. TCE's are also required for 3 of these parcels.

The total amount of right of way acquisition (including easements) required for the preferred alternative is approximately 117,000 square feet. A qualified agency or consultant will be contracted to conduct right of way activities.

2) Relocation Impact Studies

It has been determined that there is no significant impact to owners, tenants, businesses or persons in possession of real property to be acquired who would qualify for relocation assistance benefits or entitlements under the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.

A field review of the proposed project was conducted to determine the potential impact on the residential and nonresidential units. There is one residential unit and two nonresidential (commercial) units (only one of the nonresidential units is occupied) that will need to be acquired requiring displacement of the occupants. Based on a review of available commercial and residential properties in Pacifica and surrounding coastal San Mateo County area in January 2013, an adequate number of suitable replacement sites that are equal to or better than the displacement property appear to exist for sale or rent. According to the US Census Bureau, there is a 3.8% residential vacancy rate in Pacifica.

Any person (individual, family, corporation, partnership, or association) who moves from real property or moves personal property from real property as a result of the acquisition of the real property, or required to relocate as a result of a written notice from Caltrans from the real property required for a transportation project is eligible for "Relocation Assistance." All activities will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act. Relocation resources shall be available to all displaces free of discrimination.

3) Airspace Lease Areas

No potential future or existing airspace leases have been identified for this project.

4) Railroad Involvement

There are currently no railroad facilities within or near project limits, therefore there are no railroad involvement issues. A State historic building exists on the east side of Highway 1 immediately south of Reina Del Mar Avenue. This building was the Vallemar Station Depot along the Ocean Shore Railroad which was operational in the early 1900's.

5) Utility and Other Owner Involvement

Utility relocations are anticipated within project limits. Based on the most recent submittal of the Utility Encroachment Exception Variance Request in February 2013, HQ encroachment exceptions division of design has no further comments and concurs with the variance request.

In general, the preferred alternative proposes to move existing longitudinal utilities outside of the new roadway section, beyond the pavement but still within State right of way. Moving these utilities beyond State right of way would require impacts to wetlands or relocation to steep hillsides that would be difficult to construct/maintain, and would still require access from the shoulders of Highway 1. Within reasonable cost considerations, utilities are proposed to be relocated away from the roadway to minimize access requirements from Highway 1 and to provide a minimum 20' clear recovery zone separation from the edge of traveled way.

Affected utilities include overhead and underground electrical (PG&E), communication (AT&T) and TV (Comcast) lines and associated poles, as well as underground gas (PG&E) water (North Coast County Water District – NCCWD) and sewer (city of Pacifica) lines. Cost obligations to relocate utilities would be split evenly (50/50) between the project and both PG&E and AT&T companies. Relocation costs for both water (NCCWD) and sewer (City) lines would be borne 100% by the project, while Comcast relocation costs would be borne 100% by Comcast.

See attachment E for the Right of Way Data Sheet which provides information on the types of utilities proposed to be relocated and the cost obligations to State, Local (project cost) and Utility Owners.

E. Environmental Issues

Due to the extent of regulatory issues, permitting processes, and potential public controversy, the environmental document for the project is an Environmental Impact Report (EIR) under CEQA and an Environmental Assessment (EA) leading to a Finding of No Significant Impact (FONSI) under NEPA. The final document is a combined EIR/EA. Caltrans assumes FHWA's responsibilities under NEPA as well as FHWA's consultation and coordination responsibilities under other Federal environmental laws for this project per the Memorandum of Understanding which became effective on July 1, 2007.

The Final EIR/EA has been prepared in accordance with Caltrans' environmental procedures, as well as State and Federal environmental regulations. The Final EIR/EA was approved by Caltrans on August 1, 2013, and the signed coversheet is included as Attachment J to this Project Report. Refer to the Final EIR/EA for further discussions of environmental issues.

The project is within the California Coastal Zone per the California Coastal Act of 1976 (Coastal Act) and falls under the jurisdiction of the California Coastal Commission (CCC),

requiring a Coastal Development Permit. Project design and impacts are influenced by the rules and regulations of the California Coastal Act. Among these rules and regulations are requirements that a roadway improvement project may not impact any wetland (as defined by the Coastal Act) and must provide buffer zones between existing wetlands and other "high value" habitat and the highway facility.

On January 26, 2012, the U.S. Fish & Wildlife Service (USFWS) issued the Biological Opinion (BO). It is the USFWS's opinion that the effects of the proposed project would not jeopardize the continued existence of or reduce the likelihood of survival and recovery in the wild for both the threatened California red-legged frog and endangered San Francisco garter snake. The BO completed the formal consultation process with USFWS.

The following detailed technical studies have been prepared to support the Final EIR/EA:

- Air Quality Report
- Archaeological Survey Report
- Biological Assessment
- Historic Property Survey Report
- Historic Resource Evaluation Report
- Initial Site Assessment
- Natural Environmental Study
- Preliminary Delineation of Wetlands and Other Waters/Delineation of Coastal Zone Wetlands within California Coastal Commission Jurisdiction
- Preliminary Geotechnical Report
- Location Hydraulic Study
- Noise Study Report
- Storm Water Data Report
- Traffic Operations Analysis Report
- Water Quality Report
- Visual Impact Assessment
- Paleontological Identification Report
- Additional Transit Analysis
- Supplemental Traffic Analysis

The following environmental issues are not adversely affected by the preferred alternative; thus no avoidance, minimization or mitigation measures are proposed or required:

- Land Use
- Growth
- Environmental Justice
- Utilities and Emergency Services
- Traffic and Transportation
- Geology/Soils/Seismic/Topography
- Air Quality
- Cumulative Impacts

1) Relocation and Real Property Acquisition

The preferred alternative will require the acquisition of one residential unit (425 Old County Road) and two commercial units (4408 and 4430 Coast Highway). The 425 Old County Road residential unit is occupied, and the 4430 Coast Highway business is currently in operation as a restaurant, and both are on Assessor's Parcel Number (APN) 022-022-120. The project will require displacement of the occupants at this address. The 4408 Coast Highway is a vacant restaurant on APN 022-022-190 and will not require displacement of occupants.

It has been determined that there is no significant impact to owners, tenants, businesses or persons in possession of real property to be acquired who would qualify for relocation assistance benefits or entitlements under the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.

2) Visual and Aesthetics

The improvements proposed for the preferred alternative will alter the visual character of portions of the project alignment due to the removal of structures, trees, screening shrubs at the edges of the roadway and portions of the existing vegetated soil embankment. The preferred alternative includes trees and shrubs within the median which will provide an aesthetic benefit and glare screening for headlights of oncoming traffic. While the project will change the appearance at certain locations, the project will not substantially affect views or the aesthetics of the project corridor.

Replacement planting will be implemented per Chapter 29 (Highway Planting) of the Caltrans Project Development Procedures Manual and Chapter 900 (Landscape Architecture) of the Caltrans Highway Design Manual. The current project cost estimate includes $300,000 for replacement planting and associated irrigation. Aesthetic treatment will be considered for all structures associated with the proposed project. During construction, nighttime lighting may be required which will temporarily increase light and glare. Thus, nighttime construction lighting shall be directed downward, away from sensitive land uses, such as nearby residences.

3) Cultural Resources

There are two recorded archaeological sites (CA-SMa-162 and CA-SMa-268) within the Area of Potential Effect (APE). Field reconnaissance and a coring program determined that CA-SMa-162 is identified as a redeposit of prehistoric archaeological materials from an area to the north that was used in the creation of the road embankment west of Highway 1. CA-SMa-162 was previously determined as ineligible to the National Register of Historic Places (NRHP) with State Historic Preservation Officer (SHPO) concurrence as part of an undertaking in October 1986 (Code 6Y). The other prehistoric site, CA-SMa-268, was discovered during highway construction in the early 1960s and was noted as nearly destroyed at the time of its original inspection. A recent study indicates that the site

appears eligible for the California Register of Historical Resources (CRHR) and the city of Pacifica's local list. Available data also indicates that the site is eligible for the NRHP under Criterion D.

Caltrans, in accordance with Stipulation X.B.2 (a)(ii) and (iii) of the 2004 Programmatic Agreement (PA), has determined that a Finding of No Adverse Effect with Standard Conditions is applicable for archaeological sites CA-SMA-162 and CA-SMA-268. Under the PA obligations, Caltrans notified SHPO of this finding. Under each viable alternative, two separate Environmentally Sensitive Areas (ESA) will be included that would be maintained for each site to avoid any effects to these resources. The requirements of each ESA will be part of the construction documents to be prepared for the project.

The preferred alternative will not result in a substantial adverse change to any designated historic resources. The preferred alternative does not impact the Vallemar Station (2125 Cabrillo Highway), which Caltrans has determined to be a historic resource under CEQA and is eligible for the CRHR at a local level. The SHPO concurred on the eligibility and ineligibility of historic properties within the APE on February 22, 2010.

4) Hydrology and Floodplain

Portions of the project area are within the "100-year" event, however improvements for the preferred alternative will have minimal effect on the floodplains. The project will result in an increase in impervious area, however this increase will be insignificant compared to the overall watershed area and will have a negligible effect upon the floodplains associated with the water bodies that cross the project. The final design will ensure that localized ponding will not encroach on the travelled way.

5) Water Quality and Storm Water Runoff

Construction-related activities may affect storm water quality during construction, and there is a potential for temporary effects to occur due to increased erosion. There is also a potential for spills and leaks of lubricants and other fluids associated with vehicles and equipment during construction. Certain pollutants are associated with stormwater runoff from highways and other impervious surfaces.

The design of the project will include permanent and temporary Best Management Practices (BMPs) to reduce the pollutant component of stormwater runoff, as required by the Caltrans National Pollutant Discharge Elimination System (NPDES) permit. In addition to the requirements of the NPDES permit, compliance with the requirements of the Caltrans Stormwater Management Plan (SWMP) will also be required. The project will also include permanent treatment BMPs such as biofiltration swales/strips to treat stormwater originating on-site before it reaches water bodies, wetlands, or storm drain systems.

6) Paleontology

The project area is considered to have a high potential of paleontological sensitivity, since the Pleistocene Terrace deposits units have in the past yielded fossils. Construction activities can impact paleontological geologic units when vehicles or other work equipment impact previously undisturbed sediments by excavating, grading, or crushing bedrock exposed in or underlying a project. This can result in impacts to fossils by destroying them or otherwise altering them in such a way that their scientific value is lost.

The middle portion of the project is the location where the geological deposits are the most sensitive. Within this area, the roadway will be widened to the west of the existing roadway. The widening will be constructed on new embankment contained by retaining walls to prevent encroachment into environmentally sensitive areas. The other half of the area to be widened would be excavated into an existing man-made embankment. Because the only excavation in this area is into man-made embankment, natural deposits will not be disturbed, and no paleontological resources will be affected in this area of the project site.

There are three areas where planned ground-disturbing/excavation activities will occur in native soils. These excavations within the project footprint could potentially affect paleontological resources. The first location (Cut 1) is at the southeastern end of the project, Cut 2 is southeast of Fassler Avenue, and Cut 3 is northwest of Reina Del Mar Avenue. Cut 1 and Cut 3 are within the Franciscan formation, and Cut 2 is in limestone. The average depths of Cut 1 and Cut 2 are 7’ and the average depth of Cut 3 is 60’. Cut 1 and Cut 2 are approximately 10’ wide and are 700’ and 600’ long, respectively. Cut 3 is approximately 60’ wide and 1,000’ long.

Avoidance and minimization measures for paleontological resources are proposed in accordance with Caltrans' Standard Environmental Reference Guidelines for those areas were ground-disturbing activities may take place.

7) Noise and Vibration

Noise levels under the preferred alternative will remain unchanged from existing levels, or will increase by one to three decibels; thus, this increase will not be substantial. The projected noise levels will, however, approach or exceed FHWA’s noise abatement criteria. A Noise Abatement Decision Report (NADR) is included in this Project Report (Section 6H) and recommends no new sound walls for the preferred alternative.

8) Biological Resources

Natural Communities: No natural communities of concern (i.e. shining willow riparian forest, aquatic, or seasonal wetlands) are located within areas of permanent or temporary project impacts. A cantilevered bridge would be constructed over a seasonal aquatic habitat west of Highway 1 approximately 700 feet north of Fassler Avenue; however, this would not be a substantial change because the seasonal aquatic habitat is currently shaded and no vegetation is growing in this area under existing conditions. Therefore, the

cantilevered bridge will not directly impact this natural community of concern. The project will prohibit equipment in the live stream channel of Calera Creek and confine construction within the designated construction, access, and staging areas.

Jurisdictional Waters and Wetlands: Approximately 0.87 acres of wetlands and other waters meeting the regulatory definitions of either the U.S. Army Corps of Engineers (USACE) (Section 404 Wetlands and Waters) or California Coastal Commission (CCC) (Coastal Zone Wetlands) occur within the project site. These areas include riparian/wetland habitat associated with the Calera Creek corridor, seasonal wetland/seasonal aquatic habitat associated with a drainage ditch that parallels southbound Highway 1, three seasonal drainage ditches/seeps, and small patches of seasonal wetlands located within ruderal grasslands on fill materials.

No work or staging of equipment or materials is proposed within areas supporting wetlands or other waters as defined by USACE or coastal wetlands as defined by the CCC. Therefore wetlands will not be directly impacted by the project.

Indirect impacts on water quality in wetlands and other waters on-site or off-site are possible during and after construction of the project. However, in compliance with Caltrans' NPDES permit, the project includes feasible BMPs to treat stormwater runoff and control pollutants in runoff during and after construction.

As mentioned in the previous Natural Communities summary, a cantilevered bridge will be constructed over an existing culvert outfall with wetland habitat on the west side of Highway 1 approximately 700 feet north of Fassler Avenue. Although the bridge will create some shading, this would not be a substantial change because this wetland area is currently shaded and no vegetation is growing in this area under existing conditions. Therefore, the proposed cantilevered bridge would not directly impact wetlands.

Special-Status Plant Species: No special-status plant species are present within the project impact area. Therefore the project will not impact any special-status plant species.

Threatened and Endangered Species: There is potential for California red-legged frog, San Francisco garter snake, American peregrine falcon, and bank swallow to be present within the project's Biological Study Area (BSA). It has been determined that there is no suitable habit for American peregrine falcon and bank swallow in the project area; therefore there is no impact to these species.

California Red-legged Frog – The project will not result in direct permanent or temporary effects to aquatic, riparian, or wetland habitats used by California red-legged frogs. The hydrology of aquatic habitats outside the project area where California red-legged frogs could be present also will not be altered by the project. Construction of the project will, however, disturb developed and roadside/ruderal grassland habitat that could be used for foraging and dispersal by frogs. The project would result in permanent impacts to 7.08 acres of potentially occupied habitat and temporary impacts to 3.75 acres of potentially

occupied habitat. Temporary impacts would occur in the area between the proposed future edge of pavement and the outer limits of cut and/or fill plus construction staging and access areas. No paving is proposed in temporary impact areas, and it is anticipated that habitat of equal value would be reestablished within one year following revegetation with native plant species. To minimize impacts, the following measures will be implemented:

- Perform pre-construction survey
- Minimize nighttime work
- Install ESA and wildlife exclusion fencing
- Conduct construction worker education program
- Avoidance of entrapment
- Inspection and discovery
- Compensatory mitigation for habitat impacts
- Consultation with USFWS

The retaining wall/barrier and exclusion fencing along the west side of the highway will prevent California red-legged frogs from reaching the road and suffering mortality along this stretch of the roadway. There will be beneficial long-term effects to red-legged frogs, and perhaps the population, with the installation of this retaining wall/barrier by reducing the potential for frogs to disperse onto Highway 1 and suffer mortality from the high levels of traffic where a median barrier prevents successful crossing. No project-related increase in traffic mortality is expected, and therefore, no substantial effects due to traffic mortality on California red-legged frogs would occur.

San Francisco Garter Snake - The presence of San Francisco garter snakes is unlikely, however they could occur within the project construction area. The project will not result in direct permanent or temporary effects to aquatic, riparian, or wetland habitats used by San Francisco garter snakes. Construction of the proposed project will disturb ruderal grassland and non-native woodland habitat between Mori Point Road and San Marlo Way that could be used for dispersal by garter snakes. The impacts, avoidance and mitigation measures are similar to California red-legged frog.

The project proposes compensatory mitigation for San Francisco garter snake and California red-legged frog habitat encroachment in cooperation with the Golden Gate National Recreation Area (GGNRA). The proposed concept starts with the preservation in perpetuity of a 5-acre parcel owned by the city of Pacifica that is located west of Pacifica's wastewater treatment plant and south of the GGNRA Mori Point site. This parcel is just to the north of ponds next to Calera Creek that were created by Pacifica as San Francisco garter snake habitat. The parcel is located at the base of the ridgeline that separates Calera Creek and its associated ponds from the next closest aquatic habitat, which is along the northern perimeter of the GGNRA parcel and the southern edge of the Sharp Park Golf Course. There is a low point or saddle in the ridgeline just above the Pacifica parcel that makes this the most likely route for San Francisco garter snakes or California red-legged frogs to cross between habitat areas south of the GGNRA land in the vicinity of Calera

Creek and along the northern perimeter of the GGNRA land. The 5-acre parcel will complete a connection of preserved land between these habitats.

In addition to preservation of 5 acres of upland habitat, upland habitat from the preserved parcel would be enhanced, up over the saddle within the GGNRA, and down to a bowl shaped area adjacent to GGNRA California red-legged frog breeding ponds. These enhancements will improve the dispersal habitat over the ridgeline by providing protection and moisture for dispersants and allow for increased connectivity between aquatic habitats. The enhancements will include depressions to collect water and woody debris and rocks to preserve moisture and provide cover for California red-legged frogs and San Francisco garter snakes. The goal of the enhancements is to improve dispersal and foraging habitat, improve the connection between perennial habitat areas, improve the chances of population expansion or recolonization in new or historic habitat areas, and improve sustainability of the local San Francisco garter snake population through expansion of occupied habitat areas. Currently the lower portion of the 5-acre parcel is infested with invasive exotic weeds. Part of the implementation plan would include invasive plant control.

California red-legged frogs and San Francisco garter snakes, in particular, have little chance of presence within the impact area of the project, and the project has relatively small impacts on potential dispersal habitat that is rarely used by California red-legged frogs and even less likely by San Francisco garter snakes. This compensatory proposal will offset impacts of the project, and the benefit to local San Francisco garter snake population would be significant if a second core perennial habitat area can be recolonized by improved connectivity to the current core habitat area which is within an active golf course.

Special Status Animal Species (Western Pond Turtle) - Habitat for the western pond turtle within the BSA is marginal, although it is possible that turtles may occur in the BSA occasionally as dispersing individuals. The avoidance and mitigation measures are similar to California red-legged frog and San Francisco garter snake.

Special-Status Bird Species (Migratory Birds Nesting) - There is a potential that construction activities could impact nesting migratory birds that are protected under the Migratory Bird Treaty Act and California Fish & Game Code, including the loggerhead shrike, yellow warbler, San Francisco common yellowthroat, or white-tailed kite. Potential nesting will be removed during the non-breeding season to preclude nesting. If this will not be possible, preconstruction surveys of potential habitats will be performed by an ornithologist and if active nests are found close to the work areas, a buffer zone will be established around the nests in consultation with California Department of Fish and Game.

Invasive Species: None of the species on the California list of noxious weeds is currently used by Caltrans for erosion control or landscaping in San Mateo County. Therefore, the project will not propagate invasive species in the site area. To reduce the existing and minimize future infestation, the following measures will be implemented during construction:

- Prior to grading, infested areas will be cleared of vegetation and all vegetative material destroyed off-site, taking care to prevent any seed dispersal in the process.
- Native seed from a local source (within the same watershed if practicable) will be planted on all disturbed ground.
- All areas of ground disturbance within the project area will be monitored and maintained for a period of at least two years following project implementation. Maintenance may include removal of re-sprouts, treatment of cut invasive trees with systemic herbicides, and removal of seedlings.

The total cost of environmental mitigation for the preferred alternative is $3.2M. $2.0M is for habitat preservation and land acquisition, $1.0M is for habitat restoration and mitigation, $0.1M is for plant establishment work, and $0.1M is for wildlife exclusion fencing.

F. Air Quality Conformity

The 1990 Clean Air Act Amendments (CAAA) outlines requirements for ensuring that Federal transportation plans, programs and projects are consistent with ("conform to") the purpose of the State Implementation Plan (SIP). Conformity to the purpose of the SIP means that transportation activities will not cause new air quality violations, worsen existing violations, or delay timely attainment of the relevant national ambient air quality standards. A conformity finding demonstrates that the total emissions projected for a RTP or TIP are within the emissions limits ("budgets") established by the SIP, and that transportation control measures (TCMs) are implemented in a timely fashion.

Conformity requirements apply in all nonattainment and maintenance areas for transportation-related criteria pollutants and precursor pollutants for which the area is designated nonattainment or maintenance area. Currently for the Bay Area (and the project air basin location) the criteria pollutants to be addressed are ground-level ozone (8-hour), carbon monoxide (8-hour), and for the first time, the national 24-hour fine particulate matter ($PM_{2.5}$) standard. The precursor pollutants to be addressed include volatile organic compounds (VOC) and oxides of nitrogen (NO_x) for ozone and NO_x for $PM_{2.5}$. The latest EPA published transportation conformity regulations to implement the 1990 California Clean Air Act Section 175A is dated March 2010.

Regulations state in part that MTC cannot approve any transportation plan, program or project unless these activities conform to the purpose of the Federal air quality plan (officially titled the State Implementation Plan, or SIP). "Transportation plan" refers to the RTP. "Program" refers to the TIP, which is a financially realistic set of highway and transit projects to be funded over the next four years. A "transportation project" is any highway or transit improvement, which is included in the RTP and TIP and requires funding or approval from the FHWA or the Federal Transit Administration (FTA). Conformity regulations also affect regionally significant non-Federally funded projects which must be included in a conforming transportation plan and program.

The current RTP for the San Francisco Bay Area, known as *Transportation 2035*, was adopted by MTC on April 22, 2009. The current 2011 TIP and 2011 Transportation-Air Quality Conformity Analysis were adopted by MTC on October 27, 2010. The current 2011 Transportation Air Quality Conformity Analysis is a conformity assessment of both the *Transportation 2035* RTP (re-conforming this document particularly with regards to its conformance with the national $PM_{2.5}$ standard) and the 2011 TIP in accordance with the latest EPA transportation conformity regulations and the Bay Area Conformity SIP. The 2011 TIP was then combined with other TIP's throughout the State to create the 2011 Federal Transportation Improvement Programs (FTIP) and submitted to Caltrans, which was then combined with all remaining statewide transportation projects to create the 2011 Federal Statewide Transportation Improvement Program (FSTIP) and submitted to FHWA/FTA. The FHWA and FTA subsequently issued their joint approval of the 2011 FSTIP on December 14, 2010.

The preferred alternative is compatible with the design concept and scope of the project contained in the current approved *Transportation 2035* RTP and 2011 TIP. Based on the interagency consultation with the Air Quality Conformity Task force in April 2011, this project does not fit the definition of a project of air quality concern as defined by 40 CFR 93.126(b)(1) or 40 CFR 93.128, and therefore is not subject to the PM2.5 project level conformity requirement. The air quality conformity report was subsequently submitted to FHWA for their review and concurrence. FHWA concurrence was received in a letter dated June 2, 2011.

G. Title VI Considerations

The project does not propose any route relocation, so there would be no effect to low mobility, economically disadvantaged or minority groups in this respect. The preferred alternative will improve existing access to public transit facilities by providing widened sidewalks at bus stops, improved pedestrian access between Fassler Avenue and Reina Del Avenue, and ensuring both of these intersections are brought into compliance with ADA standards as further discussed in Section 5A-11, "Non-Motorized and Pedestrian Features, etc."

H. Noise Abatement Decision Report

General

This section represents the Noise Abatement Decision Report (NADR) which:

- Is an evaluation of the reasonableness and feasibility of incorporating noise abatement measures for this project;
- Constitutes the preliminary decision on noise abatement measures and is incorporated into the Environmental Document; and

- Is required for Caltrans to meet Title 23, Code of Federal Regulation, Part 772 of the Federal Highway Administration standards.

The NADR does not present the final decision regarding noise abatement; rather, it presents key information on abatement to be considered throughout the environmental review process, based on the best available information at the time the Environmental Document is published. If a project is subject to Federal review, but does not have a circulated Environmental Document, the NADR section documents the final noise abatement decision. The NADR does not address noise barriers or other noise-reducing treatments required as mitigation for significant adverse environmental effects identified under CEQA.

Results of the Noise Study Report

The Noise Study Report (NSR) for this project was prepared by Illingworth & Rodkin, Inc. on October 25, 2009 and approved by Glenn Kinoshita (Caltrans District Branch Chief) on November 18, 2009. Noise measurement locations were selected to generally represent human activity areas adjacent to Highway 1. These measurement positions were located at Category B activity areas or in areas considered to be acoustically equivalent to Category B activity areas. Care was taken to select sites that were primarily affected by noise from Highway 1 and to avoid sites in which noise contamination from sources other than the roadway could affect levels. Category B land use areas, consisting of single-family and multi-family residential land use areas, are located on both the east and west sides of Highway 1 within project limits and are the locations where noise impacts could potentially occur.

Long-term (LT) noise measurements were made at two locations within the study area:

- Southeast corner of Reina Del Mar Avenue and Highway 1
- West side of Highway 1 north of Rockaway Beach Avenue

Short-term (ST) noise measurements were made at four locations within the study area:

- In front of Holiday Inn at Rockaway Beach Avenue
- In front of 451 Harvey Way
- Near 446 Old Country Road
- Near backyard of residences on Franz Court

Receivers that would experience noise levels exceeding either State or Federal thresholds must be evaluated for potential noise abatement/ mitigation. Substantial noise increases would not occur at Category B receivers in the study area, but many receivers along the project corridor would experience future noise levels that would approach or exceed the Noise Abatement Criteria (NAC). As a result, noise abatement must be evaluated for these receivers. Potential noise abatement measures include the following:

- Avoiding the project impacts by using design alternatives, such as altering the horizontal and vertical alignment of the project;
- Constructing noise barriers;
- Using traffic management measures to regulate types of vehicles and speeds;
- Acquiring property to serve as a buffer zone; and/or
- Acoustically insulating public use or nonprofit institutional structures.

Of the available options, the chosen abatement type for this project would likely be the construction of noise barriers. A preliminary noise abatement analysis was conducted to identify the feasibility of constructing sound walls to reduce traffic noise. Sound walls were assessed for receivers where noise levels approached or exceeded the NAC. Two potential barriers were evaluated and both were found to be feasible for the preferred alternative.

A noise barrier must achieve a minimum 5-decibel reduction in noise at a given receiver to be considered feasible. The feasible sound wall locations are located along Highway 1 just north of Fassler Avenue at SB (west side) Sta 31+50 to 33+50 (sound wall #1) and NB (east side) Sta 32+00 to 36+50 (sound wall #2).

Factors in the Noise Abatement Decision Report

A summary of the barrier evaluation is presented in the following table:

Sound Wall	Station	Barrier Height (feet)	Acoustically Feasible? (Yes/ No)	Insertion Loss (dBA)	Number of Benefited Receivers	Total Reasonable Allowance	Estimated Construction Cost	Cost Less than Allowance?
SW1	SB 31+50 to 33+50	6	Yes	6	1	$50,000	$72,000	No
		8	Yes	6	1	$50,000	$82,000	No
		10	Yes	7	1	$50,000	$92,000	No
		12	Yes	7	1	$50,000	$100,000	No
		14	Yes	9	1	$50,000	$111,000	No
SW2	NB 32+00 to 36+50	6	Yes	5	7	$294,000	$435,000	No
		8	Yes	5 to 6	9	$396,000	$461,000	No
		10	Yes	5 to 6	9	$400,000	$490,000	No
		12	Yes	5 to 7	11	$496,000	$518,000	No
		14	Yes	5 to 7	11	$498,000	$548,000	No

Nonacoustical Factors Relating to Feasibility

Both sound wall locations studied would affect sight distance at the Highway 1/Rockaway Beach/Fassler Avenue intersection as well as the Harvey Way entrance to Highway 1, but

sight distance for a design speed of 55 mph could likely be maintained. It's unlikely these walls would present safety or security issues, however they would require future maintenance. Sound wall #1 would not require additional utility relocations, however it is likely that the proposed wall piles required for sound wall #2 would impact existing utilities. The estimated cost to relocate the existing gas, sewer and water utility lines associated with sound wall #2 would be approximately $200,000, which is included in the estimated construction costs in the table above.

Preliminary Noise Abatement Decision

It is recommended that sound wall #1 not be constructed since the estimated construction costs would exceed the total reasonable allowance for every sound wall height configuration, and because this sound wall would benefit only one receiver. Likewise, it is recommended that sound wall #2 not be constructed since the estimated construction costs would exceed the total reasonable allowance for every sound wall height configuration.

The preliminary noise abatement decision presented in this report is based on preliminary project alignments and profiles which may be subject to change. As such, the physical characteristics of noise abatement described herein may also be subject to change. If pertinent parameters change substantially during the final project design, the preliminary noise abatement decision may be changed or eliminated from the final project design. A final decision to construct noise abatement will be made during the final project design process.

The preliminary noise abatement decision presented here is included in the Final EIR/EA.

Secondary Effects of Abatement

In addition to the cost considerations in the aforementioned Preliminary Noise Abatement Decision, new sound walls along this section of Highway 1 would not fit into the scenic character of this area. This section of Highway 1 is an Eligible State Scenic Highway, so the construction of walls that block views of the nearby Pacific Ocean and detract from the overall visual quality of this corridor are strongly discouraged unless absolutely necessary.

7. OTHER CONSIDERATIONS AS APPROPRIATE

A. Public Hearing Process

The Draft EIR/EA was made available for public review and comment from August 8, 2011 to October 22, 2011. The public comment period was extended from October 7 to October 22 at the City's request. A public meeting/hearing on the project and the Draft EIR/EA was held on September 22, 2011. Thirty-six members of the public provided oral and written testimony at the public meeting. There were a total of 180 written comments (12 from government agencies, 4 from organizations, 7 from businesses and 157 from individuals) submitted from the public during the public comment period. The comments

were divided between opposition to the project and support for the project. Approximately three times as many people expressed opposition to the widening project as expressed support for the project. Many people raised questions about the process, and suggested using the funding for other solutions or studying additional alternatives further instead of widening. Full responses to public comments are presented in the Final EIR/EA.

The preferred alternative has the support of the two local agencies involved in the project (city of Pacifica and SMCTA) and is consistent with the voter approved Measure A expenditure plan.

B. Route Matters

Route Concept Reports (RCRs) were developed for all 56 routes in Caltrans District 4 between 1984 and 1989. These reports define the concept for route development for a 20 year period (1985-2005). The concepts were based on the expertise of Caltrans Divisions of Transportation Planning and Local Assistance, Highway Operations, Environmental Planning, Safety, and other District functions. RCRs were approved by District management and signed by the District Director. For the Highway 1 RCR, the project limits are located within segment D in this report, which is defined as a "four lane conventional highway" from Linda Mar Boulevard to just south of Sharp Point Rd, where it becomes a four lane freeway to the north.

Draft Transportation Concept Corridor Report (TCCRs, also known as the 4-panel map sets) were developed in 2002/03, and were intended to complement and expand upon the corridor based RTP developed by MTC in 2001. This effort used the 16 original corridors established by MTC as a base and expanded the assessment to include 24 total corridors. For the Highway 1 TCCR, the project limits are located within segment C in this report, which defines the 2025 Highway Operational Concept Configuration for this segment as a four lane conventional highway.

Corridor Plans (CPs) are now being developed for all 56 routes in Caltrans District 4 to establish Caltrans' long range multi-modal transportation vision. The CPs will build on the legacy of the RCRs and TCCRs that preceded them, and will be updated to present a more comprehensive snapshot and vision of the corridor. Demographic and projected growth data will be included, as well as geographical information, current and emerging traffic patterns, and changes in land use and projects that could impact mobility in the region. The CPs will also include input from local partner agencies, updated environmental and transportation policy information, and projects listed in the MTC 2035 RTP. When completed, the CPs adopted by Caltrans will capture future corridor needs and required improvements. There is currently no CP for Highway 1. The latest approved freeway agreement for this segment of Highway 1 is dated February 14, 1969.

C. Permits

The following permits will be required for this project. These will be submitted during final design.

- California Coastal Commission - Coastal Development Permit

- Regional Water Quality Control Board – General Construction Section 402 National Pollution Discharge Elimination System (NPDES) Permit

- City of Pacifica – Local Coastal Plan (LCP) Permit

Approval of use of lands for mitigation measures from the Golden Gate National Recreation Area (GGNRA) will need to be finalized after the EIR process is completed. Additional approvals will be required from SMCTA and the State Transportation Improvement Program (STIP) for construction funding.

D. Cooperative Agreements

The PA/ED Cooperative Agreement between Caltrans and SMCTA was effective June 30, 2010. Cooperative agreements for PS&E design, right of way acquisition (ROW) and construction are still required between Caltrans and SMCTA. A draft Cooperative Agreement for PS&E is included as Attachment G. Roles and responsibilities for each agency are as follows:

	SMCTA (Project Sponsor)	Caltrans (Lead Agency)
PA/ED	Implement	Oversight
PS&E	Implement	Oversight
ROW Acquisition	to be determined	to be determined
Construction	to be determined	to be determined

This Project Report will be the authorizing document for these future cooperative agreements.

E. Other Agreements

A revised maintenance agreement will be required between the city of Pacifica and Caltrans which will clarify which agency will be responsible for ongoing maintenance of sidewalks, pedestrian/bike paths, landscaping, traffic signals and lighting. The maintenance agreement shall be executed prior to PS&E approval and construction. The latest existing maintenance agreement was executed on June 25, 1965 and covers Highway 1 from PM 42.3 to 45.5.

A landscaped median on Highway 1 within the project limits will only be approved by the State under the condition that the State will not be responsible for maintenance of the landscaping within the median and that the project sponsor will provide a responsible agency, approved by the State, to enter into a maintenance agreement for long-term

maintenance of the landscaping within the median. A copy of the commitment letter to maintain the landscaped median from the local agency is included as Attachment K.

The existing Freeway Agreement is still valid.

F. Involvement with a Navigable Waterway

Navigable waterway considerations are not applicable to this project.

G. Transportation Management Plan for Use during Construction

Impacts to the traveling public will be minimized by performing the majority of the work behind temporary concrete barriers (K-rails), scheduling temporary lane closures during non-peak commute periods, and closely coordinating with the city of Pacifica. Roadway construction can be accomplished by shifting and narrowing existing travel lanes/shoulders and using temporary concrete barriers to protect the work zone. Standard stage construction and traffic handling plans will be included in the construction documents to designate traffic routing during construction.

Temporary lane closures will comply with the approved lane closure charts to be submitted during final design. Public information outreach, portable changeable message signs, and a Construction Zone Enhanced Enforcement Program (COZEEP) will be used as required to manage traffic during certain construction activities and temporary lane closures.

The design and construction of the project will be coordinated with the District Traffic Manager (DTM) and District Transportation Management Plan (TMP) Coordinator, consistent with District policy and procedures. A TMP will be prepared for the project per Caltrans requirements. Separate contracts to implement advanced TMP activity (such as public information outreach) would be used where beneficial to the project delivery schedule. Contingency plans for late lane openings, incident management, etc. would also be included in the TMP before the start of construction activities. See Attachment F for the TMP Data Sheet. Measures to be incorporated into the TMP will include, but are not limited to the following:

- Provide public information campaign and outreach programs.
- Provide orderly construction sequences as a requirement in the contract plans. If the Contractor proposes changes, insure that these changes do not worsen the traffic flow or greatly impact traffic movements.
- Provide advance warning and guide signs.
- Maintain minimum turning-lane storage capacity during construction.
- Provide continuous vehicle access to cross streets, driveways and businesses, and provide for pedestrian and bicycle access.
- Provide a Construction Zone Enhanced Enforcement Program (COZEEP).
- Provide traffic and contractor contingency plans.

H. Stage Construction

In order to minimize delays and congestion caused by construction, this project will be constructed in multiple stages. Construction for this project will take approximately one and a half years to complete. The construction contract will be followed by a replacement planting contract with a 3 to 5-year plant establishment period.

Each construction stage would maintain two through lanes along each direction of Highway 1, left turn lanes at the Fassler and Reina Del Mar intersections, and maintain pedestrian and bicycle access. Some nighttime and weekend work would probably be required to permit temporary closures for tasks that could interfere with traffic or create safety hazards, such as placement of temporary concrete barriers, pavement overlays and restriping.

It is expected that the majority of the widening work will be done during daylight hours and performed behind temporary concrete barriers. Retaining walls and the bridge over the wetlands will be constructed with the associated widening work in each stage. Detours away from Highway 1 between Fassler Avenue and Mori's Point Road are not possible since there are no other parallel routes in the area.

See Attachment F for the staging concept display. The following three-stage construction plan is proposed for the project:

Stage 1: Remove the existing concrete barrier along Highway 1 and pave to provide for temporary vehicle access lanes. Shift both NB and SB Highway 1 traffic to the east and construct west side improvements.

Stage 2: Shift both NB and SB Highway 1 traffic to the west side improvements constructed in Stage 1. Construct east side improvements.

Stage 3: Maintain SB Highway 1 traffic shifted to the west, but shift NB traffic to the east side improvements constructed in Stage 2. Construct remaining improvements in the median area of Highway 1.

As discussed in the previous Section 7G, "Transportation Management Plan for Use During Construction," a TMP will be developed, in cooperation with the city of Pacifica, to provide advance notice to motorists, transportation and emergency service providers, and other impacted groups regarding information on construction activities and durations, detours, and access issues during each stage of construction.

I. Accommodation of Oversized Loads

The project does not include any permanent features that would restrict oversize loads from passage along Highway 1. During construction, K-rail would be placed to allow truck movements through the work zone.

J. Graffiti Control

Graffiti control measures will be applied to the proposed retaining walls within project limits.

K. Complete Streets

The project will improve pedestrian, ADA, and bicycle access along the highway to make the highway more multimodal and context sensitive. Complete street enhancements will include a new, ADA-compliant sidewalk along the east side of the highway between Fassler Avenue and Reina Del Mar Avenue; a reconstructed, ADA-compliant crosswalk across the highway at Fassler Avenue with an ADA accessible ramp from Old County Road/Rockaway Beach Avenue intersection up to the crosswalk; a relocated and widened Class I bike path from Reina Del Mar Avenue up to Mori's Point Road along the west side of the highway; widened, 10-foot outside shoulders along the full length of the highway within project limits to provide more space for riding bicycles along the highway; and 4-foot wide "pocket lanes" between right turn lanes and through lanes for bicycles to more safely approach the intersections of Fassler Avenue and Reina Del Mar Avenue. The project will also reconstruct and improve access to four bus stops within the project limits, one each direction at the two major intersections of Fassler Avenue and Reina Del Mar Avenue.

In response to a request by the city of Pacifica to include a landscaped median option for the project, the preferred alternative includes a landscaped median between Fassler Avenue and Reina Del Mar Avenue as discussed further in the Highway Planting section of this report.

8. PROGRAMMING

A. Programming

This project is addressed in the following planning/programming documents:

- Caltrans 1985 Route Concept Report and 2002 Draft Transportation Concept Corridor Report
- SMCTA Measure "A" Strategic Plan 1988 to 2008
- SMCTA Transportation Expenditure Plan
- MTC 2035 RTP, MTC proposed 2040 RTP, and 2011 TIP

The project will be funded from SMCTA Measure A and STIP funds, and is identified as TIP ID #SM-050001, RTP ID #98204, CTIPS ID #20600002917, and SMCTA Capital Program #00615. Potential Federal funding would be used if it becomes available.

The current approved RTP (*Transportation 2035)* shows $44.4M for the project cost. The next proposed RTP (*Plan Bay Area 2040)* shows $53.25M for the project cost which is consistent with the current cost estimate.

The current 2011 TIP includes the following funding amounts:

	Programmed Amount	Funding Source	Implementing Agency
PA/ED	$1,000,000	Measure A	SMCTA
PS&E	$3,000,000	Measure A	SMCTA
ROW	$8,200,000	Measure A & STIP	to be determined
CON	$25,100,000	Measure A & STIP	to be determined
TOTAL	**$37,300,000**		

Of the $37.3M total currently programmed in the 2011 TIP, $6.9M is STIP and $5.6M is approved Measure A funds. The remainder is future planned STIP and Measure A funds.

Preliminary engineering is underway for this project. A preliminary project cost estimate for the preferred alternative has been prepared and is included as Attachment D. The cost breakdown of the main items is shown in Section 5A-14, "Cost Estimates."

B. Schedule

The proposed schedule for the project is summarized below:

Environmental Clearance	August 2013
District Final PS&E	June 2015
Right of Way Certification (R/W Cert)	September 2015
Ready to List (RTL)	October 2015
California Transportation Commission (CTC)	January 2016
Advertise	February 2016
Begin Construction	April 2016
Complete Construction	August 2017

9. REVIEWS

The Draft Project Report (DPR) was approved on July 29, 2011. A Caltrans constructability review of the project was completed with no comments based on the DPR submitted in December 2010. Further constructability reviews would be performed during the PS&E stage.

The Fact Sheet for exceptions to mandatory design standards for the preferred alternative was approved on March 4, 2013, while the Fact Sheet for exceptions to advisory design standards was approved on February 15, 2013. Based on the most recent submittal of the Utility Encroachment Exception Variance Request in February 2013, HQ encroachment exceptions division of design has no further comments and concurs with the variance request.

Since the project does not have characteristics that would classify it as a High Profile Project (HPP), this is a delegated project with no FHWA review anticipated to be required per the October 14, 2010 Caltrans and FHWA Joint Stewardship and Oversight Agreement.

10. PROJECT PERSONNEL

To facilitate contact with team members responsible for preparation of the Project Report, names and phone numbers of key staff are identified below.

Caltrans Project Manager -	Mohammad Suleiman (510) 622-5943
Project Manager (SMCTA) -	Joe Hurley (650) 508-7938
Project Development Team Leader (Mark Thomas) -	Brad Leveen (650) 363-8277
City of Pacifica Public Works Director -	Van Ocampo (650) 738-3767
Caltrans Project Development Unit Supervisor -	Amir Sanatkar (510) 622-8826
Caltrans Project Development Unit Project Engineer -	Eva Ng (510) 286-6201
Caltrans Environmental Reviewer -	Tom Rosevear (510) 286-5360
Caltrans Right of Way Branch Reviewer -	Laura Hameister (510) 286-5429

11. LIST OF ATTACHMENTS

A. Location Map

B. Preferred Alternative Site Map

C. Preferred Alternative GAD and Bridge Plan

D. Preferred Alternative Project Report Cost Estimate

E. Preferred Alternative Right of Way Data Sheet

F. TMP Data Sheet, Request for TMP Data Sheet, Staging Concept Display

G. Draft PS&E Cooperative Agreement

H. Risk Management Plan and Risk Register

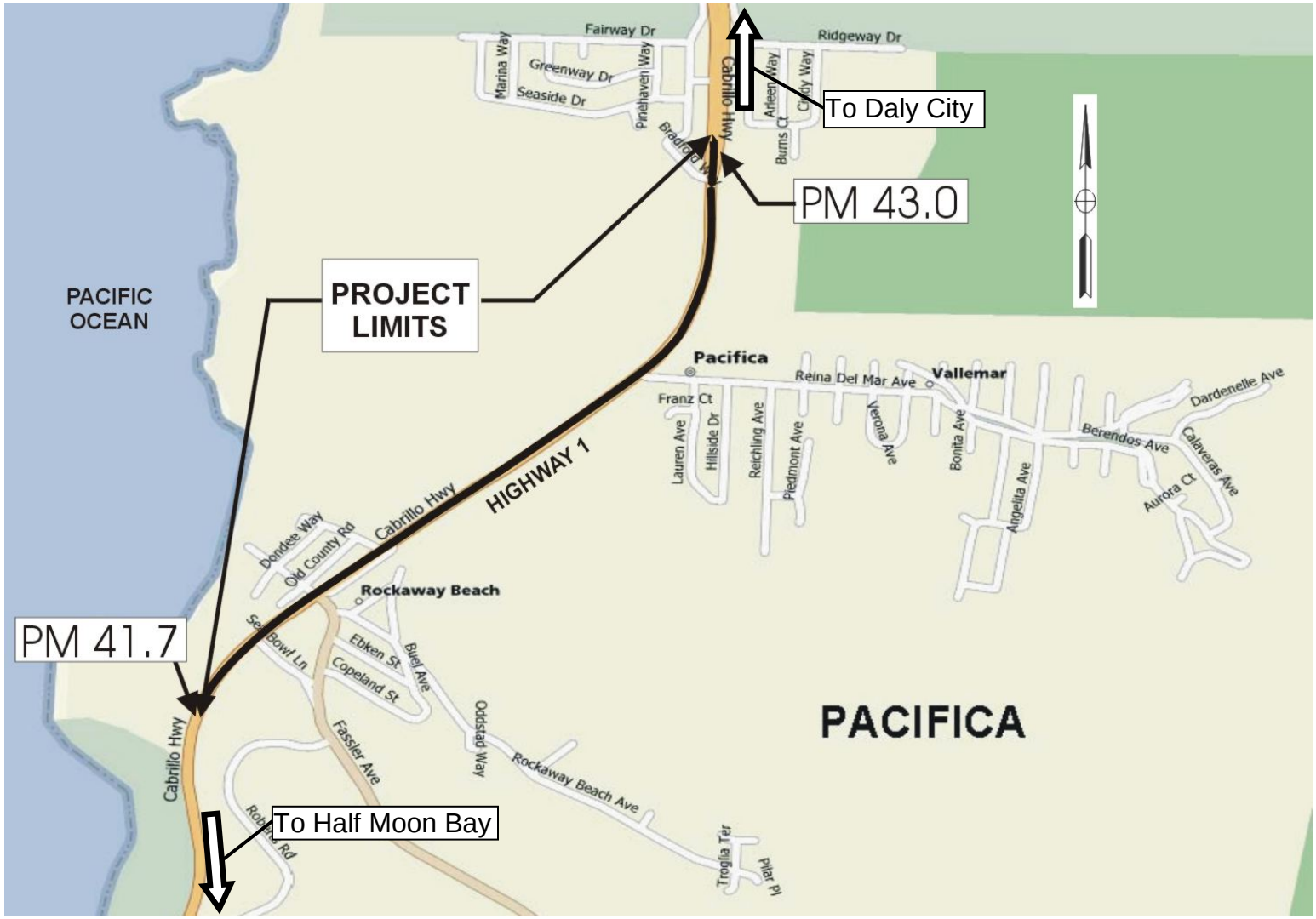
I. Pavement Strategy Checklist

J. Final Environmental Impact Report/Environmental Assessment (FEIR/EA) Signed Coversheet

K. Local Agency Commitment Letter to Maintain Landscaped Median

Attachment A

Location Map

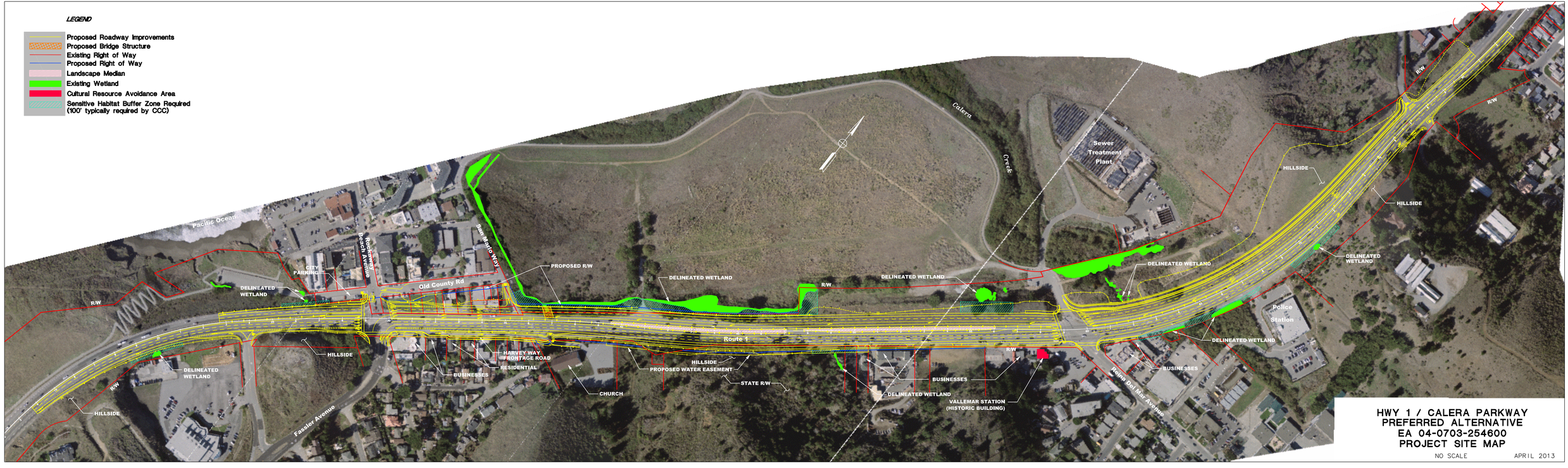


MARK THOMAS & COMPANY, INC.
Providing Engineering, Surveying and Planning Services

HIGHWAY 1/ CALERA PARKWAY PROJECT
Project Location Map

Attachment B

Preferred Alternative
Site Map

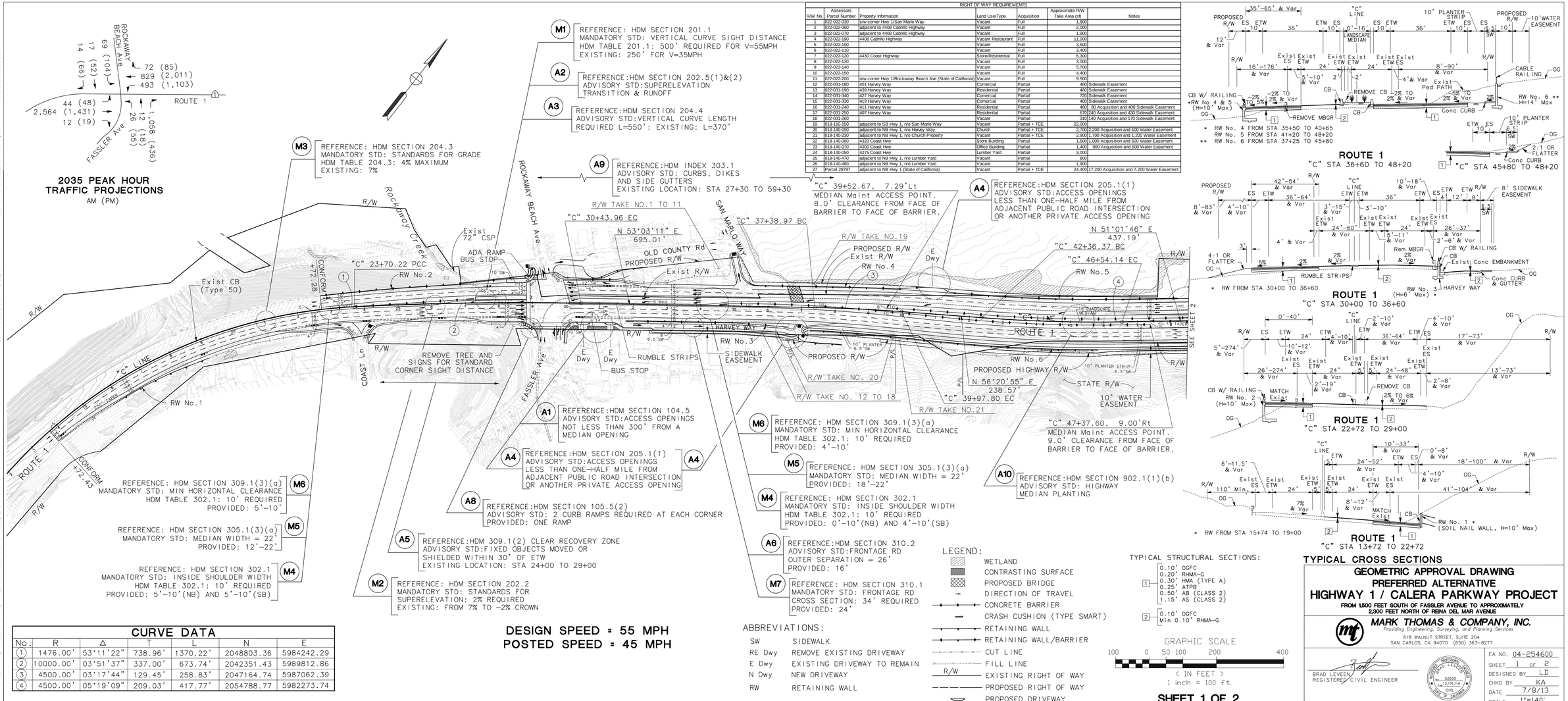


HWY 1 / CALERA PARKWAY
PREFERRED ALTERNATIVE
EA 04-0703-254600
PROJECT SITE MAP

NO SCALE APRIL 2013

Attachment C

Preferred Alternative
GAD and Bridge Plan



RIGHT OF WAY REQUIREMENTS						
R/W No.	Assessors Parcel Number	Property Information	Land Use/Type	Acquisition	Approximate R/W Take Area (sf)	Notes
1	022-022-030	s/w corner Hwy 1/San Marlo Way	Vacant	Full	1,800	
2	022-022-060	adjacent to 4408 Cabrillo Highway	Vacant	Full	2,000	
3	022-022-070	adjacent to 4408 Cabrillo Highway	Vacant	Full	1,900	
4	022-022-190	4408 Cabrillo Highway	Vacant Restaurant	Full	11,000	
5	022-022-100		Vacant	Full	3,500	
6	022-022-110		Vacant	Full	3,400	
7	022-022-120	4430 Coast Highway	Store/Residential	Full	6,300	
8	022-022-130		Vacant	Full	3,000	
9	022-022-140		Vacant	Full	5,700	
10	022-022-150		Vacant	Full	4,400	
11	022-022-200	r/w corner Hwy 1/Rockaway Beach Ave (State of California)	Vacant	Full	9,500	
12	022-031-180	451 Harvey Way	Comercial	Partial	480	Sidewalk Easement
13	022-031-190	439 Harvey Way	Residential	Partial	480	Sidewalk Easement
14	022-031-340	427 Harvey Way	Comercial	Partial	720	Sidewalk Easement
15	022-031-330	419 Harvey Way	Comercial	Partial	400	Sidewalk Easement
16	022-031-240	411 Harvey Way	Residential	Partial	480	80 Acquisition and 400 Sidewalk Easement
17	022-031-250	407 Harvey Way	Residential	Partial	670	240 Acquisition and 430 Sidewalk Easement
18	022-031-260		Vacant	Partial	310	140 Acquisition and 170 Sidewalk Easement
19	018-150-150	adjacent to SB Hwy 1, n/o San Marlo Way	Vacant	Partial + TCE	22,000	
20	018-140-090	adjacent to NB Hwy 1, n/o Harvey Way	Church	Partial + TCE	2,700	2,200 Acquisition and 500 Water Easement
21	018-140-230	adjacent to NB Hwy 1, n/o Church Property	Vacant	Partial + TCE	2,900	1,700 Acquisition and 1,200 Water Easement
22	018-140-060	4320 Coast Hwy	Store Building	Partial	1,500	1,000 Acquisition and 500 Water Easement
23	018-140-070	4300 Coast Hwy	Office Building	Partial	1,400	900 Acquisition and 500 Water Easement
24	018-140-050	4275 Coast Hwy	Lumber Yard	Partial	3,000	
25	018-140-470	adjacent to NB Hwy 1, n/o Lumber Yard	Vacant	Partial	800	
26	018-140-460	adjacent to NB Hwy 1, n/o Lumber Yard	Vacant	Partial	1,900	
27	Parcel 28797	adjacent to NB Hwy 1 (State of California)	Vacant	Partial + TCE	24,400	17,200 Acquisition and 7,200 Water Easement

CURVE DATA						
No.	R	Δ	T	L	N	E
(1)	1476.00'	53°11'22"	738.96'	1370.22'	2048803.36	5984242.29
(2)	10000.00'	03°51'37"	337.00'	673.74'	2042351.43	5989812.86
(3)	4500.00'	03°17'44"	129.45'	258.83'	2047164.74	5987062.39
(4)	4500.00'	05°19'09"	209.03'	417.77'	2054788.77	5982273.74

ABBREVIATIONS:

SW	SIDEWALK
RE Dwy	REMOVE EXISTING DRIVEWAY
E Dwy	EXISTING DRIVEWAY TO REMAIN
N Dwy	NEW DRIVEWAY
RW	RETAINING WALL

LEGEND:

WETLAND
CONTRASTING SURFACE
PROPOSED BRIDGE
DIRECTION OF TRAVEL
CONCRETE BARRIER
CRASH CUSHION (TYPE SMART)
RETAINING WALL
RETAINING WALL/BARRIER
CUT LINE
FILL LINE
R/W EXISTING RIGHT OF WAY
PROPOSED RIGHT OF WAY
PROPOSED DRIVEWAY

TYPICAL STRUCTURAL SECTIONS:

[1] 0.10' OGFC
0.20' RHMA-G
0.30' HMA (TYPE A)
0.25' ATPB
0.50' AB (CLASS 2)
1.15' AS (CLASS 2)

[2] 0.10' OGFC
Min 0.10' RHMA-G

GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

SHEET 1 OF 2

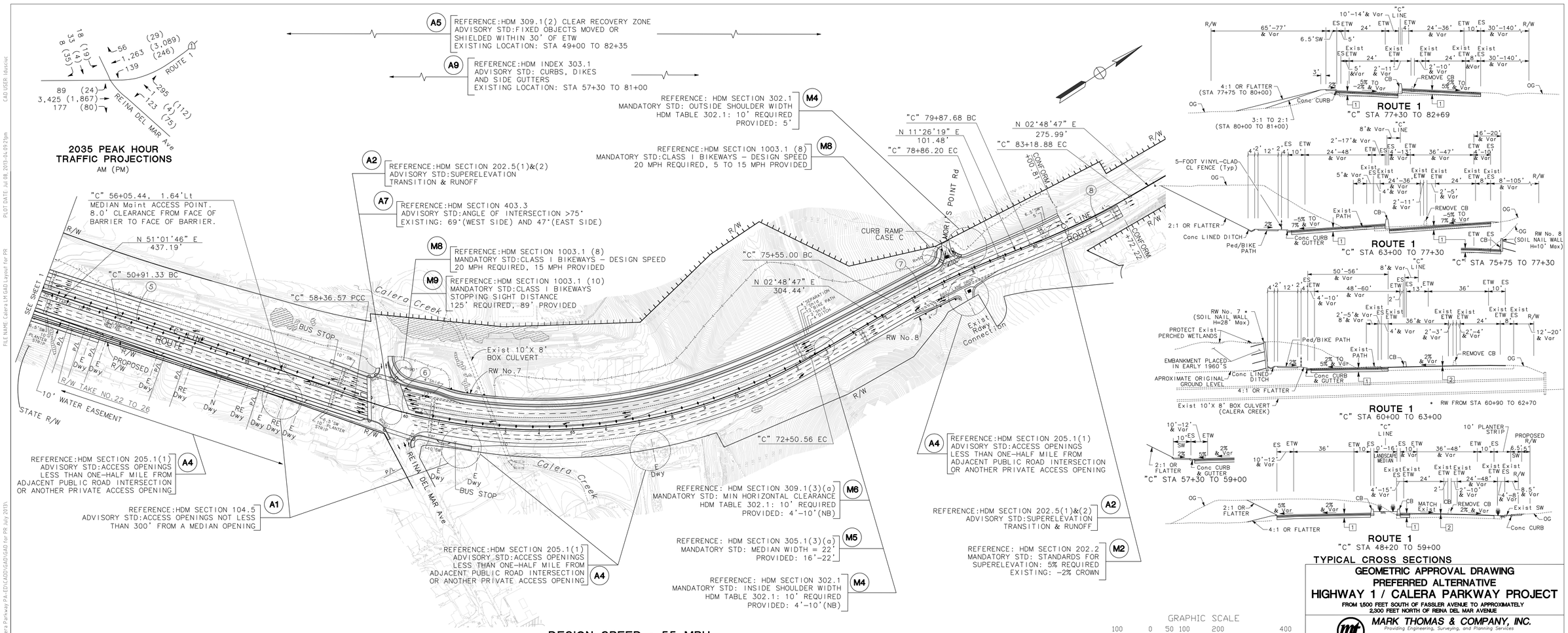
TYPICAL CROSS SECTIONS

GEOMETRIC APPROVAL DRAWING
PREFERRED ALTERNATIVE
HIGHWAY 1 / CALERA PARKWAY PROJECT
FROM 1500 FEET SOUTH OF FASSLER AVENUE TO APPROXIMATELY 2,300 FEET NORTH OF REINA DEL MAR AVENUE

MARK THOMAS & COMPANY, INC.
Providing Engineering, Surveying, and Planning Services
618 WALNUT STREET, SUITE 204
SAN CARLOS, CA 94070 (650) 363-8277

BRAD LEVEEN
REGISTERED CIVIL ENGINEER
No. 52500 Exp 12/31/14 CIVIL STATE OF CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER

EA NO. 04-254600
SHEET 1 OF 2
DESIGNED BY LD
CHKD BY KA
DATE 7/8/13
SCALE 1"=140'



CURVE DATA						
No.	R	Δ	T	L	N	E
⑤	20000.00'	02°08'06"	372.67'	745.24'	2036015.71	5998022.19
⑥	1609.00'	50°21'05"	756.30'	1413.99'	2053310.69	5985067.16
⑦	2200.00'	08°37'32"	165.91'	331.20'	2053427.83	5988886.51
⑧	2200.00'	08°37'32"	165.91'	331.20'	2054399.89	5984594.03

DESIGN SPEED = 55 MPH
POSTED SPEED = 45 MPH

GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

SHEET 2 OF 2

GEOMETRIC APPROVAL DRAWING
PREFERRED ALTERNATIVE
HIGHWAY 1 / CALERA PARKWAY PROJECT
FROM 1,500 FEET SOUTH OF FASSLER AVENUE TO APPROXIMATELY 2,300 FEET NORTH OF REINA DEL MAR AVENUE

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618 WALNUT STREET, SUITE 204
SAN CARLOS, CA 94070 (650) 363-8277

BRAD LEVEEN
REGISTERED CIVIL ENGINEER
No. 52500 Exp. 12/31/14 CIVIL STATE OF CALIFORNIA

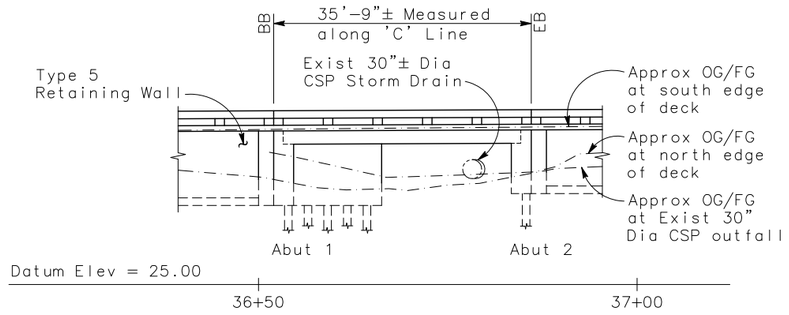
EA NO. 04-254600
SHEET 2 OF 2
DESIGNED BY LD
CHKD BY KA
DATE 7/8/13
SCALE 1"=140'

PREPARED FOR THE STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT
04	SM	1	

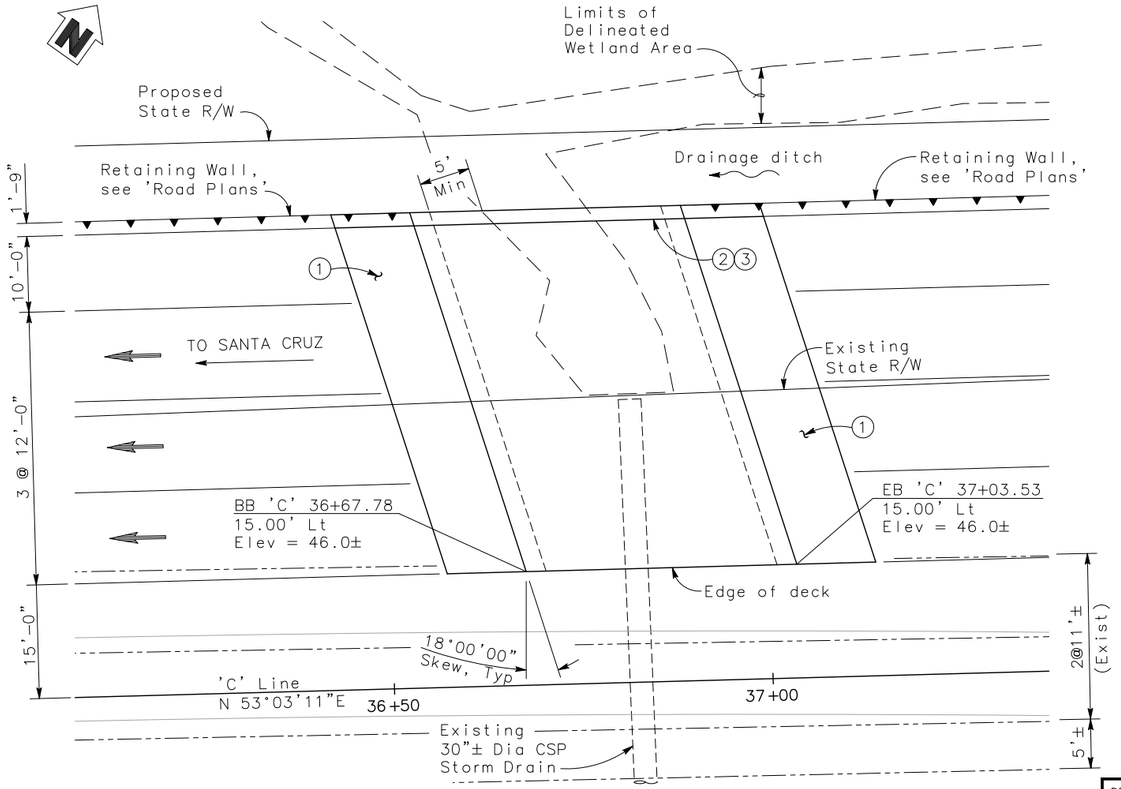
SAN MATEO COUNTY TRANSPORTATION AUTHORITY
1250 SAN CARLOS AVENUE
SAN CARLOS, CA 94070

MARK THOMAS & COMPANY, INC.
618 WALNUT STREET, SUITE 204
SAN CARLOS, CA 94070



MIRRORED ELEVATION
1" = 10'

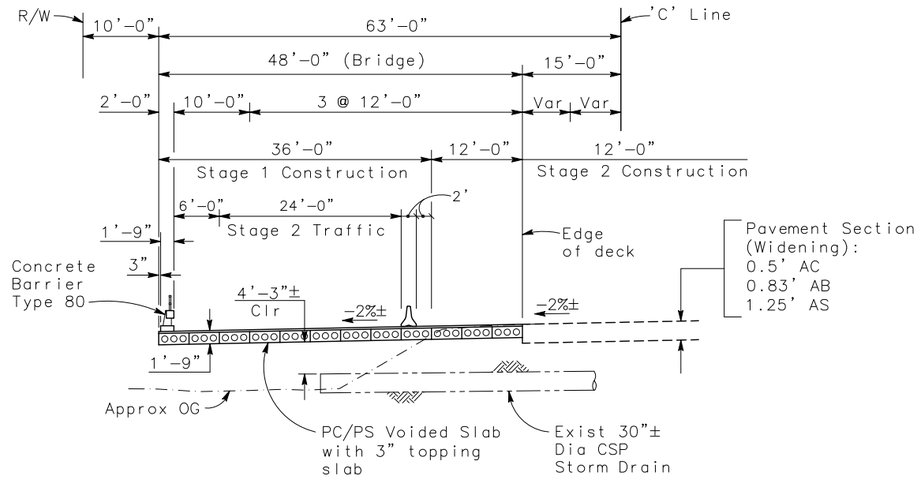
Note:
Abutment foundations are supported on Caltrans standard Class 90 (Alt X) driven piles.



PLAN
1" = 10'

LEGEND

1. Approach Slab Type EQ(10)
2. Paint "Calera Wetlands Protection Structure"
3. Paint "Bridge No. __-____" and year completed



TYPICAL SECTION
1" = 10'

PLANNING ESTIMATE

Date of Estimate	7/9/10
Structure Depth	=1.75 FT
Length	=35.75 FT
Width	=48.00 FT
Area	=1,716 SQ FT
Cost/sq ft including 10% Mobilization & 25% Contingency	$315/SQ FT
Total Cost	=$541,000

VEHICULAR TRAFFIC

1. ✓ Widening. Traffic adjacent to the site.
2. ___ Traffic will be detoured away from the site.
3. ___ Traffic will be carried on the structure. Stage construction will not be required.
4. ___ Traffic will pass under the structure on _____ (Name of St. or Hwy.)
   - A. ___ No falsework allowed over traffic
   - B. ___ Falsework opening(s) required:

	Temporary Vertical Clearance	Width of Traffic Opening	Width of Falsework Opening
___ Bnd.			
___ Bnd.			
___ Two-way			

   - C. ✓ Temporary traffic lane reduction needed for bridge construction.

PREFERRED ALTERNATIVE

DESIGNED BY	T. WALKER	DATE	7/09/10
DRAWN BY	T. WALKER	DATE	7/09/10
CHECKED BY	P. CHEN	DATE	7/09/10
APPROVED		DATE	

TOM WALKER
PROJECT ENGINEER

PLANNING STUDY
CALERA WETLANDS PROTECTION STRUCTURE

BRIDGE NO.	CU
SCALE: AS SHOWN	EA 04-254600

DESIGN OVERSIGHT

SIGN OFF DATE

TIME PLOTTED => $TIME
DATE PLOTTED => $DATE
USERNAME => $USER
FILE => $REQUEST

ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV. 6/01/09)
W:\SMCTA-57-0256B-DMJM JV-HIGHWAY 1 CALERA PKWY\STRUCTURES\APS\CALERA APS LANDSCAPE MEDIAN 07-07-10.DWG 7/27/2010 2:21:06 PM

Attachment D

Preferred Alternative
Project Report Cost Estimate

DIST - CO - RTE	04-SM-01
PSR, PR, etc.:	PR
Program Code:	
PM:	41.7 / 43.0
EA:	04-254600
PP No. :	

Project Description:

Limits: 1,500 feet south of Fassler Avenue/Rockaway Beach Avenue (PM 41.7) to 2,300 feet north of Reina Del Mar Avenue (PM 43.0)

Proposed Improvements: -Widen NB Highway 1 to accommodate a new third lane from 1,500 feet south of Fassler Avenue to 2,300 feet north of Reina Del Mar Avenue. Widen SB Highway 1 to accommodate a new third lane from 1,300 feet north of Reina Del Mar Avenue to Fassler Avenue.
-Construct approximately 4,100 feet of retaining walls to retain the hillside and embankment and prevent encroachment into environmentally sensitive areas. Install a bridge structure along SB Hwy 1, over a portion of existing wetland. Provide continuous sidewalk along Harvey Way for pedestrian access continuity between Fassler Avenue and Reina Del Mar Avenue.
-Construct a 16-foot wide landscaped median with concrete barrier on both sides for approximately 1800 feet between San Marlo Way and Reina Del Mar Avenue.
-Mitigate for impacts to existing sensitive species habitat by establishing off-site habitat restoration and preservation outside the State right-of-way.

Alternate: Preferred Alternative

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	$24,150,000
TOTAL STRUCTURE ITEMS	$550,000
SUBTOTAL CONSTRUCTION COST	$24,700,000
TOTAL RIGHT OF WAY ITEMS	$7,070,000
ENVIRONMENTAL MITIGATION	$3,200,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	**$35,000,000**

Reviewed by SMCTA Program Manager _____ (Signature) 7-25-13 (Date)

Approved by Project Manager _____ (Signature) 7/26/13 (Date)

Phone No. (650) 363-8277

DIST - CO - RTE	**04-SM-01**
PSR, PR, etc.:	**PR**
Program Code:	
PM:	**41.7 / 43.0**
EA:	**04-254600**
PP No. :	

I. ROADWAY ITEMS

	Quantity	Unit	Unit Price	Unit Cost	Section Cost
Section 1 - Earthwork					
Imported Borrow					
Roadway Excavation	220,200	CY	$12	$2,642,400	
Clearing & Grubbing	1	LS	$100,000	$100,000	
Develop Water Supply	1	LS	$20,000	$20,000	
				Total Earthwork	$2,763,000
Section 2 - Structural Section					
Hot Mix Asphalt	14,730	TON	$90	$1,325,700	
OGFC	5,200	TON	$95	$494,000	
Rubberized HMA (Gap Graded)	7,200	TON	$95	$684,000	
Asphalt Treated Permeable Base	2,600	CY	$150	$390,000	
Aggregate Base	8,060	CY	$35	$282,100	
Aggregate Subbase	15,000	CY	$15	$225,000	
Cold Plane AC Pavement	19,000	SQYD	$3	$57,000	
Edge Drains	1	LS	$80,000	$80,000	
				Total Structural Section	$3,538,000
Section 3 - Drainage					
Large Drainage Facilities	1	LS	$60,000	$60,000	
Storm Drains	7,000	LF	$90	$630,000	
Pumping Plants					
Drainage Inlets / Manholes / RSP	61	EA	$1,520	$92,720	
Project Drainage					
				Total Drainage	$783,000

DIST - CO - RTE	**04-SM-01**
PSR, PR, etc.:	**PR**
Program Code:	
PM:	**41.7 / 43.0**
EA:	**04-254600**
PP No. :	

	Quantity	Unit	Unit Price	Unit Cost	Section Cost
Section 4 - Specialty Items					
Retaining Wall (Soil Nail)	6,100	SF	$90	$549,000	
Retaining Wall (Type 1 & Type 5)	26,300	SF	$100	$2,630,000	
Concrete Barrier / Guardrails	9,600	LF	$85	$816,000	
Conc Sidewalk, C&G & Median	44,000	SF	$8	$352,000	
Chain Link Fence/Railings	3,700	LF	$15	$55,500	
Construction Water Pollution Control	1	LS	$690,000	$690,000	
Aerially Deposited Lead (ADL)	16,000	CY	$100	$1,600,000	
Resident Engr Office Space	1	LS	$80,000	$80,000	
				Total Specialty Items	$6,773,000
Section 5 - Traffic Items					
Lighting	1	LS	$200,000	$200,000	
Traffic Signals & Interconnect	2	EA	$300,000	$600,000	
Roadside Signs	1	LS	$200,000	$200,000	
Traffic Operation System	1	LS	$40,000	$40,000	
Traffic Striping	52,000	LF	$2	$104,000	
Temporary K-Rail	1	LS	$410,000	$410,000	
Traffic Control Systems	1	LS	$250,000	$250,000	
Stage Construction	1	LS	$200,000	$200,000	
Transp Mngmnt Plan Elements	1	LS	$295,000	$295,000	
				Total Traffic Items	$2,299,000
Section 6 - Planting and Irrigation					
Highway Planting & Irrigation	1	LS	$260,000	$260,000	
Replacement Planting	1	LS	$300,000	$300,000	
3-Year Plant Establishment Period	1	LS	$120,000	$120,000	
Irrigation Crossovers	1	LS	$120,000	$120,000	
				Subtotal Planting and Irrigation Section	$800,000
Section 7 - Roadside Management and Safety Section					
Miscellaneous Paving					
Erosion Control/Treatment BMPs	1	LS	$700,000	$700,000	
Side Slopes/Embankment Slopes					
Maintenance Vehicle Pull outs					
Access Facilities (Gates, Stairways)	1	LS	$30,000	$30,000	
				Subtotal Roadside Management and Safety Section	$730,000
				TOTAL SECTIONS: 1 thru 7	$17,686,000

DIST - CO - RTE	**04-SM-01**
PSR, PR, etc.:	**PR**
Program Code:	
PM:	**41.7 / 43.0**
EA:	**04-254600**
PP No. :	

				Unit Cost	Section Cost
Section 8 - Minor Items					
Subtotal Sections 1 - 7	$17,686,000	X	5%	$884,300	
			TOTAL MINOR ITEMS:		$885,000
Section 9 - Roadway Mobilization					
Subtotal Sections 1 - 7	$17,686,000				
Minor Items	$885,000				
Sum	$18,571,000	X	10%	$1,857,100	
			TOTAL ROADWAY MOBILIZATION		$1,858,000
Section 10 - Roadway Additions					
Supplemental Work					
Subtotal Sections 1 - 7	$17,686,000				
Minor Items	$885,000				
Sum	$18,571,000	X	5%	$928,550	
Contingencies					
Subtotal Sections 1 - 7	$17,686,000				
Minor Items	$885,000				
Sum	$18,571,000	X	15%	$2,785,650	
			TOTAL ROADWAY ADDITIONS		$3,715,000
			TOTAL ROADWAY ITEMS (Total of Sections 1 - 10)		$24,150,000

Estimate Prepared By:	Karsten Adam	(650) 363-8277	06/06/13
	(Print Name)	(Phone)	(Date)

Estimate Checked By:	Brad Leveen	(650) 363-8277	06/06/13
	(Print Name)	(Phone)	(Date)

DIST - CO - RTE	**04-SM-01**
PSR, PR, etc.:	**PR**
Program Code:	
PM:	**41.7 / 43.0**
EA:	**04-254600**
PP No. :	

II. STRUCTURES ITEMS

Bridge Name	Calera Wetlands Protection Structure			
Structure Type	PC/PS Voided Slab			
Width - out to out (ft)	48.00			
Span Length (ft)	35.8			
Total Area (ft^2)	1,716			
Footing Type (pile/spread)	Pile			
Cost per Sq. Ft.	$315			
Including: Mobilization: 10% Contingency: 25%				
Retrofit Exist OC				
Total Cost For Structure	$550,000			

TOTAL STRUCTURES ITEMS $550,000

COMMENTS:

Estimate Prepared By:	Karsten Adam	(650) 363-8277	06/06/13
	(Print Name)	(Phone)	(Date)

DIST - CO - RTE	**04-SM-01**
PSR, PR, etc.:	**PR**
Program Code:	
PM:	**41.7 / 43.0**
EA:	**04-254600**
PP No. :	

III. RIGHT OF WAY

Right-of-Way estimates should consider the probable highest and best use and type and intent of improvements at the time of acquisition. Assume acquisition including utility relocation occurs at the right of way certification milestone as shown in the Funding and Scheduling Section of the PSR. For further guidance see Chapter 1, Caltrans Right of Way Procedural Handbook.

	Current Values (Future Use)	Escalation Rate (%/yr)	Escalated Value
Acquisition, including excess lands and damages to remainders	$3,481,385	0.0%	$3,481,385
Utility Relocation (State/Local Share)	$2,201,750	0.0%	$2,201,750
Relocation Assistance	$75,000	0.0%	$75,000
Clearance / Demolition	$50,000	0.0%	$50,000
R//W Services - Title and Escrow Fees	$84,000	0.0%	$84,000

TOTAL RIGHT OF WAY (CURRENT VALUE)	$5,892,000	TOTAL ESCALATED RIGHT OF WAY	$5,892,000
TOTAL RIGHT OF WAY (CURRENT VALUE) 20% Contingency	$7,070,000	TOTAL ESCALATED RIGHT OF WAY 20% Contingency	$7,070,000

Estimate Prepared By:	Karsten Adam (Print Name)	(650) 363-8277 (Phone)	06/06/13 (Date)

Attachment E

Preferred Alternative
Right of Way Data Sheet

To: District Office Chief
R/W Local Public Agency Services

Date: April 8, 2013

Co. SM Rte. 1 PM 41.7/43.0

Attention: Kristin L. Schober, District Branch Chief Local Programs
Local Public Agency Services

Expense Authorization 04-254600

Subject: **RIGHT OF WAY DATA SHEET- LOCAL PUBLIC AGENCY SERVICES – PREFERRED ALTERNATIVE**

Project Description: Highway 1 / Calera Parkway Project – Preferred Alternative

Right of way necessary for the subject project will be the responsibility of the **San Mateo County Transportation Authority**.

The information in this data sheet was developed by Mark Thomas & Company / Associated Right of Way Services, Inc.

I. *Right of Way Engineering*

Will right of way engineering be required for this project?

- No
- Yes X (Submit a copy of the *Right of Way Engineering, Surveys and Mapping Services checklist for Special Funded Projects.* This checklist includes but is not limited to the following items.

(The following items will be provided during the PA/ED and PS&E phase.)

- Hard copy (base map) X
- Appraisal map X
- Acquisition Documents X
- Property Transfer Documents X
- R/W Record Map X
- Record of Survey X

II. *Engineering Surveys*

1. Is any surveying or photogrammetric mapping required?

   No _____ Yes X (Complete the following)

2. Datum Requirements

   Yes X Project will adhere to the following criteria.
   - Horizontal - datum policy is NAD 83, CA-HPGN, EPOCH 1991.35.
   - Vertical - datum policy is NAVD 88.
   - Units - English is required.

   No _____ Provide an explanation on additional page.

3. Will land survey monument perpetuation be scoped into the project, if required?

   Yes X

   No _____ Provide explanation on additional page.

III. ***Parcel Information (Land and Improvements)***

Are there any property rights required within the proposed project limits?

No _____ Yes __X__ (Complete the following)

	Part Take	Full Take	Estimate $
A. Number of Vacant Land Parcels	6	9	$ 1,837,728
B. Number of Single Family Residential Units	3	0	$ 71,735
C. Number of Multi-Family Residential Units	0	0	$ 0
D. Number of Commercial/Industrial Parcels	3	2	$1,359,246
E. Number of Farm/Agricultural Parcels	0	0	$ 0
F. Reimbursement of Grantor's Appraisal Expenses ($5,000 per First Offer)	0	0	$ 0*
G. Number of Permanent and/or Temporary Easements not already counted above	3	0	$ 69,964
H. Other Parcels (define in "Remarks" Section)	1	0	$ 142,712
Totals	16	11	$ 3,481,385
Totals with 20% contingency			$ 4,177,661

*Reimbursement of Grantor's appraisal expenses have already been factored into the overall estimate.

1) On the west side of Highway 1 there are a total of 12 parcels affected. Between Rockaway Beach Avenue and San Marlo Way there are full takes of 11 Assessor's parcels. The southernmost of these parcels (APN 022-022-200) is owned by the State of California. Two of these Assessor's parcel takes are improved with commercial buildings: 1) APN 022-022-120 is improved with an occupied restaurant/office/residential structure; and 2) APN 022-022-190 is improved with a restaurant structure (vacant Kentucky Fried Chicken). North of San Marlo Way there is a partial take of a strip of vacant "Special Area" (per City General Plan) land (APN 018-150-150) planned for a variety of uses. This parcel also requires Temporary Construction Easement (TCE).

2) On the east side of Highway 1 north of Fassler Avenue there are a total of 15 parcels affected. One of these parcels (Parcel 28797) is owned by the State of California. A fee take from an improved church property (APN 018-140-090) is listed under the "Other Parcels" section (Section H) shown above. TCE was assumed for three of the affected parcels.

3) None of the parcels will be considered critical or sensitive under the current engineering plans provided by the engineers of the project.

Table of parcel acquisitions:

Item #	Assessor's Parcel #	Property Information	Land Use/Type	Acquisition
1	022-022-030	s/w corner Hwy 1/San Marlo Way	Vacant	Full
2	022-022-060	adjacent to 4408 Cabrillo Highway	Vacant	Full
3	022-022-070	adjacent to 4408 Cabrillo Highway	Vacant	Full
4	022-022-190	4408 Coast Highway	Vacant Restaurant	Full
5	022-022-100		Vacant	Full
6	022-022-110		Vacant	Full
7	022-022-120	4430 Coast Highway	Store/Residential	Full
8	022-022-130		Vacant	Full
9	022-022-140		Vacant	Full
10	022-022-150		Vacant	Full
11	022-022-200	n/w corner Hwy 1/Rockaway Beach Ave (State of California)	Vacant	Full
12	022-031-180	451 Harvey Way	Commercial	Partial
13	022-031-190	439 Harvey Way	Residential	Partial
14	022-031-340	427 Harvey Way	Commercial	Partial
15	022-031-330	419 Harvey Way	Commercial	Partial
16	022-031-240	411 Harvey Way	Residential	Partial
17	022-031-250	407 Harvey Way	Residential	Partial
18	022-031-260		Vacant	Partial
19	018-150-150	adjacent to SB Hwy 1, n/o San Marlo Way	Vacant	Partial + TCE
20	018-140-090	adjacent to NB Hwy 1, n/o Harvey Way	Church	Partial + TCE
21	018-140-230	adjacent to NB Hwy 1, n/o Church Property	Vacant	Partial + TCE
22	018-140-060	4320 Coast Hwy	Store Building	Partial
23	018-140-070	4300 Coast Hwy	Office Building	Partial
24	018-140-050	4275 Coast Hwy	Lumber Yard	Partial
25	018-140-470	adjacent to NB Hwy 1, n/o Lumber Yard	Vacant	Partial
26	018-140-460	adjacent to NB Hwy 1, n/o Lumber Yard	Vacant	Partial
27	Parcel 28797	State of California	Vacant	Partial + TCE

IV. ***Dedications***

Are there any property rights which have been acquired, or anticipate will be acquired, through the "dedication" process for the Project?

No X Yes ____ (Complete the following)

Number of dedicated parcels: N/A

Have the dedication parcel(s) been accepted by the municipality involved? N/A

V. ***Excess Lands / Relinquishments***

Are there Caltrans property rights which may become excess lands or potential relinquishment areas?

No X Yes _____ (Provide an explanation on additional page.)

VI. ***Relocation Information***

Are relocation displacements anticipated?

No _____ Yes X (Complete the following)

A. Number of Single Family Residential Units Estimated RAP Payments	1	$ 50,000
B. Number of Multi-Family Residential Units Estimated RAP Payments	0	$ 0
C. Number of Business/Nonprofit Estimated RAP Payments	1	$ 25,000
D. Number of Farms Estimated RAP Payments	0	$ 0
E. Other (define in the "Remarks" section) Estimated RAP Payments	0	$ 0
Totals	2	$ 75,000
Totals with 20% contingency		$ 90,000

Please Note: APN 022-022-120 has two structures that constitute a restaurant/office/residential use. Relocation for this parcel involves: 1) restaurant/office use and 2) single family residential use, for the same parcel. APN 022-022-190 is another improved property (restaurant) but is vacant and therefore it is assumed not to require relocation.

VII. ***Utility Relocation Information***

Anticipate any utility facilities or utility rights of way to be affected?

No _____ Yes __X___ (Complete the following)

{PRIVATE **}**

Facility	Owner	Estimated Relocation Expense: State Obligation	Local Obligation	Utility Owner Obligation
A. 8" Sewer (Line 1-B)	City of Pacifica	$ 0	$ 90,000	$ 0
B. 4" Gas (Lines 2-A , 2-Q and 1-D)	PG&E	$ 0	$ 785,500	$ 785,500
C. Electric (Lines 2-C, 2-J, 2-U and 1-C)	PG&E	$ 0	$ 111,500	$ 111,500
D. OH TV (Lines 2-D, 2-K and 2-V)	Comcast	$ 0	$ 0	$ 76,400
E. Underground Telephone (Line 2-I)	AT&T	$ 0	$ 177,750	$ 177,750
F. 12" Gravity Sewer Line (Line 2-M)	City of Pacifica	$ 0	$ 240,000	$ 0
G. 18" Water Line (Line 2-N)	NCCWD	$ 0	$ 251,000	$ 0
H. 24" Sewer Force Main (Line 2-O)	City of Pacifica	$ 0	$ 340,000	$ 0
I. 12" Recycled Water (Line 2-W)	NCCWD	$ 0	$ 150,000	$ 0
J. 8" Water (Line 2-Y)	NCCWD	$ 0	$ 55,000	$ 0
Totals		$ 0	$ 2,201,750	$ 1,152,150
Totals with 20% contingency			$ 2,642,100	$ 1,382,580

Additional information concerning utility involvement on this project? **Anticipated utility relocations listed above are described in the Utility Encroachment Policy Exceptions Report. Please refer to the Utility Encroachment Policy Exceptions Report for detailed description and exhibits of proposed utility relocations.**

VIII. ***Rail Information***

Are railroad facilities or railroad rights of way affected?

No __X___ Yes _____ (Complete the following)

IX. ***Clearance Information***

Are there improvements that require clearance?

No ____ Yes __X__ (Complete the following)

A. Number of Structures to be Demolished	3
Estimated Cost of Demolition	$50,000
Estimated Cost of Demolition with 20% contingency	$60,000

X. ***Hazardous Materials/Waste***

Are there any site(s) and/or improvements(s) in the Project Limits that are known to contain *hazardous materials*? None __X__ Yes ____ (Explain in the "Remarks" section)

Are there any site(s) and/or improvement(s) in the Project Limits that are suspected to contain *hazardous waste*? None ____ Yes __X__ (Explain in the "Remarks" section)

XI. ***Project Scheduling***

	Proposed lead time	Completion date
Preliminary Engineering, Surveys	6 (months)	Dec 2013
R/W Engineering Submittals	4 (months)	Feb 2014
R/W Appraisals/Acquisition	18 (months)	June 2015
Proposed Environmental Clearance		May 2013
Proposed R/W Certification		July 2015

XII. ***Proposed Funding***

	Local[++]	State[++]	Federal[++]	Other[++]
Acquisition	$ 4,177,661	$	$	$
Utilities	$ 2,642,100	$	$	$
Relocation Assistance Program	$ 90,000	$	$	$
Clearance/Demolition	$ 60,000	$	$	$
R/W Services (Title & Escrow Fees)	$ 100,800	$	$	$
R/W Support Cost (Eng. Appraisals, etc.)	$ 500,000	$	$	$

[++] Proposed funding for Right of Way as shown includes 20% contingency, is for current value and has not been escalated.

XIII. ***Remarks:***

It is anticipated that the areas adjacent to Highway1 may contain elevated levels of aerially deposited lead. The lead levels in surface soils along highways can reach concentrations in excess of the hazardous waste threshold, requiring disposal at either a Class I landfill or on-site stabilization.

Potential impacts are anticipated at Vallemar Beacon, Pacifica Alliance & others (Active Station) located at 2095 Coast Hwy and also at a former gas service station located at 4460 Coast Hwy.

Other potential hazardous materials within the project limits that may require testing are naturally occurring asbestos from sheared rock containing serpentinite, dust and weed suppression chemicals from the former Ocean Shore Railroad (Vallemar Station – 2125 Coast Hwy), asbestos containing material from the buildings located on parcels at 4408 and 4430 Coast Hwy which are to be demolished following acquisition and ground water monitoring wells located within the project limits that should be properly abandoned and/or relocated in coordination with the San Mateo Department of Environmental Health.

Project Sponsor Consultant	Project Sponsor	R/W Professional (ie: qualified consultant or agency)
Prepared by:	Reviewed and Approved by:	Reviewed and Approved by:
Mark Thomas & Co. Inc.	San Mateo County Transportation Authority	Associated Right of Way Services, Inc.
Brad Leveen, Project Manager	Joseph M. Hurley, SMCTA Program Director	Steve Castellano, SR/WA Right of Way Consultant
4/16/13 Date	4-17-13 Date	4/11/13 Date

Caltrans
Reviewed and approved based on information provided to date:

Kristin L. Schober — 7/24/13
Date

Kristin L. Schober
Caltrans District Branch Chief
Local Public Agency Services
Division of Right of Way

Attachment F

TMP Data Sheet, Request for TMP Data Sheet, Staging Concept Display

State of California **Business, Transportation and Housing Agency**

Memorandum

To: Project File **Date: 4/09/2013**

From: **Brad Leveen (Mark Thomas & Co., Inc.) / Amir Sanatkar (Caltrans)**

Subject: REQUEST FOR TRANSPORTATION MANAGEMENT PLAN DATA SHEET

Project Data

CALTRANS PROJECT MANAGER (Name) Mohammad Suleiman	(Calnet#) (510) 622-5943
CALTRANS PROJECT ENGINEER (Name) Amir Sanatkar	(Calnet#) (510) 622-8826
DIST-EA: 04-254600 PROGRAM (HB1, HE11, etc.): HB4N (Local & RIP)	
PROJECT COMMON NAME Highway 1 Calera Parkway Widening	
CO-RTE-PM (KP): SM-1-41.7/43.0	
LEGAL DESCRIPTION: SR 1 – Fassler to West Port Drive Widening	
DETAILED WORK DESCRIPTION: Widen Highway 1 from 4 lanes to 6 lanes by adding a lane in each direction. Storage for SB left turn-lanes would be increased, while inside and outside shoulders would be widened. Old County Road would be converted into a cul-de-sac near the Rockaway Beach Avenue intersection. Pedestrian/Bike facilities would be reconstructed or improved upon by widening and/or providing greater separation from Highway 1. Overall improvements would include retaining walls, traffic signals, lighting, a bridge widening over wetlands, utility relocations and drainage system improvements.	
CONSTRUCTION COST ESTIMATE: $34,600,000	
PROJECT PHASE: PSR □ PR ✓ PS&E □	

Traffic Impact Description

A) The Project includes the following:
(Check applicable type of facility closures)

- ✓ Highway or freeway lanes
- ✓ Highway or freeway shoulders
- □ Freeway connectors
- □ Freeway off-ramps
- □ Freeway on-ramps
- ✓ Local streets

B) Major operations requiring traffic control and working days for each

	Operation	# of working days
√	Clearing and grubbing	10
√	Existing feature removal	20
√	Excavation of embankments construction	40
√	Structural section construction	30
√	Drainage feature construction	10
√	Structures construction	20
√	MBGR/Barrier construction	10
√	Striping	10
√	Electrical component construction	10
√	Other	10
	Total days requiring traffic control	100

C. Project staging description and # of working days required per stage:

Stage Description	# of working days per stage
1. Demo existing Hwy 1 median barrier & pave	15
2. Stage 1 (Shift NB & SB traffic east, build west)	165
3. Stage 2 (Shift NB & SB traffic west, build east)	140
4. Stage 3 (Shift NB traffic east, build median)	60
Total construction days	380

D. Have you considered any construction strategies that can restore existing number of lanes?

- ☐ Temporary Roadway Widening Structure Involvement?
  Yes _____ No __√__ if "yes", notify Project Manager
- √ Lane Restriping (Temporary narrow lane widths)
- ☐ Roadway Realignment (Detour around work area)
- √ Median and/or Right Shoulder Utilization
- ☐ Use of HOV lane as a Temporary Mixed Flow Lane
- ☐ Staging alternatives (Explain below)

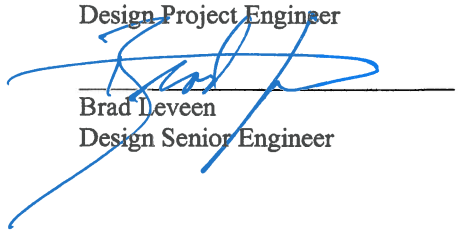
Attachments

- Title Sheet
- Typical Cross Section
- Layouts
- Staging or Traffic Handling Plan
- Draft PSR/PR
- Back up calculations for Section B.

Note: At this time, only a draft staging concept display and draft PR are available for this Request for TMP data sheet.

Karsten Adam
Design Project Engineer

(650) 363-8277
Contact Phone Number



Brad Leveen
Design Senior Engineer

(650) 363-8277
Contact Phone Number

TRANSPORTATION MANAGEMENT PLAN DATA SHEET

For Major TMP Projects

District EA: 04-254600 Co-Rte-MP: SM-1-41.7/43.0
Project Limit: Highway 1 from 1,500' south of Fassler Ave to 2,300' north of Reina Del Mar Ave
Project Description: Pacifica Highway 1 Calera widening project

Caltrans Project Manager: Mohammad Suleiman Phone Number: (510) 622-5943

A) Does the proposed project includes long term closures (> 24 hours) Yes __ No √
[(Check Applicable Facilities. If "No", Continue to Item D (Preliminary TMP Elements and Costs.)]

- □ Freeway Lanes
- □ Freeway Shoulder
- □ Freeway Connectors
- □ Freeway Off-ramps
- □ Freeway On-ramps
- □ Local Streets
- □ Full Freeway Closures

B) Are there any construction strategies that can restore existing number of lanes?
(Check Applicable Strategies) __

- □ Temporary Roadway Widening Structure Involvement?
  Yes __ No √__ If yes, notify Project Manager
- ☒ Lane Restriping (Temporary Narrow Lane Widths)
- □ Roadway Realignment (Detour Around Work Area)
- ☒ Median and/or Right Shoulder Utilization
- □ Use of HO V lane as a Temporary Mixed Flow Lane
- □ Staging Alternatives (Explain Below)

Notes:

_____

_____

_____

C) Calculated Delays (To be performed if construction strategies in Item B do not mitigate congestion resulting from Item A

1. Estimated Maximum Individual Vehicle Delay _____Minutes
2. Existing or Acceptable Individual Vehicle Delay _____Minutes
3. Estimated Individual Vehicle Delay Requiring Mitigation
   [(l) - (2)] _____Minutes
4. Estimated Delay Cost (Most Applicable)
   - □ Extended Weekend Closure $_____
   - □ Weekly (7 days) $_____
5. Estimated Duration of Project Related Delays $_____
6. Cost of Construction Related Delays [(4 X 5)] $_____

D) Preliminary TMP Elements and Cost

1. Public Information **OUTREACH**
   - ☒ a. Brochures and Mailers $ 5,000
   - ☒ b. Press Release $ 5,000
   - ☒ c. Paid Advertising $ 5,000
   - ☐ d. Public Information Center/Kiosk $ _____
   - ☒ e. Public Meeting/Speakers Bureau $ 5,000
   - ☒ f. Telephone Hotline $ 5,000
   - ☒ g. Internet $ 5,000
   - ☒ h. Notification to impacted groups $ 5,000
     (Bicycle users, Pedestrians with disability, others.)
   - ☒ i. Others Miscellaneous Outreach $ 10,000

   TOTAL$ 45,000

2. Motorists Information strategies **MESSAGE SIGNS**
   - ☐ a. Changeable Message Signs (Fixed) $ _____
   - ☒ b. Changeable Message Signs (Portable) $ 40,000
   - ☒ c. Ground Mounted Signs $ 50,000
   - ☐ d. Highway Advisory Radio $ _____
   - ☐ e. Caltrans Highway Information Network (CHIN) $ _____
   - ☐ f. Revised Transit Schedules/maps $ _____
   - ☐ g. Others _____ $ _____

   TOTAL$ 90,000

3. Incident Management **COZEEP & VIDEO/SURVEILLANCE**
   - ☒ a. Construction or Maintenance Zone Enhanced Enforcement Program (COZEEP OR MAZEEP) $ 50,000
   - ☐ b. Freeway Service Patrol $ _____
   - ☐ c. Traffic Management Team $ _____
   - ☐ d. New CCTV's and Detectors $ _____
   - ☐ e. Others _____ $ _____

   TOTAL$ 50,000

4. Construction Strategies (In Addition to Elements Identified on Item B)
   - ☐ a.. Off Peak/Night/Weekend Work (Lane Closure Charts)
   - ☐ b. Reversible Lanes $ _____
   - ☐ c. Total Facility Closure $ _____
   - ☐ d. Extended Weekend Closure $ _____
   - ☐ e. Truck Traffic Restrictions $ _____
   - ☐ f. Reduced Speed Zone $ _____
   - ☐ g. Connector and Ramp Closures $ _____

- ☐ h. Incentive and Disincentive $ _____
- ☐ i. Moveable Barrier $ _____
- ☒ j. Others Construction Area Signs $ 110,000

TOTAL$ 110,000

5. Demand Management
   - ☐ a. HOV Lanes/ramps (New or Convert) $ _____
   - ☐ b. Park and Ride Lots $ _____
   - ☐ c. Rideshare Incentives $ _____
   - ☐ d. Variable Work Hours $ _____
   - ☐ e. Telecommute $ _____
   - ☐ f. Ramp Metering (New Installation) $ _____
   - ☐ g. Ramp Metering (Maintain Existing) $ _____
   - ☐ h. Others _____ $ _____

TOTAL$ 0

6. Alternate Route Strategies
   - ☐ a. Add Capacity to Freeway Connector $ _____
   - ☐ b. Street Improvement (widening, traffic signal...etc) $ _____
   - ☐ c. Traffic Control Officers $ _____
   - ☐ d.. Parking Restrictions
   - ☐ e. Others _____ $ _____

TOTAL$ 0

7. Other Strategies
   - a. Application of New Technology $ _____
   - b. Others _____ $ _____

TOTAL ESTIMATED COST OF TMP ELEMENTS = $ 295,000

Notes:

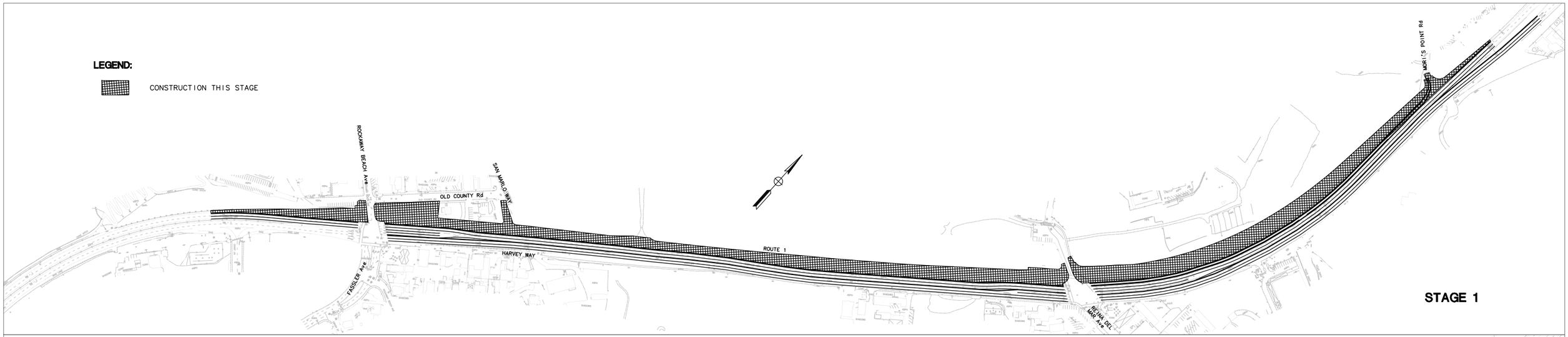
PREPARED BY: Brad Leveen DATE: 4/09/2013

APPROVAL
RECOMMENDED BY: M. Sellman, PM DATE: 7/23/13

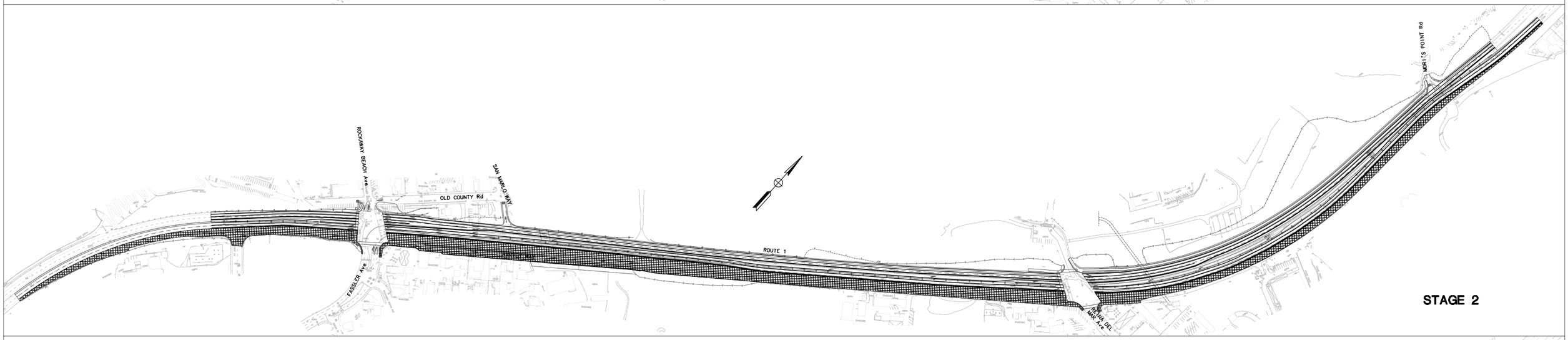
APPROVED BY: Randall Ha DATE: 7/23/13

LEGEND:

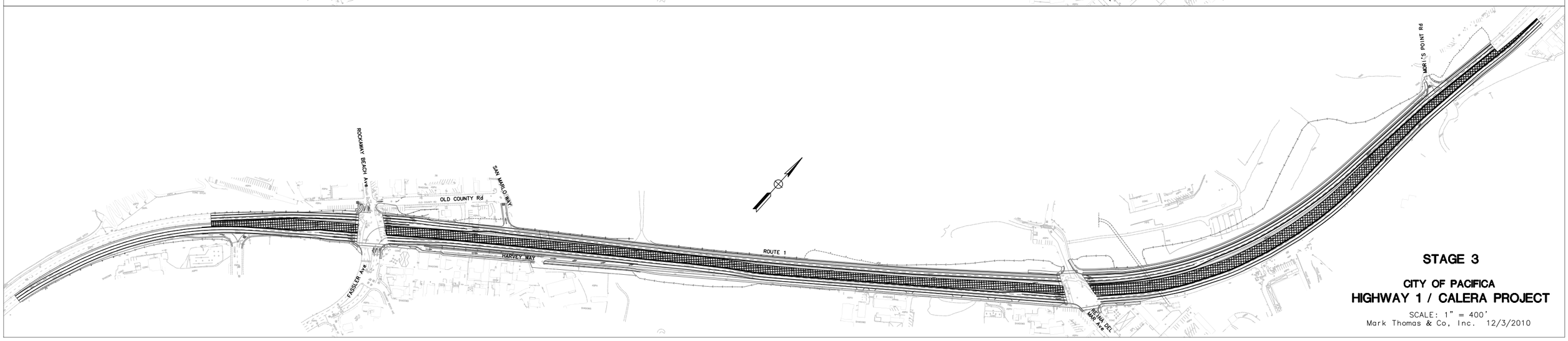
CONSTRUCTION THIS STAGE



STAGE 1



STAGE 2



STAGE 3

CITY OF PACIFICA

HIGHWAY 1 / CALERA PROJECT

SCALE: 1" = 400'

Mark Thomas & Co, Inc. 12/3/2010

Attachment G

Draft PS&E Cooperative Agreement

COOPERATIVE AGREEMENT
State Independent Quality Assurance (IQA)

This Agreement, effective on _____, is between the State of California, acting through its Department of Transportation, referred to as CALTRANS, and:

San Mateo County Transportation Agency, a political subdivision of the State of California, referred to hereinafter as SMCTA.

RECITALS

1. PARTNERS are authorized to enter into a cooperative agreement for improvements to the state highway system (SHS) per the California Streets and Highways Code sections 114 and 130.

2. For the purpose of this Agreement, State Route 1 (SR 1) Calera Parkway Project proposes to widen SR 1 from 4 to 6 lanes from south of Fassler Avenue to north of Reina Del Mar Avenue in the City of Pacifica, in San Mateo County, referred to hereinafter as PROJECT.

3. All responsibilities assigned in this Agreement will be referred to hereinafter as OBLIGATIONS.

4. This Agreement includes the following PROJECT COMPONENTS:
   - Plans, Specifications, and Estimate (PS&E)

5. This Agreement is separate from and does not modify or replace any other cooperative agreement or memorandum of understanding between PARTNERS regarding the PROJECT.

6. CALTRANS is preparing or is causing to be prepared an Environmental Impact Report pursuant to CEQA and an Environmental Assessment pursuant to NEPA and will be completed in August 2013. PS&E cannot proceed without an approved final Environmental Document.

7. In this Agreement capitalized words represent defined terms and acronyms.

8. PARTNERS hereby set forth the terms, covenants, and conditions of this Agreement, under which they will accomplish OBLIGATIONS.

RESPONSIBILITIES

9. SMCTA is SPONSOR for 100% of PROJECT.

10. SMCTA is the only FUNDING PARTNER for this Agreement. SMCTA will fund work activities using local fund sources. -PARTIES agree to amend this Agreement prior to the expenditure of state or federal funds.

11. SMCTA is the IMPLEMENTING AGENCY for:
    - Plans, Specifications, and Estimate (PS&E)

12. CALTRANS is the CEQA lead agency for PROJECT.

13. CALTRANS is the NEPA lead agency for PROJECT.

14. CALTRANS will provide Independent Quality Assurance (IQA) for the portions of WORK within existing and proposed SHS right-of-way. Per NEPA assignment and CEQA statutes, CALTRANS will perform its QC/QAP process review for environmental documentation.

SCOPE

Scope: General

15. SMCTA will perform all OBLIGATIONS in accordance with federal and California laws, regulations, and standards; FHWA STANDARDS; and CALTRANS STANDARDS.

16. CALTRANS retains the right to reject noncompliant WORK, protect public safety, preserve property rights, and ensure that all WORK is in the best interest of the SHS.

17. SMCTA will ensure that personnel participating in OBLIGATIONS are appropriately qualified or licensed to perform the tasks assigned to them.

18. PARTNERS will invite each other to participate in the selection of any consultants who participate in OBLIGATIONS.

19. If WORK is done under contract (not completed by SMCTA's own employees) and is governed by the California Labor Code's definition of "public works" (section 1720(a)), SMCTA will conform to sections 1720 – 1815 of the California Labor Code and all applicable regulations and coverage determinations issued by the Director of Industrial Relations.

20. CALTRANS will issue, upon proper application, the encroachment permits required for WORK within SHS right-of-way. Contractors and/or agents, and utility owners will not perform activities within the SHS right-of-way without an encroachment permit issued in their name.

21. If SMCTA discovers unanticipated cultural, archaeological, paleontological, or other protected resources during WORK, all WORK in that area will stop and SMCTA will notify CALTRANS within 24 hours of discovery. WORK may only resume after a qualified professional has evaluated the nature and significance of the discovery and a plan is approved for its removal or protection.

22. PARTNERS will hold all administrative drafts and administrative final reports, studies, materials, and documentation relied upon, produced, created, or utilized for PROJECT in confidence to the extent permitted by law and where applicable, the provisions of California Government Code section 6254.5(e) shall protect the confidentiality of such documents in the event that said documents are shared between PARTNERS.

    PARTNERS will not distribute, release, or share said documents with anyone other than employees, agents, and consultants who require access to complete PROJECT without the written consent of the PARTNER authorized to release them, unless required or authorized to do so by law.

23. If a PARTNER receives a public records request pertaining to OBLIGATIONS, that PARTNER will notify PARTNERS within five (5) working days of receipt and make PARTNERS aware of any disclosed public documents. PARTNERS will consult with each other prior to the release of any public documents related to the PROJECT.

24. If HM-1 or HM-2 is found during any PROJECT COMPONENT, SMCTA will immediately notify CALTRANS.

25. CALTRANS, independent of PROJECT, is responsible for any HM-1 found within the existing SHS right-of-way. CALTRANS will undertake HM MANAGEMENT ACTIVITIES related to HM-1 with minimum impact to PROJECT schedule.

26. SMCTA, independent of PROJECT, is responsible for any HM-1 found within PROJECT limits and outside the existing SHS right-of-way. SMCTA will undertake or cause to be undertaken HM MANAGEMENT ACTIVITIES related to HM-1 with minimum impact to PROJECT schedule.

27. If HM-2 is found within PROJECT limits, the public agency responsible for the advertisement, award, and administration (AAA) of the PROJECT construction contract will be responsible for HM MANAGEMENT ACTIVITIES related to HM-2.

28. CALTRANS' acquisition or acceptance of title to any property on which any HM-1 or HM-2 is found will proceed in accordance with CALTRANS' policy on such acquisition.

29. PARTNERS will comply with all of the commitments and conditions set forth in the environmental documentation, environmental permits, approvals, and applicable agreements as those commitments and conditions apply to each PARTNER's responsibilities in this Agreement.

30. Upon OBLIGATION COMPLETION, ownership or title to all materials and equipment constructed or installed for the operations and/or maintenance of the SHS within SHS right-of-way as part of WORK become the property of CALTRANS.

    CALTRANS will not accept ownership or title to any materials or equipment constructed or installed outside SHS right-of-way.

31. SMCTA will accept, reject, compromise, settle, or litigate claims of any non-Agreement parties hired to do WORK in that component.

32. If WORK stops for any reason, SMCTA will place PROJECT right-of-way in a safe and operable condition acceptable to CALTRANS.

33. If WORK stops for any reason, SMCTA will continue to implement all of its applicable commitments and conditions included in the PROJECT environmental documentation, permits, agreements, or approvals that are in effect at the time that WORK stops, as they apply to SMCTA's responsibilities in this Agreement, in order to keep PROJECT in environmental compliance until WORK resumes.

34. SMCTA will furnish CALTRANS with all relevant deliverables and history files related to PROJECT facilities on the SHS within one hundred eighty (180) days following the completion of each PROJECT COMPONENT.

35. This Agreement includes the PS&E PROJECT COMPONENT but does not include the R/W SUPPORT PROJECT COMPONENT. Completion of PS&E is dependent upon completion of some activities in R/W SUPPORT. PARTNERS acknowledge that the WORK will not result in a product that can be used to advertise and award a contract for the CONSTRUCTION SUPPORT/CAPITAL PROJECT COMPONENTS without completing some activities outside of this agreement, under a separate agreement, or by later amending this Agreement.

Scope: Environmental Permits, Approvals and Agreements

36. Each PARTNER identified in the Environmental Permits table below accepts the responsibility to complete the assigned activities. If PARTNERS later determine that an environmental permit, approval or agreement is necessary PARTNERS will amend this Agreement to ensure completion and implementation of all environmental permits, approvals, and agreements.

ENVIRONMENTAL PERMITS						
Permit	**Coordinate**	**Prepare**	**Obtain**	**Implement**	**Renew**	**Amend**
Coastal Development Permit CCC	SMCTA	SMCTA	SMCTA	SMCTA	SMCTA	SMCTA

Scope: Plans, Specifications, and Estimate (PS&E)

37. SMCTA will make all necessary arrangements with utility owners for the timely accommodation, protection, relocation, or removal of any existing utility facilities that conflict with construction of PROJECT or that violate CALTRANS' encroachment policy.

COST

Cost: General

38. All costs associated with completing the PROJECT, except where otherwise noted in this agreement, are the responsibility of SMCTA including, but not limited to:
    - Public meetings.
    - Environmental commitments and compliance.
    - Obtaining, implementing and renewing resource agency permits.

39. Fines, interest, or penalties levied against a PARTNER will be paid, independent of OBLIGATIONS cost, by the PARTNER whose actions or lack of action caused the levy.

40. CALTRANS, independent of PROJECT, will pay, or cause to be paid, all costs for HM MANAGEMENT ACTIVITIES related to HM-1 found within the existing SHS right-of-way.

41. SMCTA, independent of PROJECT, will pay, or cause to be paid, all costs for HM MANAGEMENT ACTIVITIES related to HM-1 found within PROJECT limits and outside of the existing SHS right-of-way.

42. Independent of OBLIGATIONS cost, CALTRANS will fund the cost of its own IQA for WORK done within existing or proposed future SHS right-of-way.

    Independent of OBLIGATIONS cost, CALTRANS will fund the cost of its QC/QAP process review for environmental documentation.

43. CALTRANS will provide encroachment permits to PARTNERS, their contractors, consultants and agents, at no cost.

Cost: Plans, Specifications, and Estimate (PS&E)

44. SMCTA will determine the cost to positively identify and locate, protect, relocate, or remove any utility facilities whether inside or outside SHS right-of-way in accordance with federal and California laws and regulations, and CALTRANS' policies, procedures, standards, practices, and applicable agreements.

SCHEDULE

45. SMCTA will manage the schedule for OBLIGATIONS through the work plan included in the PROJECT MANAGEMENT PLAN.

GENERAL CONDITIONS

46. PARTNERS understand that this Agreement is in accordance with and governed by the Constitution and laws of the State of California. This Agreement will be enforceable in the State of California. Any PARTNER initiating legal action arising from this Agreement will file and maintain that legal action in the Superior Court of the county in which the CALTRANS district office that is signatory to this Agreement resides, or in the Superior Court of the county in which PROJECT is physically located.

47. All OBLIGATIONS of CALTRANS under the terms of this Agreement are subject to the appropriation of resources by the Legislature, the State Budget Act authority, and the allocation of funds by the California Transportation Commission.

48. When CALTRANS performs IQA activities it does so for its own benefit. No one can assign liability to CALTRANS due to its IQA activities.

49. Neither SMCTA nor any officer or employee thereof is responsible for any injury, damage or liability occurring by reason of anything done or omitted to be done by CALTRANS and/or its agents under or in connection with any work, authority, or jurisdiction conferred upon CALTRANS under this Agreement.

    It is understood and agreed that CALTRANS, to the extent permitted by law, will defend, indemnify, and save harmless SMCTA and all of its officers and employees from all claims, suits, or actions of every name, kind, and description brought forth under, but not limited to, tortious, contractual, inverse condemnation, or other theories or assertions of liability occurring by reason of anything done or omitted to be done by CALTRANS and/or its agents under this Agreement.

50. Neither CALTRANS nor any officer or employee thereof is responsible for any injury, damage, or liability occurring by reason of anything done or omitted to be done by SMCTA and/or its agents under or in connection with any work, authority, or jurisdiction conferred upon SMCTA under this Agreement.

    It is understood and agreed that SMCTA, to the extent permitted by law, will defend, indemnify, and save harmless CALTRANS and all of its officers and employees from all claims, suits, or actions of every name, kind, and description brought forth under, but not limited to, tortious, contractual, inverse condemnation, or other theories or assertions of liability occurring by reason of anything done or omitted to be done by SMCTA and/or its agents under this Agreement.

51. PARTNERS do not intend this Agreement to create a third party beneficiary or define duties, obligations, or rights in parties not signatory to this Agreement. PARTNERS do not intend this Agreement to affect their legal liability by imposing any standard of care for fulfilling OBLIGATIONS different from the standards imposed by law.

52. PARTNERS will not assign or attempt to assign OBLIGATIONS to parties not signatory to this Agreement.

53. PARTNERS will not interpret any ambiguity contained in this Agreement against each other. PARTNERS waive the provisions of California Civil Code section 1654.

54. A waiver of a PARTNER's performance under this Agreement will not constitute a continuous waiver of any other provision. An amendment made to any article or section of this Agreement does not constitute an amendment to or negate all other articles or sections of this Agreement.

55. A delay or omission to exercise a right or power due to a default does not negate the use of that right or power in the future when deemed necessary.

56. If any PARTNER defaults in its OBLIGATIONS, a non-defaulting PARTNER will request in writing that the default be remedied within 30 calendar days. If the defaulting PARTNER fails to do so, the non-defaulting PARTNER may initiate dispute resolution.

57. PARTNERS will first attempt to resolve Agreement disputes at the PROJECT team level. If they cannot resolve the dispute themselves, the CALTRANS district director and the executive officer of SMCTA will attempt to negotiate a resolution. If PARTNERS do not reach a resolution, PARTNERS' legal counsel will initiate mediation. PARTNERS agree to participate in mediation in good faith and will share equally in its costs.

58. Neither the dispute nor the mediation process relieves PARTNERS from full and timely performance of OBLIGATIONS in accordance with the terms of this Agreement. However, if any PARTNER stops fulfilling OBLIGATIONS, any other PARTNER may seek equitable relief to ensure that OBLIGATIONS continue.

    Except for equitable relief, no PARTNER may file a civil complaint until after mediation, or 45 calendar days after filing the written mediation request, whichever occurs first.

    PARTNERS will file any civil complaints in the Superior Court of the county in which the CALTRANS district office signatory to this Agreement resides or in the Superior Court of the county in which PROJECT is physically located. The prevailing PARTNER will be entitled to an award of all costs, fees, and expenses, including reasonable attorney fees as a result of litigating a dispute under this Agreement or to enforce the provisions of this article including equitable relief.

59. PARTNERS maintain the ability to pursue alternative or additional dispute remedies if a previously selected remedy does not achieve resolution.

60. If any provisions in this Agreement are found by a court of competent jurisdiction to be, or are in fact, illegal, inoperative, or unenforceable, those provisions do not render any or all other Agreement provisions invalid, inoperative, or unenforceable, and those provisions will be automatically severed from this Agreement.

61. PARTNERS intend this Agreement to be their final expression and supersedes any oral understanding or writings pertaining to OBLIGATIONS.

62. If during performance of WORK additional activities or environmental documentation is necessary to keep PROJECT in environmental compliance, PARTNERS will amend this Agreement to include completion of those additional tasks.

63. SMCTA was the CEQA-Responsible Agency and CALTRANS was the Lead Agency for CEQA . If, during PS&E package preparation, new information is obtained, which requires the preparation of a higher-level CEQA or NEPA environmental document or additional environment studies, SMCTA will amend this Agreement to include completion of these additional tasks."

64. Except as otherwise provided in the Agreement, PARTNERS will execute a formal written amendment if there are any changes to OBLIGATIONS.

65. PARTNERS agree to sign a COOPERATIVE AGREEMENT CLOSURE STATEMENT to terminate this Agreement. However, all indemnification, document retention, audit, claims, environmental commitment, legal challenge, maintenance and ownership articles will remain in effect until terminated or modified in writing by mutual agreement.

DEFINITIONS

CALTRANS STANDARDS – CALTRANS policies and procedures, including, but not limited to, the guidance provided in the *Guide to Capital Project Delivery Workplan Standards* (previously known as WBS Guide) available at www.dot.ca.gov/hq/projmgmt/guidance.htm.

CEQA (California Environmental Quality Act) – The act (California Public Resources Code, sections 21000 et seq.) that requires state and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those significant impacts, if feasible.

CONSTRUCTION CAPITAL – See PROJECT COMPONENT.

COOPERATIVE AGREEMENT CLOSURE STATEMENT – A document signed by PARTNERS that verifies the completion of all OBLIGATIONS included in this Agreement and in all amendments to this Agreement.

FHWA – Federal Highway Administration

FHWA STANDARDS – FHWA regulations, policies and procedures, including, but not limited to, the guidance provided at www.fhwa.dot.gov/topics.htm.

FUNDING PARTNER – A PARTNER that commits funds to fulfill OBLIGATIONS. Each FUNDING PARTNER accepts responsibility to provide the funds it commits in this Agreement.

HM-1 – Hazardous material (including, but not limited to, hazardous waste) that may require removal and disposal pursuant to federal or state law whether it is disturbed by PROJECT or not.

HM-2 – Hazardous material (including, but not limited to, hazardous waste) that may require removal and disposal pursuant to federal or state law only if disturbed by PROJECT.

HM MANAGEMENT ACTIVITIES – Management activities related to either HM-1 or HM-2 including, without limitation, any necessary manifest requirements and disposal facility designations.

IMPLEMENTING AGENCY – The PARTNER is responsible for managing the scope, cost, and schedule of a PROJECT COMPONENT to ensure the completion of that component.

IQA (Independent Quality Assurance) – Ensuring that the IMPLEMENTING AGENCY's quality assurance activities result in WORK being developed in accordance with the applicable standards and within an established Quality Management Plan (QMP). IQA does not include any work necessary to actually develop or deliver WORK or any validation by verifying or rechecking work performed by another PARTNER.

NEPA (National Environmental Policy Act of 1969) – This federal act establishes a national policy for the environment and a process to disclose the adverse impacts of projects with a federal nexus.

OBLIGATION COMPLETION – PARTNERS have fulfilled all OBLIGATIONS included in this Agreement, and all amendments to this Agreement, and have signed a COOPERATIVE AGREEMENT CLOSURE STATEMENT.

OBLIGATIONS – All responsibilities included in this Agreement.

PARTNER – Any individual signatory party to this Agreement.

PARTNERS – The term that collectively references all of the signatory agencies to this Agreement. This term only describes the relationship between these agencies to work together to achieve a mutually beneficial goal. It is not used in the traditional legal sense in which one PARTNER's individual actions legally bind the other PARTNER.

PROJECT COMPONENT – A distinct portion of the planning and project development process of a capital project as outlined in California Government Code, section 14529(b).

- **PID (Project Initiation Document)** – The activities required to deliver the project initiation document for PROJECT.
- **PA&ED (Project Approval and Environmental Document)** – The activities required to deliver the project approval and environmental documentation for PROJECT.
- **PS&E (Plans, Specifications, and Estimate)** – The activities required to deliver the plans, specifications, and estimate for PROJECT.
- **R/W (Right-of-way) SUPPORT** –The activities required to obtain all property interests for PROJECT.
- **R/W (Right-of-way) CAPITAL** – The funds for acquisition of property rights for PROJECT.
- **CONSTRUCTION SUPPORT** – The activities required for the administration, acceptance, and final documentation of the construction contract for PROJECT.
- **CONSTRUCTION CAPITAL** – The funds for the construction contract.

PROJECT MANAGEMENT PLAN – A group of documents used to guide a project's execution and control throughout that project's lifecycle.

PS&E (Plans, Specifications, and Estimate) – See PROJECT COMPONENT.

QMP (Quality Management Plan) – An integral part of the PROJECT MANAGEMENT PLAN that describes IMPLEMENTING AGENCY's quality policy and how it will be used.

QC/QAP (QUALITY CONTROL/QUALITY ASSURANCE PROGRAM) – Per NEPA assignment CALTRANS will review all environmental documents as described in the Jay Norvell Memos dated October 1, 2012 (available at http://www.dot.ca.gov/ser/memos.htm). This also includes the independent judgment, analysis, and determination under CEQA that the environmental documentation meets CEQA statute and Guideline requirements.

SHS (State Highway System) – All highways, right-of-way, and related facilities acquired, laid out, constructed, improved, or maintained as a state highway pursuant to constitutional or legislative authorization.

SPONSOR – Any PARTNER that accepts the responsibility to establish scope of PROJECT and the obligation to secure financial resources to fund PROJECT. SPONSOR is responsible for adjusting

the PROJECT scope to match committed funds or securing additional funds to fully fund the PROJECT scope. If a PROJECT has more than one SPONSOR, funding adjustments will be made by percentage (as outlined in Responsibilities). Scope adjustments must be developed through the project development process and must be approved by CALTRANS as the owner/operator of the SHS.

WORK – All scope activities included in this Agreement.

CONTACT INFORMATION

The information provided below indicates the primary contact information for each PARTNER to this Agreement. PARTNERS will notify each other in writing of any personnel or location changes. Contact information changes do not require an amendment to this Agreement.

The primary Agreement contact person for CALTRANS is:
Mohammad Suleiman, Project Manager
111 Grand Ave
Oakland, CA 94612
Office Phone: (510) 622-5943
Email: mohammad.sulieman@dot.ca.gov

The primary Agreement contact person for SMCTA is:
Joseph M Hurley, Director, SMCTA Program
1250 San Carlos Avenue
San Carlos, CA 94070
Office Phone: (650) 508-7942
Email: hurleyj@samtrans.com

SIGNATURES

PARTIES declare that:

1. Each party is an authorized legal entity under California state law.
2. Each party has the authority to enter into this Agreement.
3. The people signing this Agreement have the authority to do so on behalf of their public agencies.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

By:_____
Helena (Lenka) Culik-Caro
Deputy District Director - Design

CERTIFIED AS TO FUNDS:

By:_____
Kevin M. Strough
District Budget Manager

SAN MATEO COUNTY
TRANSPORTATION AGENCY

By:_____
M. J. Scanlon
Executive Director

ATTEST:

By:_____
Martha Martinez
Authority Secretary

APPROVED AS TO FORM AND
PROCEDURE:

By:_____
David Miller
Attorney

COOPERATIVE AGREEMENT CLOSURE STATEMENT

If the following questions are ALL answered "YES" then this form may be used to terminate this Agreement.

1. Did PARTNERS complete all scope, cost and schedule commitments included in this Agreement and any amendments to this Agreement?

2. Did CALTRANS accept and approve all final deliverables submitted by SMCTA?

3. Did the CALTRANS HQ Office of Accounting verify that all final accounting for this Agreement and any amendments to this Agreement were completed?

4. If construction is involved, did the CALTRANS District Project Manager verify that all claims and third party billings (utilities, etc.) have been settled before termination of the Agreement?

COOPERATIVE AGREEMENT CLOSURE STATEMENT

PARTNERS agree that they have completed all scope, cost, and schedule commitments included in Cooperative Agreement 04-2510 and any amendments to this Agreement.

The final signature date on this document terminates Cooperative Agreement 04-2510 except survival articles.

All survival articles in Cooperative Agreement 04-2510 will remain in effect until expired by law, terminated or modified in writing by PARTNER's mutual agreement, whichever occurs earlier.

The people signing this Agreement have the authority to do so on behalf of their public agencies.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

By: _____

Name:

Deputy District Director - Design

Date: _____

SMCTA

By: _____

Name:

Executive Director

Date: _____

CERTIFIED AS TO ALL FINANCIAL OBLIGATIONS/TERMS AND POLICIES

By: _____

Name:

District Budget Manager

Attachment H

Risk Management Plan and Risk Register

Risk Management Plan

District 04 EA 254600

County SM Route: 1 PM 41.7/43.0

Purpose

This document describes how Risk Management will be structured and performed on this project. The risk management plan includes methodology, roles and responsibilities, budgeting, timing, risk categories, definitions of risk probability and impact, probability and impact matrix, reporting formats, and tracking. The Caltrans Project Risk Management Handbook will be utilized as primary reference and guideline.

APPROVED BY:

SMCTA Program Director — Date: 4-17-13

Design Project Manager — Date: 4/18/13

Roles and Responsibilities

Sponsor responsibilities include:

- Develop and distribute this Risk Management Plan
- Develop the Risk Register with the support of the Project Team

Project Manager responsibilities include:

- Incorporate the resources and time required to execute the Risk Management Plan in the project budget and schedule
- Support the Sponsor in developing the Risk Management Plan and the Risk Register
- Implement this Risk Management Plan
- Update the Risk Register with the support of the Project Team and incorporate it into the workplan
- Coordinate with the risk owners to monitor risks and implement risk response strategies

Project Manager Support or Risk Officer responsibilities include:

- Support the Sponsor and Project Manager in developing and updating the Risk Management Plan and the Risk Register
- Maintain updates to the Risk Management Plan and the Risk Register
- Maintain a list of risk and response strategies of all the projects in the district
- Update the Sample Risk List and the lessons learned database (http://pd.dot.ca.gov/pm/PMPI/LessonsLearned/index.asp).

Project Team responsibilities include:

- Identify the risk and describe it
- Assess the probability that a risk will occur and specify the criteria used to assess the probability
- Assess the impact of risks on project cost, time, scope, and quality objectives, and specify the criteria used to assess the impact
- Help identify the risk owners and assist in developing the risk response strategies (Project Team members may be assigned as “Risk Owner”)
- Perform the risk response steps assigned
- Assist the PM in activities associated with Risk Monitoring and Control

Risk Owner responsibilities include:

- Develop and/or update the assigned risk response strategy
- Monitor the risk assigned and inform PM of any threats or opportunities to the project. This includes monitoring the risk trigger and informing the PM, if the risk becomes a real event.

Following is a matrix showing the six processes and the responsibilities of the project manager and stakeholders:

Process Tasks	**Role**					
	Sponsor	**Deputy District Director, Program and Project Management**	**Project Manager**	**Project Manager Support/ Risk Officer**	**Project Team**	**Risk Owner**
Risk Management Planning	S	C	R, A	S	R	
Risk Identification	S	C	R	S	R	
Qualitative Risk Analysis	S		R	S	R	
Risk Response Planning	S	C	R, A	S	R	R
Risk Monitoring and Control	S		R	S	R	R

Legend:

- R=Responsible
- S=Support
- A=Approve
- C=Concur

Risk Register

The Risk Register (Appendix D, Project Risk Management Handbook) documents the identified risks, the assessment of their root causes, areas of the project affected (WBS elements), the analysis of their likelihood of occurring and impact if they occur, and the criteria used to make those assessments and the overall risk rating of each identified risk by objective (e.g. cost, time, scope and quality).

Importantly, it includes the risk triggers, response strategies for high priority risks, and the assigned risk owner who will monitor the risk.

Risk Identification Methods Used

The risk breakdown structure (Appendix B, Project Risk Management Handbook) and Sample Risk List (Appendix C, Project Risk Management Handbook) will be used as reference tools to help identify and categorize risks.

Risk Analysis Methods Used

Qualitative Risk Analysis attempts to rank the risks into high, medium and low risk categories based on their probability of occurring and impact on an objective.

This project will	x	will not		use qualitative risk analysis
This project will		will not	x	use District RM Web tool

Quantitative Risk Analysis attempts to estimate the risk that the project and its phases will finish within objectives taking into account all identified and quantified risks, estimates the contingency needed for cost and schedule and identifies the best decisions using decision tree analysis.

This project will		will not	x	use quantitative cost risk analysis
This project will		will not	x	use quantitative schedule risk analysis
This project will		will not	x	use decision tree analysis
This project will		will not	x	use other quantitative methods

Period of Risk Management Meetings and Full Review of Project Risk

Meetings for the purpose of discussing and making decisions on Project risk will be held:

Weekly _____ Bi-Weekly _____ Monthly _____ Other_____x_____

The risk management identification, analysis and response planning process shall occur during project initiation document (PID). A full review and update of risk register will occur at the beginning of each subsequent phase of the project.

Budget Allocated for Risk Management
[Caltrans to provide information for this section]

Staff allocated and assigned for risk management activities include:

PMSU Chief	@	_____	Hrs
Risk Officer	@	_____	Hrs
PM	@	_____	Hrs
Environmental	@	_____	Hrs
Design	@	_____	Hrs
R/W	@	_____	Hrs
DES/Structure	@	_____	Hrs
Const.	@	_____	Hrs
Traffic Operations	@	_____	Hrs
Maintenance	@	_____	Hrs
	@	_____	Hrs
Total:		_____	Hrs

___Hrs. × $ __ /Hr =

A total of $ is allocated for Risk Management on this project.

PROJECT RISK MANAGEMENT PLAN
Highway 1/Calera Parkway Project

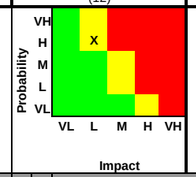
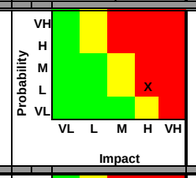
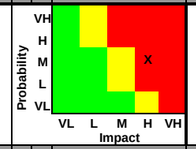
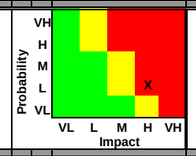
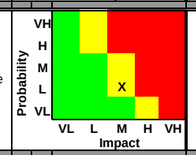
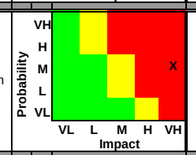
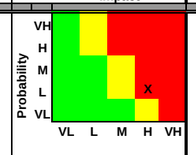
Dist - E.A 04-254600

Co-Rte-PM SM-1-41.7/43.0

Date 4/16/2013

Project Mngr Brad Leveen **Telephone Number** (650) 363-8277

PROJECT RISK MANAGEMENT PLAN

	Identification							Qualitative Analysis				OPTIONAL Quantitative Analysis			Response Strategy			Monitoring and Control		
Priority	Status	ID #	Date Identified Project Phase	Functional Assignment	Threat/Opportunity Event	SMART Column	Risk Trigger	Type	Probability	Impact	Risk Matrix	Probability (%)	Impact ($ or days)	Effect ($ or days)	Strategy	Response Actions including advantages and disadvantages	Affected WBS Tasks	Responsibility (Task Manager)	Status Interval or Milestone Check	Date, Status and Review Comments
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15) =(13)x(14)	(16)	(17)	(18)	(19)	(20)	(21)
	Retired	1	8/20/2009 **Rev. 1/2013** PA&ED	Design	Landscaped Median Alternative	Current project has a nonstandard 10' median. City has expressed interest in pursuing a Landscaped Median which would require approximately 40- width including standard 10' shoulders. This creates a greater project footprint which could trigger additional ADL treatment, environmental impacts, etc. Adding a landscaped median requires that someone maintain it.	SMCTA did decide to proceed with the "Landscaped Median" design alternative, and the "Narrow Median" alternative that previously had nonstandard 10' median now has 22' median with standard inside 10' shoulders. Now risk is occurring if neither City nor Caltrans will take on maintenance responsibility for Landscaped Median.	**Schedule** **Cost**	High	Low		70%	180	126	Acceptance	Increase construction budget by $5M for this risk. Adjust schedule expectations by 6 months. Request Work Directive scope/budget amendment to address additional work for consultant team. Remove Landscaped Median alternative from the Draft Environmental Document if it is determined that maintenance cannot be assumed by an agency.	WBS 160 Perform Preliminary Engineering Studies and Prepare Draft Project Report	Joe Hurley	Revisit during PS&E phase if necessary	January 2013: This risk has been changed to retired since the Landscaped Median Alternative is now the Preferred Alternative in the FED and FPR. If maintenance responsibilities will not be assumed by an agency, then the risk will become Active again.
	Dormant	2	10/15/2009 **Rev. 4/2013** PA&ED	Environmental Analysis	Coastal Commission (CCC) Permit	Current project identifies need for project as relief of congestion on an isolated stretch of Hwy 1. Solution is to widen highway in this stretch from 4 lanes to 6 lanes with intersection improvements. CCC has questioned solution and may require a "Transit-oriented" solution as an alternative for study or as an ultimate goal.	Risk is occurring if CCC revisits this concern during CDP Permit Application.	**Scope** **Schedule**	Low	High		30%	360	108	Transference	If a Transit Alternative is required, this goes beyond the funding capability of this project category and may have to get reprogrammed within the SMCTA projects categories.	WBS 165 Perform Environmental Studies and Prepare Draft Environmental Document (DED)	Joe Hurley	Revisit during PS&E phase	June 2011: Additional analysis on transit options was done in 2010 and the analysis was discussed with CCC staff. This appears to be less of an issue now but won't be resolved for certain until the CDP Permit application process. April 2013: Risk has been changed to dormant.
	Retired	3	8/20/2009 **Rev. 4/2013** PA&ED	Environmental Analysis	Cultural site CA-SMa-162 (Design Mitigation Plan)	Cultural site CA-SMa-162 is a relocated, disturbed Native American historic cultural site. It is not eligible for the National Historic Register since it was relocated in the early 1960s. The project widening will require that a portion of the site be excavated and removed.	Risk is occurring if Caltrans or SHPO denies the mitigation approach of site monitoring during construction excavation.	**Schedule** **Cost**	Moderate	High		50%	200000	100,000	Mitigation	If Caltrans or SHPO does not accept the design mitigation plan then the site will probably have to be excavated to the final design limit under a Cultural Study phase as a separate construction activity ahead of the main construction project. This would require additional funding during the PA/ED or PS&E phase.	WBS 165 Perform Environmental Studies and Prepare Draft Environmental Document (DED)	Brad Leveen		October 2010: The cultural studies were approved by Caltrans and concurrence was received from SHPO on Feb 23, 2010. April 2013: Risk has been retired since the Design Fact Sheets are now signed.
	Dormant	4	9/15/2009 PA&ED	Construction	Cultural site CA-SMa-162 (Construction Impacts)	Assuming Caltrans/SHPO accept the proposed mitigation plan of monitoring during construction, there is still a risk that human remains may be found during excavation. If so, the construction would be temporarily stopped until a new plan of action could be determined.	Risk is occurring during construction if the excavation uncovers human remains.	**Schedule** **Cost**	Low	High		30%	200000	60,000	Acceptance	If above mitigation plan is approved then the project will have a Construction Action Plan in place in case human remains are discovered during the construction phase. The Action Plan would provide direction in advance to minimize the construction impact and delay of addressing the issue.	WBS 230 Prepare Draft PS&E	Brad Leveen	Revisit during PS&E phase	
	Retired	5	6/20/2009 **Rev. 2/2011** PA&ED	Design	Narrow Median Design Exception	The "Narrow Median" project alternative proposes a nonstandard 10' wide median (2' barrier and two 4'-wide shoulders) to avoid wetlands and minimize the environmental impact "footprint."	Risk is occurring if Caltrans denies the design exception request for the non-standard median and requires minimum, standard median width of 22'.	**Schedule** **Cost**	Low	Moderate		30%	90	27	Acceptance	If Caltrans does not approve an exception for non-standard, narrow median then the median width will have to be redesigned at the minimum 22-foot width that would meet standard. This would require additional outside widening with corresponding R/W take, environmental impacts, water quality requirements, and changes in	WBS 160 Perform Preliminary Engineering Studies and Prepare Draft Project Report	Brad Leveen	Revisit during PS&E phase if additional impacts are identified that might justify an exception for narrower inside shoulder.	February 2011: This risk has been retired since the Narrow Median alternative now has a standard 22' median with 10' inside shoulders.
	Dormant	6	6/8/2009 **Rev. 4/2013** PA&ED	R/W	Utility Encroachment Exceptions Request	The project proposes to keep most existing utilities in their existing locations and relocate some utilities outside of the paved traveled way but still within the State Right of Way. A Utility Encroachment Exception Request has been prepared to obtain approval to leave utilities in the State R/W.	Risk is occurring if Caltrans changes their position during PS&E phase and requires more relocations..	**Cost** **Schedule**	Moderate	Very High		50%	14000000	7,000,000	Avoidance	If Caltrans will not approve the Utility Exceptions Request then the best course of action is probably to pursue removing this segment of Hwy 1 from the State F&E system. This will ultimately require a Legislative action, but should be routine if all local agencies and entities approve of the decision.	WBS 160 Perform Preliminary Engineering Studies and Prepare Draft Project Report	Brad Leveen	Revisit during PS&E phase	April 2013: The Utility Exception Report has been conceptually approved therefore this risk has been changed to Dormant. Revisit during PS&E phase
	Retired	7	7/15/2009 **Rev. 4/2013** PA&ED	R/W	R/W Access Control	This segment of Hwy 1 is on the State Freeway & Expressway (F&E) System by State Statuate. Caltrans policy is that a project on the F&E system which is obtaining R/W must also obtain access control. Due to long term plans to continue operating this segment more like a conventional highway, the project is not proposing to obtain R/W Access Control.	Risk is occurring if Caltrans denies this approach.	**Cost** **Scope**	Low	High		20%	4000000	800,000	Avoidance	Same response as above.	WBS 180 Prepare and Approve Project Report and Final Environmental Document	Brad Leveen		April 2013: Caltrans has approved the design exceptions Fact Sheets which include issues related to access control, so the risk of requiring access control has been retired.

PROJECT RISK MANAGEMENT PLAN

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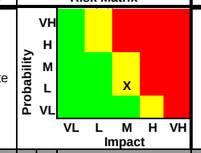
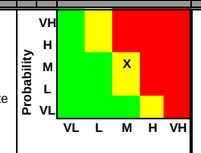
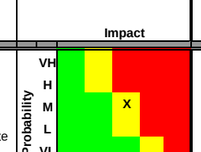
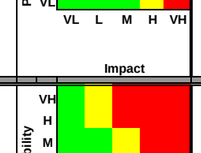
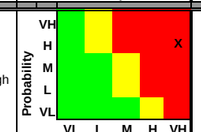
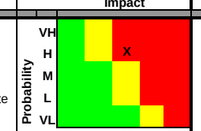
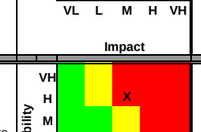
	Dormant	8	9/28/2008 **Rev. 4/2013** PA&ED	Environmental Analysis	CCC Wetlands Buffer	The project widens to within approximately 10 feet of existing CCC delineated wetlands along the side of the highway. The Coastal Act has a section which discusses typically providing a 100-foot buffer between development and a "high-value" habitat.	Risk is occurring if CCC does not allow the project to be widened within 10 feet of wetlands or requires a substantial additional mitigation to offset the narrow buffer during CDP application.	**Cost** **Schedule**	Low	Moderate		30%	500000	150,000	Mitigation	Highway alignment cannot be shifted easterly away from wetlands without significant R/W impacts, costs, and utility relocations. Will have to work with CCC to determine an appropriate mitigation for building so close to the wetlands. May require special design features within the 10-foot space or additional mitigation at another location.	WBS 165 Perform Environmental Studies and Prepare Draft Environmental Document (DED)	Brad Leveen	Revisit during PS&E phase	On January 26, 2012, the USFWS issued the Biological Opinion (BO). Project has reached tentative agreement with CCC staff on current design and proposed mitigation. April 2013: Risk has been changed to dormant.
	Retired	9	8/15/2009 **Rev. 4/2013** PA&ED	Design	Harvey Way frontage road	The Harvey Way frontage road is a non-standard, one-way road that serves residences and businesses. It does not have standard sidewalk, ADA access, and standard access from Hwy 1. Project is proposing alternatives for bus stop, sidewalk addition, and possible utility undergrounding.	Risk is occurring if project team can not reach resolution quickly between Caltrans, Pacifica, and Samtrans on an appropriate design for this frontage road, the bus stop, and the access to/from Hwy 1.	**Schedule** **Cost**	Moderate	Moderate		50%	180	90	Acceptance	If a design solution cannot be reached at the PDT level then the issue will have to be elevated to a higher level for resolution. Additional R/W acquisition cost and utility relocation or undergrounding cost may be incurred. Only other approach would be much more severe which is to eliminate direct access to Harvey Way from Hwy 1 and create circular access from Fassler Avenue only.	WBS 160 Perform Preliminary Engineering Studies and Prepare Draft Project Report	Brad Leveen		April 2013: This risk has been retired since the Design Fact Sheets are signed.
	Retired	10	10/7/2010 **Rev. 4/2013** PA&ED	Planning	Conversion from Freeway & Expressway to Conventional Highway	If SMCTA wants to proceed with project without Utility Encroachment approval or Landscaped Median exception from Caltrans, the easiest way forward is to remove highway segment from F&E System. Would likely require political process and would impact project schedule. Could mostly be done in parallel but would create some setbacks to project schedule.	May be required if Utility Encroachment Exceptions not granted or Landscaped Median determined as primary alternative by project Sponsor and Caltrans won't approve exception.	**Schedule** **Schedule**	Moderate	Moderate		50%	240	120	Acceptance	If SMCTA wants to proceed with project without Utility Encroachment approval or Landscaped Median exception from Caltrans, the easiest way forward is to remove highway segment from F&E System. Would likely require political process and would impact project schedule.	WBS 160 Perform Preliminary Engineering Studies and Prepare Draft Project Report	Joe Hurley		April 2013: This risk has been retired since the Design Fact Sheets are signed and the Utility Exception Report has been conceptually approved.
	Retired	11	10/7/2010 **Rev. 4/2013** PA&ED	Environmental Analysis	Visual Impact Assessment Study	Completing a separate VIA study opens up more opportunities for comment and request to add visual enhancements to the project. This could add to cost and/or difficulty of project implementation. If visual impacts are difficult to resolve the project schedule could also be impacted and delayed.	Risk if occurring if VIA study review by Caltrans or other agencies generates need to add visual enhancements to project or change project design to alter visual impacts.	**Cost** **Schedule**	Low	Moderate		30%	2000000	600,000	Mitigation	If additional visual enhancements or project alterations are required to proceed with project, SMCTA will have to decide if extra cost to implement changes is worth continuing with project. Actual cost of extra work will have to be weighed against benefit of project at that time.	WBS 165 Perform Environmental Studies and Prepare Draft Environmental Document (DED)	Joe Hurley		The VIA study was approved by Caltrans in January 2011. April 2013: This risk has been retired since the Design Fact Sheets are signed.
	Active	12	6/14/2011 **Rev. 1/2013**	Planning	Funding not approved for project	Complete project funding has not yet been fully identified and secured. The project is currently partially funded.	Risk is occurring if full funding cannot be identified and secured.	**Scope** **Schedule**	High	Very High		70%		0	N/A	If full funding cannot be identified and secured the project will be delayed until funding is secured.	WBS 230 Prepare Draft PS&E	Joe Hurley	Revisit during PS&E phase	January 2013: As of October 2012, the SMCTA approved $4,000,000 for the PS&E phase of the project; allocation conditional on City Council adopting EIR (environmental clearance). Full Construction funding for the project has not yet been secured.
	Dormant	13	6/14/2011 **Rev. 4/2013**	Environmental Analysis	Environmental mitigation plan not approved by USF&WS or National Park Service	A mitigation plan has been proposed in the project Biological Assessment and submitted to the U.S. Fish & Wildlife Service for approval. The plan assumes use of 5-acre parcel from City of Pacifica (per discussions with the City earlier in the PA/ED phase).	Risk is occurring if the USF&WS does not continue to approve the plan or the City backs out of their initial offer for the project to use the parcel.	**Cost** **Scope**	High	Moderate		70%	1000000	700,000	Mitigation	If the 5-acre parcel cannot be used for mitigation the project may need to purchase land or contribute money to a mitigation bank. USF&WS would have to approve the proposed mitigation.	WBS 230 Prepare Draft PS&E	John Schwarz	Revisit during PS&E phase	January 2013: On January 26, 2012, the USFWS issued the Biological Opinion (BO). The GGNRA staff has agreed in concept to the mitigation proposal; however, specific details will need to be approved by the National Park Service (NPS), who owns and manages the GGNRA
	Retired	14	6/14/2011 **Rev. 1/2013**	Design	Revised Caltrans Highway Design Manual	Caltrans is in process of revising the Highway Design Manual and many standards may be changing. Depending on the release date of the manual and schedule of project, many current design features may have to be revisited and changed.	Risk is occurring if the new standards affect project design and exceptions to the new standards cannot be obtained.	**Cost** **Schedule**	High	Moderate		70%	800000	560,000	Acceptance	When new standards come out they will likely apply to project and have to be incorporated. It is anticipated that the new standards will require wider sidewalks, bike paths, etc. as well as other potential new features that are not currently included in the project.	WBS 180 Prepare and Approve Project Report and Final Environmental Document	Brad Leveen		January 2013: This risk has been changed to retired. The new design standards have been incorporated in the project.

Attachment I

Pavement Strategy Checklist

PAVEMENT STRATEGY CHECKLIST (Rev. 3/16/09)

Date: 7/25/13

Project description and project elements:

The project is located in the City of Pacifica and covers a distance of 1.3 mile along Highway 1. The project proposes the following improvements: Widen both the northbound and southbound directions of Highway 1 to accommodate a new third through lane in each direction, construct median concrete barrier, construct a two-way bicycle/pedestrian path and new sidewalk, construct approximately 4,100 feet of retaining walls, upgrade Fassler and Reina Del Mar Avenue intersections and signals, and construct a bridge structure along SB Highway 1 over a portion of the existing wetland.

EA: 04-0703-254600 Caltrans Project Manager: Mohammad Suleiman

Co/Rte: SM-1 Office: Caltrans/District 4

Design Project Engineer: Karsten Adam Program: HB4N (Local & RIP)

Design Senior: Brad Leveen PM Limits: 41.7/43.0

Design Materials Engineer: Parikh Consultants

Caltrans Materials Engineer: Richard Chan

This project is at the following phase (please check one):

☐ PID (PSSR, etc.) ☒ PR ☐ PS&E ☐ OTHER

Describe existing structural section (e.g., shoulder, traveled way). Show limits if different sections are within the project:

Existing structural section varies from 0.40’ AC (Type A) / 0.25’ ATPB / 0.20’ AC (Type A) for shoulders and outside lanes and 0.45’ AC / 0.67’ CTB (B) / 0.83’ AS (2) for inside lanes.

What pavement types/structural sections does Materials propose for each segment (shoulders and traveled way)?

The following design parameters and structure sections are recommended for the proposed widening project:

Design Parameters

- Design Method: Caltrans Highway Design Manual (October 2010)
- Native Material: R-value = 8 (assumed)
- 20-year Design Period: Traffic Index = 9.5
- 40-year Design Period: Traffic Index = 10

20-year Design Period Recommendations

Alternative 1
0.45 ft Hot Mix Asphalt (HMA) (Type A)
0.25 ft Asphalt Treated Permeable Base (ATPB)
0.55 ft Aggregate Base (Class 2)
1.05 ft Aggregate Subbase (Class 2)

Alternative 2
0.20 ft Rubberized Hot Mix Asphalt-Gap Graded (RHMA-G)
0.25 ft Hot Mix Asphalt (HMA) (Type A)
0.25 ft Asphalt Treated Permeable Base (ATPB)
0.55 ft Aggregate Base (Class 2)
1.05 ft Aggregate Subbase (Class 2)

40-year Design Period Recommendations

Alternative 3
0.10 ft Open Graded Friction Course (OGFC)
0.20 ft Rubberized Hot Mix Asphalt-Gap Graded (RHMA-G)
0.30 ft Hot Mix Asphalt (HMA) (Type A)
0.25 ft Asphalt Treated Permeable Base (ATPB)
0.50 ft Aggregate Base (Class 2)
1.15 ft Aggregate Subbase (Class 2)

A Life Cycle Cost Analysis has been performed and the following three alternatives were considered:

Alternative 1: 20-year Design Period with Capital Preventative Maintenance and Rehabilitation bringing design period to 55 years. Total Life-Cycle cost of $19,751,730.

New Construction	Maintenance and Rehabilitation
0.45 ft HMA (Type A)	HMA (Mill & Overlay)
0.25 ft ATPB	Rehab HMA (Mill & Overlay)
0.55 ft AB (Class 2)	
1.05 ft AS (Class 2)	

Alternative 2: 20-year Design Period with Capital Preventative Maintenance and Rehabilitation bringing design period to 55 years. Total Life-Cycle cost of $19,407,600.

New Construction	Maintenance and Rehabilitation
0.20 ft RHMA-G	HMA with RHMA (Mill & Overlay)
0.25 ft HMA (Type A)	Rehab HMA w/RHMA (Mill & Overlay)
0.25 ft ATPB	
0.55 ft AB (Class 2)	
1.05 ft AS (Class 2)	

Alternative 3: 40-year Design Period with Capital Preventative Maintenance and Rehabilitation bringing design period to 55 years. Total Life-Cycle cost of $18,978,730.

New Construction	Maintenance and Rehabilitation
0.10 ft OGFC	HMA with OGFC (Mill & Overlay)
0.20 ft RHMA-G	Rehab HMA w/OGFC (Mill & Overlay)
0.30 ft HMA (Type A)	
0.25 ft ATPB	
0.50 ft AB (Class 2)	
1.15 ft AS (Class 2)	

Conclusion: Alternative 3 is the preferred alternative as it has the lowest total life-cycle cost of $18.98 million (present value) compared to the other two alternatives over the 55-year analysis period

Pavement is involved in:

☒ Entire project OR ☐ Part of the project

Assumptions (Is future widening in Regional Transportation Plan? Yes or no?): *Yes*

Please provide information for all of the following items that apply to this project.

	Yes	No	Question
1.	☐	☒	Are you implementing an innovative strategy (e.g., cold foam Hot-Mix Asphalt (HMA), pre-cast concrete pavement, continuously reinforced pavement, etc)? If so, which are you implementing and why? If not, why not? *Standard pavement sections are proposed to match similar existing pavement.*
2.	☐	☒	Has Rapid Rehab strategy been considered (e.g., weekend closures and lane replacements)? Explain: *Not applicable since doing outside widening behind K-Rail.*
3.	☒	☐	Are you using Rubberized Hot-Mix Asphalt (RHMA) in this project? If not, justify:
4.	☒	☐	Was Life Cycle Analysis performed? *Yes.* Provide Life Cycle Analysis and results. *LCCA results are on page 3.*
5.	☐	☒	Does existing pavement have a settlement problem? Explain: *The subsoil appears to consist of firm lean and sandy clays mixed with silty sand and clayey sand layer.*
6.	☒	☐	a) Is this project (or part of project) maintaining the grade profile? *For the most part the existing profile grade is being maintained, with small profile grade changes proposed at vertical curves to provide for a 55-mph design speed.* b) If not, explain how the profile change affects the pavement strategy choice (cut v. fill):
7.	☒	☐	Will there be a new barrier?
8.	☒	☐	Is the proposed structural section on cut or fill or both? Provide limits of both, if applicable. *Structural section is in fill for SB Hwy 1, south of Reina Del Mar Ave. and in cut for the remainder of project.*
9.	☐	☒	Are highly expansive basement soils present? *Highly expansive soils do not appear to be present based on the preliminary geotech report.*

	Yes	No	Question
10.	☒	☐	Are as-builts (including structural section information regarding edge drains, under drains, lime treatment, permeable blanket, etc.) available?
	☐	☐	If no, did you check map files and online?
			If yes, existing structural section was based on (check one): ☒ as-built ☐ actual boring
11.	☐	☒	Do the project limits have problems with groundwater (e.g., high water table, flow requirements, etc.)? If yes, explain: *Groundwater is relatively shallow (3' to 4') only in the marine terrace deposits located adjacent to Calera creek.*
12.	☒	☐	Has the availability of pavement materials (i.e., long haul distances from plants) been considered? *Sources generally 19-26 miles away.* If yes, how does material availability affect pavement type selection? *The sources and distance should not affect pavement type selection.*
13.	☒	☐	Will the existing pavement be rehabilitated?
	☐	☐	What are the age and condition of the existing adjacent lanes? Explain: *Per topic 603 of HDM, standard widening and preventive maintenance will be performed with minimum 0.20' overlay (0.10' OGFC and 0.10' RHMA-G) over existing pavement. Pavement structural section age varies from 20 to 55 years. Pavement is generally in good condition, with patches of recent pavement overlay constructed within the past 10 years.*
14.	☐	☐	What is the type of pavement/structural section (corridor pavement type/structural section continuity) on upstream/downstream roadway? Explain if several: *Upstream and downstream roadway are asphalt concrete pavement with similar pavement section within project limits. Some pavement sections include ATPB layer in the structural section.*
15.	☐	☒	Is TMP data (lane closure charts) available and was it considered? *Lane closure charts are not yet available.*
	☒	☐	Will there be nighttime paving? If so, provide lane closure hours: *Majority of work will be done during daytime with night time closures (10 PM to 5AM) only as needed for final overlay or striping work.*
16.	☒	☐	Was field Maintenance input considered? *Caltrans Maintenance has provided comments on GAD/Fact Sheets and DPR submittals.*
17.	☐	☒	Were climate conditions (extreme temperature, rainfall, etc.) considered? *Climate in project area is a mild coastal climate with high humidity.* If so, which ones do you anticipate affecting the pavement job?

	Yes	No	Question
18.			Which stage construction requirements (matching adjacent sections, temporary paving, etc.) were considered? *North of San Marlo Way, there are sections of permeable/drainage layers in the existing pavement section. The new pavement will need to match the layers and carry the pavement drainage out to the edge of highway.*
19.	☒	☐	Is this a large-scale project? Explain all quantity take-off: *Pavement quantities were computed based on area and depth. Earthwork quantities were computed based on average end area method. The Caltrans standard Project Report cost estimate format was used.*
20.	☐	☒	Is there Open-Graded Hot-Mix Asphalt (OGHMA) on the existing pavement?
21.	☒	☐	Was environmental impact considered? Explain: *Project will not encroach into wetlands and will maximize use of existing pavement. Existing pavement removed will be reused as much as possible.*
22.			What is the proposed pavement design life? *The current proposed pavement section was designed for a 40-year TI.*
23.			What is the final lane line configuration? *3 lanes in each direction.*
24.	☐	☒	Are there vertical clearance issues? If yes, explain:
25.			What is the traffic index? *20-year Design Period: Traffic Index = 9.5* *40-year Design Period: Traffic Index = 10.*
26.	☒	☐	Are there existing retrofit edge drains?
27.	☒	☐	Will shoulders be used as detours?
28.	☐	☒	Is there settlement at bridge approaches? *There are no bridges within project area.*
	☐	☒	Are bridge approach slabs being replaced? Does such replacement include shoulders? *A new bridge with approach slabs will be constructed.* Consulted with structures maintenance representative on _____.
29.	☒	☐	Is there a minimum standard (2% or 1.5%) cross-slope? If not standard, provide date of design exception approval:_____

	Yes	No	Question
30.			Provide the pavement condition report. *2007 Pavement Conditions Survey Inventory is attached.*
31	☐	☒	Other factors? Explain:

Design Project Engineer

Karsten Adam
Print Name

Signature

Design Senior

Brad Leveen
Print Name

Signature

Collection Date: 08/27/2007
Printed: 05/06/2011

Caltrans Maintenance Program
2007 Pavement Condition Survey Inventory
Caltrans Drive Order

District 4, SM, Rte 001, PM 41 - 43

District	4
County	SM
Route	001
Begin PM	40.863

District 4 County SM Route 001

Begin PM - End PM		Length	LaneMi. (Est.)	Type	AADT (,000)	MSL								
Lane	Surface Type	Alligator Cracking A %	Alligator Cracking B %	Alligator Cracking C (Y/N)?	Rutting, Bleeding	Slab Cracking 1st %	Slab Cracking 3rd %	Slab Cracking Corner %	Faulting	Patching Area %	Patching Poor Cond.?	Ride, IRI	Priority	Skid	Defect
40.863 - 41.308			**0.445**	**1.780**	**MLU**		**30**	**2**							
L1	F-DG	0	0									48 256	6		RIDE
L2	F-DG	0	0									54 280	6		RIDE
R1	F-DG	22	0									43 238	6		RIDE
R2	F-DG	14	0									N/A	32		FINE RAVEL
41.308 - 42.262			**0.954**	**3.816**	**MLD**		**47**	**2**							
L1	F-DG	0	0									37 212	32		FINE RAVEL
L2	F-DG	0	42									45 244	2		HIGH ABC, RIDE
R1	F-DG	22	0									29 181	32		FINE RAVEL
R2	F-DG	14	0									N/A	32		FINE RAVEL
R 42.262 - R 42.296			**0.034**	**0.136**	**MLD**		**47**	**2**							
L1	F-DG	0	0									N/A	32		FINE RAVEL
L2	F-DG	0	42									N/A	8		HIGH ABC
R1	F-DG	22	0									N/A	32		FINE RAVEL
R2	F-DG	14	0									N/A	32		FINE RAVEL
R 42.296 - R 42.608			**0.312**	**1.248**	**MLD**		**50**	**2**							
L1	F-DG	0	0									23 157	32		FINE RAVEL
L2	F-DG	0	42									40 223	8		HIGH ABC
R1	F-DG	0	0									40 224	6		RIDE
R2	F-DG	0	0							100		N/A	98		GOOD CONDITION
R 42.608 - R 43.408			**0.800**	**3.200**	**MLD**		**50**	**2**							
L1	F-DG	0	0									24 162	31		COARSE RAVEL
L2	F-DG	0	14									29 182	10		MOD ABC
R1	F-DG	0	0									27 172	32		FINE RAVEL
R2	F-DG	0	0							100		N/A	98		GOOD CONDITION

*Surface type of 'EB' is Enhanced Binder.

RECOMMENDATION:

Reviewed and discussed by Pavement Selection Review Committee on 7/25/2013.
(Date)

Committee's comments:

Design Responses:

Selection:

Consultant Project Manager

Brad Leveen, PE
Print Name

Signature

Caltrans Oversight Design Engineer

Eva Ng
Print Name

Signature

Attachment J

Final Environmental Impact Report/Environmental Assessment (FEIR/EA) Signed Coversheet

State Clearinghouse Number 2010022042
04-SM-1
PM 41.7/43.0
EA: 04-254600
Project ID: 0400000715

State Route 1 (SR 1)/Calera Parkway/ Highway 1 Widening Project (from South of Fassler Avenue to North of Reina Del Mar Avenue in the City of Pacifica)

San Mateo County, California

FINAL ENVIRONMENTAL IMPACT REPORT/ ENVIRONMENTAL ASSESSMENT

VOLUME I
Summary & Chapters 1-3, 5, 6 & Appendix A-J

Submitted Pursuant to: (State) Division 13, California Public Resources Code (Federal) 42 USC 4332(2) C & 23 USC 327

THE STATE OF CALIFORNIA
Department of Transportation

8-1-13
Date of Approval

Bijan Sartipi
District Director
California Department of Transportation

Attachment K

Local Agency Commitment Letter to Maintain Landscaped Median

CITY HALL

170 Santa Maria Avenue • Pacifica, California 94044-2506

www.cityofpacifica.org

Scenic Pacifica

MAYOR
Len Stone

MAYOR PRO TEM
Mary Ann Nihart

COUNCIL
Sue Digre
Karen Ervin
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- **Field Services**
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  FAX (650) 738-9747

June 24, 2013

Mr. Bijan Sartipi
District Director
Caltrans District 4
111 Grand Avenue
Oakland, CA 94623-0660

Subject: Route 1, Westport Drive to Fassler Avenue, Calera Parkway Project

Dear Mr. Sartipi,

This is in response to a request from Mohammad Suleiman, Caltrans Project Manager for the Calera Parkway Project, for a letter from the City of Pacifica stating its willingness to maintain the landscaping within the center median of the proposed Calera Parkway Project. As I understand, the inclusion of a landscape median is considered a design exception that will have to be approved by Caltrans prior to the release of the Final Environmental Impact Report (FEIR). However, in order for Caltrans to approve the design exception, you would like a formal commitment from Pacifica to maintain the landscaping within the median.

As you were probably made aware, on June 25, 2012, our City Council directed staff to participate in the Project Development Team (PDT) meeting to encourage the identification of the landscaped median alternative, but reserved the final decision on the Calera Parkway Project until after the FEIR is issued. The City of Pacifica Council also authorized staff to nominate the Calera Parkway Project to SMCTA for possible funding of the design phase pending the Councils final decision after the FEIR has been released.

Therefore, please consider this letter as Pacifica's commitment to maintaining the landscaping within the median, contingent upon our City Council's decision to move forward with the project following the release of the FEIR.

Very truly yours,

Stephen A. Rhodes

Stephen A. Rhodes
City Manager

Cc: Mohammad Soleiman, Caltrans
Joseph Hurley, SMCTA