



# South Access to the Golden Gate Bridge Doyle Drive Project

## Project Management Plan



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Submitted in Partnership by:  
Federal Highway Administration  
San Francisco County Transportation Authority  
California Department of Transportation



FHWA



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## 1.0 INTRODUCTION

### 1.1 Purpose of the Project Management Plan

The Federal Highway Administration (FHWA), the San Francisco County Transportation Authority (Authority), and the California Department of Transportation (Caltrans) are implementing the South Access to the Golden Gate Bridge – Doyle Drive Project to address the needs of the corridor’s aging infrastructure and to accommodate increasing traffic demand.

On August 10, 2005, the President signed into law the Surface Transportation Act, the “Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users” (SAFETEA-LU). This legislation contained explicit requirements for major projects in Section 1904; namely that all federally funded projects costing \$500 million or more shall submit a Project Management Plan (PMP), in addition to an annual Financial Plan.

This PMP is consistent with the FHWA guidance document related to project management plans for major projects. The PMP is a living document and will be updated periodically.

The PMP:

- Presents the overall organization linking the Authority, Caltrans, FHWA, and other parties participating in the Project;
- Identifies roles and responsibilities of participants in performing and managing work for the Project;
- Establishes a rigorous and orderly framework for the Project’s implementation in accordance with sound business and management principles;
- Demonstrates the existence of a realistic plan to meet the administrative, technical and coordination requirements of the Project;
- Provides guidelines for issues key to the success of the Project;
- Provides procedures for reporting progress;
- Outlines quality assurance and quality control procedures;
- Defines communication channels among the Authority, Caltrans, FHWA, and other participants and outside agencies, and;
- Promotes teamwork among all project participants

The PMP is not a detailed procedure manual. The goal of the plan is to document mechanisms for control of scope, budget, schedule, and quality. Detailed project procedures conforming to the parameters outlined in the PMP will be developed and implemented by the various functional group managers and published prior to their implementation. All members of the Project Team are required to follow the guidelines set forth in this document.

The Project will require a number of agreements with various governmental agencies, including the National Park Service (NPS), the Presidio Trust (Trust) and the Department of Veterans Affairs (VA).

## **1.2 Project Participants**

The principal agencies responsible for the overall Project are the Authority, Caltrans and the FHWA. The Authority and Caltrans are responsible for managing, planning, obtaining environmental approvals, financing, designing, right of way easements and construction of the Project. The FHWA provides oversight from a federal perspective with respect to funding, project management, permitting, design and construction.

Other Project participants include:

- Presidio Trust
- National Park Service, Golden Gate National Recreation Area
- Department of Veteran Affairs
- Golden Gate Bridge, Highway and Transportation District
- City and County of San Francisco
- Transportation Authority of Marin
- County of Marin
- Metropolitan Transportation Commission
- San Francisco Bay Conservation & Development Commission
- Association of Bay Area Governments
- Bay Area Air Quality Management District
- State Historic Preservation Officer
- Advisory Council on Historic Preservation
- National Park Service, Pacific West Region
- San Francisco Recreation and Parks Department

## **1.3 Updating the Project Management Plan**

This PMP will evolve with the Project, reflecting the maturation of both. The Project Management Team will review, revise, and update the entire plan annually to reflect the current state of the Project and incorporate any changes due to revisions to State or Federal guidelines. The Project Management Team will prepare interim plan revisions, in the form of addendums, if it becomes necessary to revise the plan before the annual update.

Any team member (FHWA, the Authority, Caltrans, Project Management Team staff) or other group or individual (such as the Presidio Trust, National Parks Service or the Department of Veterans Affairs) can submit written requests for revisions to the PMP, at any time. The Project Management Team will follow the process listed below to ensure adequate review:

- The Project Manager and the Deputy Project Manager will evaluate the request and make a recommendation for inclusion to the Executive Committee.
- The Executive Committee will evaluate the recommendation and make the final determination on the request. The Executive Committee may require additional information from the requestor to complete his evaluation.

- If the request is rejected, the Project Manager will notify the requestor in writing and provide sufficient detail to explain the rejection.
- If the request is accepted, the Project Manager will assign an appropriate team member to formulate the request into a proposed revision, encompassing all affected sections of the PMP.
- The proposed revision will be checked and verified using the Project QC/QA process.
- The Project Directors will have the final review of the proposed revision. Once accepted, the Project Manager will disseminate the revision.

## **2.0 PROJECT DESCRIPTION AND SCOPE OF WORK**

### **2.1 Project Background**

Doyle Drive, built in 1936, is the stretch of Route 101 that provides access to the city of San Francisco from the Golden Gate Bridge, and southern access to Marin County and other Bay Area communities. This roadway requires extensive seismic, structural and traffic safety upgrades. The structures in the corridor, including the Presidio Viaduct, Marina Viaduct, Ruckman Under Crossing and Kobbe Under Crossing on Veterans Boulevard, are at the end of their useful life. The improvements must be consistent with Doyle Drive's designation as a regional post-disaster, recovery route.

Because of its importance within the Bay Area's regional transportation system, the Federal Highway Administration (FHWA), the California Department of Transportation (Caltrans), and the San Francisco County Transportation Authority (the Authority) have proposed to improve the approximately 2.4 kilometer (1.5 mile) Doyle Drive. Also playing major roles in the development and implementation of this project are the National Park Service (NPS), the Presidio Trust (Trust) and the Department of Veterans Affairs (VA).

In addition to benefiting motorists using the Golden Gate Bridge, the improvements to Doyle Drive would be beneficial to residents, tourists and others driving to and from the Presidio, the Golden Gate National Recreation Area (GGNRA), the Palace of Fine Arts, the Exploratorium, and other destinations.

The Doyle Drive portion of Route 101 provides the southern access to the Golden Gate Bridge and is part of the primary north-south link in coastal California. Currently, over 91,000 vehicles use Doyle Drive every weekday. Typically, 80 percent of the vehicles traveling on Doyle Drive are coming from or going to the Golden Gate Bridge. The remaining 20 percent of the vehicles begin or end their trips in San Francisco. Doyle Drive weekend traffic volumes are comparable to weekday volumes, confirming that it serves as both a primary commute and a recreational route.

The Presidio has served as a military post for more than 200 years, under the flags of Spain, Mexico and the United States. This has included a period, between 1848 and its closure in 1994, during which the Presidio protected commerce and trade, and played a logistical role in major United States military conflicts.

It was also during this period, in 1962, that the Presidio became a National Historic Landmark District (NHL), and that Doyle Drive was determined to be a contributing structure within that landmark.

In 1972, the Golden Gate National Recreation Area was created, and the Presidio was designated to be part of the recreation area if the military ever closed the base. As part of a military base reduction program in 1989, Congress decided to close the post. As such, the Presidio was transferred to the National Park Service on October 1, 1994. Then in 1998, the management of the Presidio became split between the National Park Service (Area A) and the Presidio Trust (Area B).

## 2.2 Project History

The history of this project dates back to 1933 when the Golden Gate Bridge and Highway District (renamed in 1969, the Golden Gate Bridge Highway and Transportation District) started construction on Doyle Drive as the southern approach to the Golden Gate Bridge. Doyle Drive was named after Frank P. Doyle, a director of the California State Automobile Association. Mr. Doyle was a roadway advocate and civic leader, and the first private citizen to cross the Golden Gate Bridge.

Doyle Drive was designed and built to operate with three, three-meter (ten-foot) lanes in each direction, separated by painted double stripes. In September 1945, Doyle Drive became a state highway. Subsequently, the California Division of Highways, now known as Caltrans, assumed responsibility for maintenance of the section extending from near the Golden Gate Bridge toll plaza to the Palace of Fine Arts and the Marina District of San Francisco.

In 1955, the Golden Gate Bridge Highway District requested that the State widen and reconstruct Doyle Drive to handle increasing congestion. In 1962, the District specifically asked for an eight-lane divided roadway as part of a proposed Golden Gate Freeway. The proposal was not pursued due to public objection. In 1970, after a fatal accident on the facility, the National Transportation Safety Board recommended that Doyle Drive be upgraded to current freeway design standards. In 1973, a *Draft Environmental Impact Statement (DEIS)* was completed for reconstruction of Doyle Drive as an eight-lane highway with a fixed median barrier. The public objected to the proposal, and the following year the state legislature passed the Marks Bill, which prohibited Caltrans from widening Doyle Drive to more than six lanes without the specific approval of the San Francisco Board of Supervisors.

In 1985, the San Francisco Board of Supervisors recommended that Caltrans develop alternatives that would improve safety but not increase the number of vehicles using Doyle Drive. Caltrans responded with two alternative recommendations: an eight-lane roadway design and a six-lane roadway design. The issues surrounding each of these alternatives were never resolved and a preferred solution was not identified.

In 1991, Caltrans requested that the San Francisco Board of Supervisors revisit the most recent design concepts for Doyle Drive. The Supervisors responded with the establishment of the Doyle Drive Task Force, consisting of representatives from various local governments and public and private organizations. The Task Force considered design alternatives, developed a consensus on a preferred alternative, and in 1993 issued the *Report of the Doyle Drive Task Force to the San Francisco Board of Supervisors*, which proposed a scenic parkway through the Presidio.

This parkway concept envisioned three travel lanes in a separate tunnel in each direction and an additional southbound auxiliary lane between the Park Presidio Interchange and a new direct access point to the Presidio if warranted following more detailed traffic analysis. In principle, the Board of Supervisors unanimously approved the recommendations of the Task Force and urged Caltrans to expedite inclusion of rebuilding Doyle Drive in the next state transportation funding cycle.

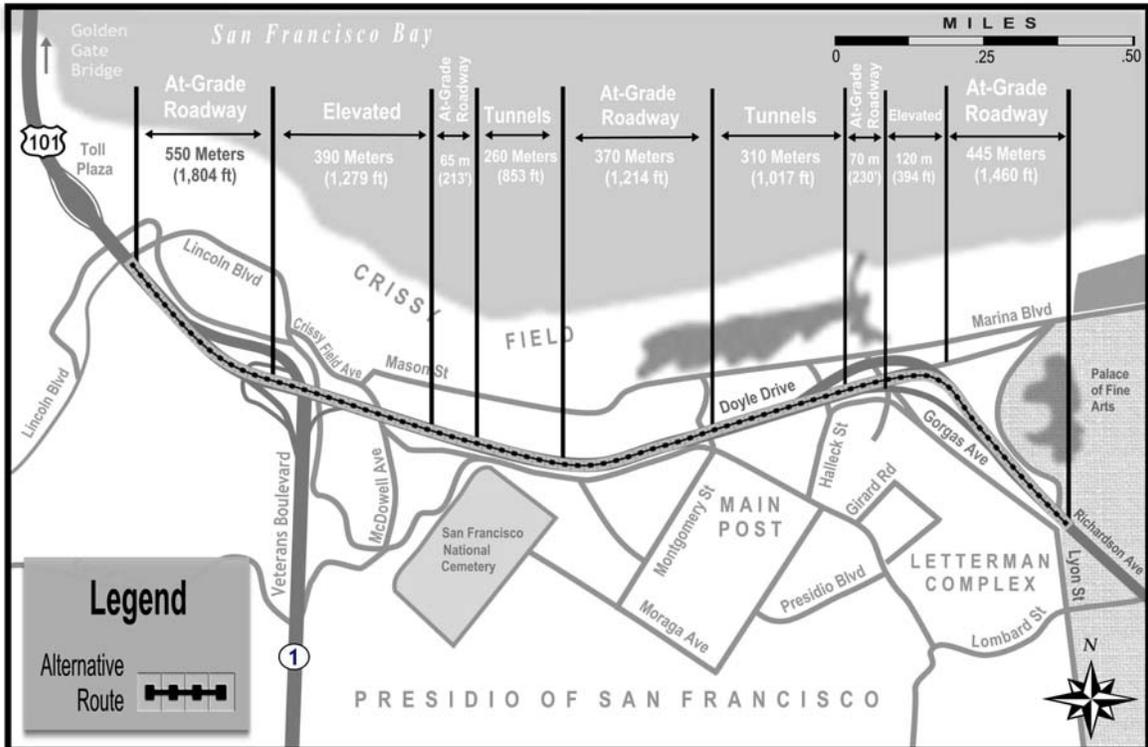
In the same year, Caltrans completed a project study report for the replacement of Doyle Drive. The Task Force’s recommended concepts were included in the alternatives evaluated in the Caltrans report.

In 1993, Caltrans completed a partial rehabilitation of the concrete decks from the Park Presidio Interchange to Richardson Avenue and Marina Boulevard. The low viaduct was coated with a thin polymer concrete overlay and the high viaduct was sealed with a polymer resin. These were maintenance measures, and have now reached the end of their service life. In 1995, Caltrans performed a seismic retrofit of the high and low viaduct structures. The high viaduct was retrofitted to withstand the maximum credible earthquake (MCE), with jacketing of the substructure and seismic restraints added to the superstructure. However, the structural configuration of the low viaduct precluded retrofitting this structure to withstand the MCE. Therefore, a probabilistic approach was used because the structure replacement was anticipated as part of the proposed Doyle Drive project. An interim 10-years retrofit plan was adopted.

**2.3 Project Scope**

Upon traffic analysis, the planned Doyle Drive project will replace the existing facility with a new six-lane facility and a southbound auxiliary lane, between the Park Presidio Interchange and the new Presidio access at Girard Road. A map of the proposed project is shown in **Exhibit 2-1**, below.

**Exhibit 2-1  
 Preferred Alternative: Refined Presidio Parkway**



The new facility will consist of two 3.3-meter (11 foot) lanes and one 3.6-meter (12 foot) outside lane in each direction with three meter (10 feet) outside shoulders and 1.2-meter (4 feet) inside shoulders. The southbound direction will include a 3.3-meter (11 foot) auxiliary lane from the Park Presidio Interchange to the Girard Road exit ramp. The total roadway width will be 32.1 meters (105.3 feet) and the overall facility width including the median will vary from 37.1 to 44.6 meters (121.7 to 146.3 feet). The width of the proposed landscaped median will vary from 5 meters (16 feet) to 12.5 meters (41 feet). To minimize impacts to the park, the footprint of the new facility will overlap with a large portion of the existing facility's footprint east of the Park Presidio Interchange. This alternative will not preclude GGBHTD's parking of the moveable median barrier machine in the median of Doyle Drive south of the toll plaza.

A 390-meter (1,279-foot) long high-viaduct will be constructed between the Park Presidio Interchange and the San Francisco National Cemetery. The height of the high-viaduct will vary from 20 to 35 meters (66 to 115 feet) above the ground surface. Shallow cut-and-cover tunnels will extend 260 meters (853 feet) past the cemetery to east of Battery Blaney. The facility will then continue towards the Main Post in an open at-grade roadway with a wide heavily landscaped median. A retaining wall between 4 to 8 meters (13 to 26 feet) high will be constructed along the south side of the facility between the Battery and Main Post tunnels. A landscaped berm will be constructed along the north side of the facility to shield park visitors from the proposed facility.

From Building 106 (Band Barracks) cut-and-cover tunnels up to 310 meters long (1,017 feet) will extend to east of Halleck Street. The facility will then rise slightly on a low level causeway 120 meters (394 feet) long over the site of the proposed Tennessee Hollow restoration and then pass over a depressed Girard Road. The low causeway will rise to approximately three meters (ten feet) above the surrounding ground surface at its highest point. East of Girard Road the facility will return to existing grade north of the Gorgas warehouses and connect to Richardson Avenue. The proposed facility will provide a transition zone starting from the Main Post tunnel to reduce vehicle speeds prior to entering city streets. A motor control and switch gear room to operate the tunnel life-safety equipment will be integrated with the Main Post tunnels.

The Park Presidio Interchange will be reconfigured due to the realignment of Doyle Drive to the south. The exit ramp from southbound Doyle Drive to southbound Veterans Boulevard will be replaced with standard exit ramp geometry and widened to two lanes. The loop of the northbound Doyle Drive exit ramp to southbound Veterans Boulevard will be improved to provide standard exit ramp geometry. The northbound Veterans Boulevard connection to northbound Doyle Drive will be realigned to provide standard entrance ramp geometry. The northbound Veterans Boulevard connection to southbound Doyle Drive will be reconstructed in a similar configuration as the existing directional ramp with improved sight lines, exit, and entrance geometry.

The project will provide direct access to the Presidio and indirect access to Marina Boulevard in both directions via access ramps from Doyle Drive connecting to an extension of Girard Road. East of the new Letterman garage, Gorgas Avenue is a one-way street with a signalized intersection at Richardson Avenue. North of Richardson Avenue, Lyon Street will remain in its existing configuration that provides access to Palace Drive. The surface parking spaces will be reconfigured to maintain the existing

parking supply in the area and improve pedestrian access between the Presidio and the Palace of Fine Arts.

Retaining walls will be required at the Park Presidio Interchange to accommodate the reconstruction of the ramps. Retaining walls will also be required in the eastern end of the alignment primarily along the extended Girard Road. Fences will be required along the edge of the at-grade portions of the roadway to restrict pedestrian access onto the roadway.

## **2.4 Project Agreements**

The Authority and Caltrans are in partnership for the Project, with the Authority as lead agency during the environmental phase. A Memorandum of Understanding (MOU) was executed in 1998 between these two agencies stating that SFCTA will prepare the Study that will include the development of the preliminary design and the EIS/EIR, act as the lead agency and be responsible for compliance with NEPA/CEQA. Caltrans agreed to work with the Authority to prepare the Study and provide prompt oversight, reviews and approvals of submittals.

The Authority and Caltrans entered into a Cooperative Agreement on May 21, 2003. This agreement defined the terms and conditions under which the Authority and Caltrans agreed to have the Authority, as the lead agency, prepare the Advance Design. The Advance Design consists of the preliminary project development design, approved Environmental document (FEIS/FEIR), Project Report, and design work to prepare Plans, Specifications and Estimates (PS&E) up to the 35% milestone.

That Cooperative Agreement terminated on January 1, 2004, prior to the Authority completing the Advance Design. The Authority and Caltrans entered into another Cooperative Agreement on July 31, 2006 which was amended on December 31, 2007, to continue the preparation of the Advance Design.

On May 5, 2009, another Cooperative Agreement was entered between the Authority and Caltrans to finalize the design work to bring the project to contract advertisement and award.

The Authority and Caltrans intended to expand the Cooperative Agreement and enter into subsequent financing, implementation and operating agreements which address in more detail the Project funding, ownership, operation and maintenance responsibilities, including Caltrans responsibilities for planning, development, design, right of way acquisition, and construction of the Project. These documents will define contract approval processes, land transfer issues, and accounting and audit procedures. Both agencies will take actions necessary to comply with Federal and State laws, regulations, directives, executive orders, Federal assurances and contractual obligations with respect to the Project.

A MOU is in development among the FHWA, the Authority, Caltrans, the Presidio Trust, and the US Department of Veterans Affairs to define the roles and responsibilities of each agency in the design and construction of the Project.

With regard to right of way acquisition, Caltrans and the Presidio Trust must enter into a Project Agreement defining the process whereby land will be transferred from the

Presidio Trust to Caltrans through FHWA, pursuant to FHWA's authority under 23 USC 317, as a federal land transfer. The Authority and Caltrans entered into a Cooperative Agreement on May 4, 2009. This agreement defined the terms and conditions under which the Authority and Caltrans agreed to have Caltrans as the implementing agency for the right-of-way as well as for the CEQA work. The Authority's responsibility included to act as the CEQA lead agency for the project while FHWA acts as the NEPA lead agency.

Caltrans and the FHWA have drafted a Doyle Drive Project Joint Stewardship and Oversight Agreement. This document defines which approval actions will be handled by FHWA or Caltrans. Other areas of federal involvement and/or approval actions for the Project are summarized in this agreement, such as attending meetings, design reviews, and conducting Project inspections.

An agreement between the City and County of San Francisco (CCSF) and Caltrans will be necessary since the proposed project will overlap into CCSF streets, which will require modifications to existing traffic signals and road markings.

A Programmatic Agreement (PA) among the Federal Highway Administration, the National Park Service (GGNRA and Region), the Presidio Trust, the Veterans Administration, the San Francisco County Transportation Authority, Caltrans, Advisory Council on Historic Preservation, and California State Historic Preservation Officer has been executed. The PA records the terms and conditions agreed upon to resolve the adverse effects of the project upon the National Historic Landmark District.

Individual Utility Agreements will have to be developed among Caltrans, the Presidio Trust and utility companies to identify, field survey and relocate each utility that will be affected by the Project.

A Maintenance and Operations Agreement among Caltrans, the Presidio Trust, and the City and County of San Francisco will be required prior to the start of construction. Long term maintenance and operations of the tunnels, tunnel systems, landscaping, graffiti control, as well as other issues will be addressed as part of this agreement.

Additionally, there are funding agreements in place outlining how much each Project sponsor expects to contribute. These funding agreements are listed below:

- Authority Resolution 06-30 which affirms commitments of \$71.1 million in RIP funds for the Project, with \$5.0 million allocated to FY2009 and the remaining \$66.1 million programmed for FY2011.
- Authority Resolution 09-18 which commits an additional \$13.0 million in RIP funds to the Project to be programmed in the 2010 STIP. The resolution also authorizes the execution of a Memorandum of Understanding (MOU) between the Authority and MTC obligating MTC to contribute \$80 million to the Project and it includes an agreement between the Authority and GGBHTD obligating GGBHTD to contribute \$80 million to the Project of which \$4.0 million will be contributed by Marin County and \$1 million by Sonoma County.

- 2008 STIP CTC Staff Recommendations which affirms commitments of \$71.1 million in RIP funds for the Project, with \$5.0 million allocated to FY2009 and the remaining \$66.1 million programmed in FY2011 of the Project funding schedule.
- Transportation Improvement Plan (TIP) - The current TIP amendment (2009-20) shows estimates of funding from various sources totaling \$954.8 million. While FHWA has not yet approved the amended TIP, it has already been approved by MTC and Caltrans.

## 3.0 GOALS AND OBJECTIVES

### 3.1 Project Purpose

The purpose of the proposed project is to improve the seismic, structural, and traffic safety of Doyle Drive within the setting and context of the Presidio of San Francisco and its purpose as a National Park.

Specific objectives of the Doyle Drive Project (Project), as they relate to the project's purpose, are to:

- improve the seismic, structural and traffic safety on Doyle Drive;
- maintain the functions that the Doyle Drive corridor serves as part of the regional and city transportation network;
- improve the functionality of Doyle Drive as an approach to the Golden Gate Bridge;
- preserve the natural, cultural, scenic and recreational values of affected portions of the Presidio;
- be consistent with the *San Francisco General Plan* and the *General Management Plan Amendment Final Environmental Impact Statement, Presidio of San Francisco, Golden Gate National Recreation Area* (NPS 1994a and 1994b) for Area A of the Presidio and the *Presidio Trust Management Plan: Land Use Policies for Area B of the Presidio of San Francisco* (Presidio Trust 2002);
- minimize the effects of noise and other pollution from the Doyle Drive corridor on natural and recreational areas at Crissy Field and other areas adjacent to the project;
- minimize the traffic impacts of Doyle Drive on the Presidio and local roadways;
- improve intermodal and vehicular access to the Presidio; and
- redesign the Doyle Drive corridor using the parkway concept described within the *Doyle Drive Intermodal Study* (1996).

### 3.2 Project Need

Doyle Drive is approaching the end of its useful life after over 70 years of operation. In the short-term, regular maintenance, seismic retrofit, and rehabilitation activities are keeping the structure safe. However, in the long-term, permanent improvements are needed to bring Doyle Drive up to current design and safety standards. **Exhibit 3-1** summarizes the need for the project.

**Exhibit 3-1  
 Need for this Project**

ELEMENT	DEFICIENCY	RESULT
<b>STRUCTURAL DEGRADATION</b>	<ul style="list-style-type: none"> <li>▪ Age of the facility</li> <li>▪ The effects of heavy traffic</li> <li>▪ Exposure to salt air</li> </ul>	Seismically and structurally below standard
<b>LOCATION</b>	Eastern portion is located in an identified liquefaction <sup>1</sup> zone	Structural failure during an earthquake
<b>DESIGN</b>	Original design does not meet today's safety standards	Today's vehicle fleet combined with traffic volumes and vehicle maneuvers add to driving patterns not anticipated when Doyle Drive was designed
<b>ACCESS</b>	No direct vehicular access into the Presidio	Limited access to facilities within the Presidio

<sup>1</sup>Liquefaction is the process by which a solid behaves as a liquid. This is often the case with some soils, resulting in landslides. Liquefaction can also happen during an earthquake in certain filled areas.

**Structural Degradation**

The Doyle Drive roadway contains two viaduct sections. In 1995, the low-viaduct was retrofitted to withstand a probabilistic earthquake assuming that Doyle Drive would be replaced within a ten-year period. The substructure (foundations and the main trusses) of the high-viaduct was retrofitted for a maximum credible earthquake.

However, neither of these retrofits addressed the bridge decks. The long-term effects of heavy traffic and exposure to salt air have caused Doyle Drive's structure to deteriorate. In the early 1990s, the concrete decks were sealed and coated with corrosion inhibiting polymer. These measures slowed the rate of corrosion and concrete deterioration and added up to ten years of service to the life of the viaduct bridge decks. However, the decks need to be replaced as about 88% of the deck area has a sufficiency rating less than 35, which is 30% lower than the FHWA replacement funding threshold.

While the previous corrosion prevention and seismic stabilization measures provided short-term solutions to the deck degradation and seismic vulnerability issues, they did not bring the roadway up to current design and safety standards. The current lifespan of Doyle Drive was not ultimately prolonged by these measures. These measures only delayed the roadway's replacement.

In July 2008, a Structural Condition and Replacement Memorandum was developed to summarize the structural condition state of Doyle Drive and the evaluation of long term improvement strategies. Primary findings of the analysis were:

- Doyle Drive is approaching the end of its design life;

- 80% of the Doyle Drive structures cannot be preserved and must be replaced;
- Rehabilitation does not address the existing traffic safety deficiencies (no shoulders, narrow lanes, tight curves and limited sight distance);
- Rehabilitation would ultimately cost more than replacement due to maintenance and continued rehabilitation of the facility;
- Participating agencies and the Citizens' subcommittee unanimously selected Presidio Parkway as the Preferred Alternative to replace the facility; and
- The Presidio Parkway best meets the project purpose to improve the seismic, structural, and traffic safety of Doyle Drive within the setting and context of the Presidio of San Francisco and its purpose as a National Park.

In the interim, the high-viaduct will increasingly become a financial burden as Caltrans will need to perform more frequent routine maintenance and monitoring to ensure its safety. Caltrans is currently performing extensive rehabilitation work to further stabilize the degradation of the high-viaduct. Should additional structural degradation lead to Doyle Drive closures or accessibility restrictions, the consequences to the regional transportation network would be dramatic.

#### **Location in a Liquefaction Zone**

The eastern half of the Doyle Drive alignment, which includes the low-viaduct section and lower Tennessee Hollow watershed, is within a potential liquefaction zone. Soils in this area, occurring at shallow depths not exceeding ten meters (33 feet), include loose, well-sorted sands and silts. There is also evidence of potentially liquefiable saturated soils at the location of the high-viaduct.

Liquefaction, due to ground shaking during a strong earthquake, could cause soils to subside rapidly and unevenly. Heavy structures, such as the low- or high-viaducts, could subsequently collapse or be severely damaged due to this subsidence and the loss of lateral support of the foundation elements.

#### **Nonstandard Design Elements**

The existing roadway has many nonstandard design elements. Existing lane widths range between 2.9 and 3 meters (9.5 and 10 feet) compared to the current standard of 3.6-meter (12-foot) lanes.

The existing roadway does not have shoulders. Current Caltrans design standards call for three-meter (ten-foot) wide shoulders on either side of the roadway. The current lack of shoulders, and the resultant inability to clear disabled vehicles from travel lanes, contributes to the high level of congestion and increased likelihood of serious accidents.

The tight curves in the Park Presidio Interchange ramps cause vehicles to brake abruptly to exit the roadway. This, in turn, causes traffic to slow down, which contributes to increased congestion on Doyle Drive. Weaving in this area also contributes to increased congestion. In addition, the acceleration lengths of the exit ramps are insufficient, given the speed of the approaching vehicles.

### **Vehicular Access into the Presidio**

Access between Doyle Drive and the Presidio is currently indirect via roads located within the Golden Gate Bridge Toll Plaza area. The ramps at the Toll Plaza connect to Merchant Road (on the west) and the Golden Gate Bridge service roads (to the east). These roads then connect to Lincoln Boulevard, which provides access to the Presidio. A new slip ramp<sup>1</sup> from northbound Richardson Avenue to the intersection of Marshall Street and Gorgas Avenue was completed in 2005 to provide access for the Letterman facility. The new slip ramp only provides access to the Presidio for northbound traffic. When access to the Presidio is provided via Doyle Drive, the slip ramp will be eliminated.

Currently, the lack of direct access into the Presidio has forced Doyle Drive traffic to detour through city neighborhoods adjacent to the Presidio gates. Usage of the Presidio is expected to increase dramatically over the next 20 years. Without proper access to the Presidio, increased traffic will have a greater negative affect on the surrounding neighborhoods.

The *Doyle Drive Intermodal Study* stated that direct access to the Presidio from Doyle Drive should be a key feature of the current replacement strategy. The study recommends that the strategy to replace Doyle Drive should also enhance multi-modal access choices into the Presidio, including improved transit service and connections, and enhanced pedestrian and bicycle facilities.

### **3.3 Project Goals and Objectives**

The following goals and strategies have been established for the Project:

- Maximize and efficiently utilize innovative funding resources to deliver a quality project as soon as possible.
- Maximize use of existing right of way and currently undeveloped land.
- Provide strategic segmentation of projects to promote competition and deliver best value.
- Identify unfunded gaps, and sources to close gaps, including strategies for new funding sources.
- Deliver design, acquire ROW, and adjust utilities early to maximize financial opportunity to advance construction lettings.
- Keep our community and affected property owners informed and be responsive to their input.
  - Provide current project information and interactive opportunities.
  - Provide Project office accessibility and outreach opportunities.
- Care for our community's quality of life and enhance the visual experience of the corridor.
- Use best practices to mitigate project impacts.
- Maximize the opportunity for right of way acquisition and utility relocation prior to start of construction.
- Maintain the existing level of service at peak times during construction

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<sup>1</sup> A slip ramp is a short connector ramp that is located between a major roadway and its adjacent frontage road. These ramps allow motorists to "slip" from one roadway to another.

- Use outreach to inform and provide public opportunity to make commute decisions during construction.
- Maintain the use of existing intelligent transportation systems (ITS) to inform drivers of impending key construction issues and traffic control phases.
- Monitor all commitments in the EIS for compliance in the design plans and final construction.
- Identify areas that may involve hazardous materials, extensive specialized relocation efforts or otherwise adversely affect the schedule.
- Advance final design to identify ROW needs and utility impacts to facilitate acquisition and relocation ahead of construction award
- Complete the Project in a safe environment for both the workers and the traveling public.
- Meet or exceed all state historically underutilized business (HUB) goals
- Achieve all Federal disadvantaged business enterprise (DBE) goals for construction.

### 3.4 Project Quality

One measure of the success of this Project will be determined by how well the project goals, discussed above, are met. The progress towards achieving these goals will be evaluated throughout the project life so as to ensure that all goals are being met. These goals are reached through a systematic approach to maintaining quality of all aspects of the project: administration, planning, environmental, design and construction. A key to this approach is the preparation and implementation of a Quality Management Plan (QMP)

The QMP outlines tools and procedures that project participants must use to ensure that the end product will meet the expectations of the external customers and that the deliverables will meet the needs of the internal customers. The QMP will cover, at a minimum, the following elements: Organization, Document Control, Design Control, Procurement Control, Control of Subcontractors, Special Process Control, Inspection, Non-Conforming Items, and Records. The QMP will identify and list critical, major, and minor items, which shall be used to differentiate the level of reporting, inspection, and attention throughout the project duration.

The Project Management Team (PMT) is preparing an overall Project QMP that provides for an independent level of quality assurance, through audits, surveillance and reviews, that the project requirements, including regulatory requirements, are being met. The Project will use the *Caltrans District 4 – Division of Design – Quality Control/Quality Assurance Guidelines*, dated March 5, 2007, as its base QMP. The document will be revised as necessary during the course of the Project.

Design consultants and construction contractors will be tasked with developing a QMP for their respective scopes, and submit it to the PMT prior to the start of work. These plans will define responsibilities for quality testing, audits, and other reviews at specific milestones during the planning, environmental, design and construction phases.

To ensure requirements and commitments of the Project are fulfilled, the Project will follow established procedures and numerous reviews during the development of the project. The *Caltrans Project Development Procedures Manual* provides step-by-step

procedures for the development of projects from project initiation through post-construction.

Project management, administrative and financial controls are discussed in the *Caltrans Project Management Handbook*, as well as in Section 10 – Project Management Controls, of this document.

The Project will follow established design standards, such as the *Caltrans Highway Design Manual*, which provides standard for design and gives guidance for good design practices where discretion is given to the designer. Additional information is contained in Section 11 – Design Quality Control/Quality Assurance.

Construction quality controls are discussed in the *Caltrans Construction Manual*, as well as in Section 12 – Construction Quality Control/Quality Assurance.

## **4.0 PROJECT ORGANIZATIONAL CHART, ROLES AND RESPONSIBILITIES**

### **4.1 Organizational Overview**

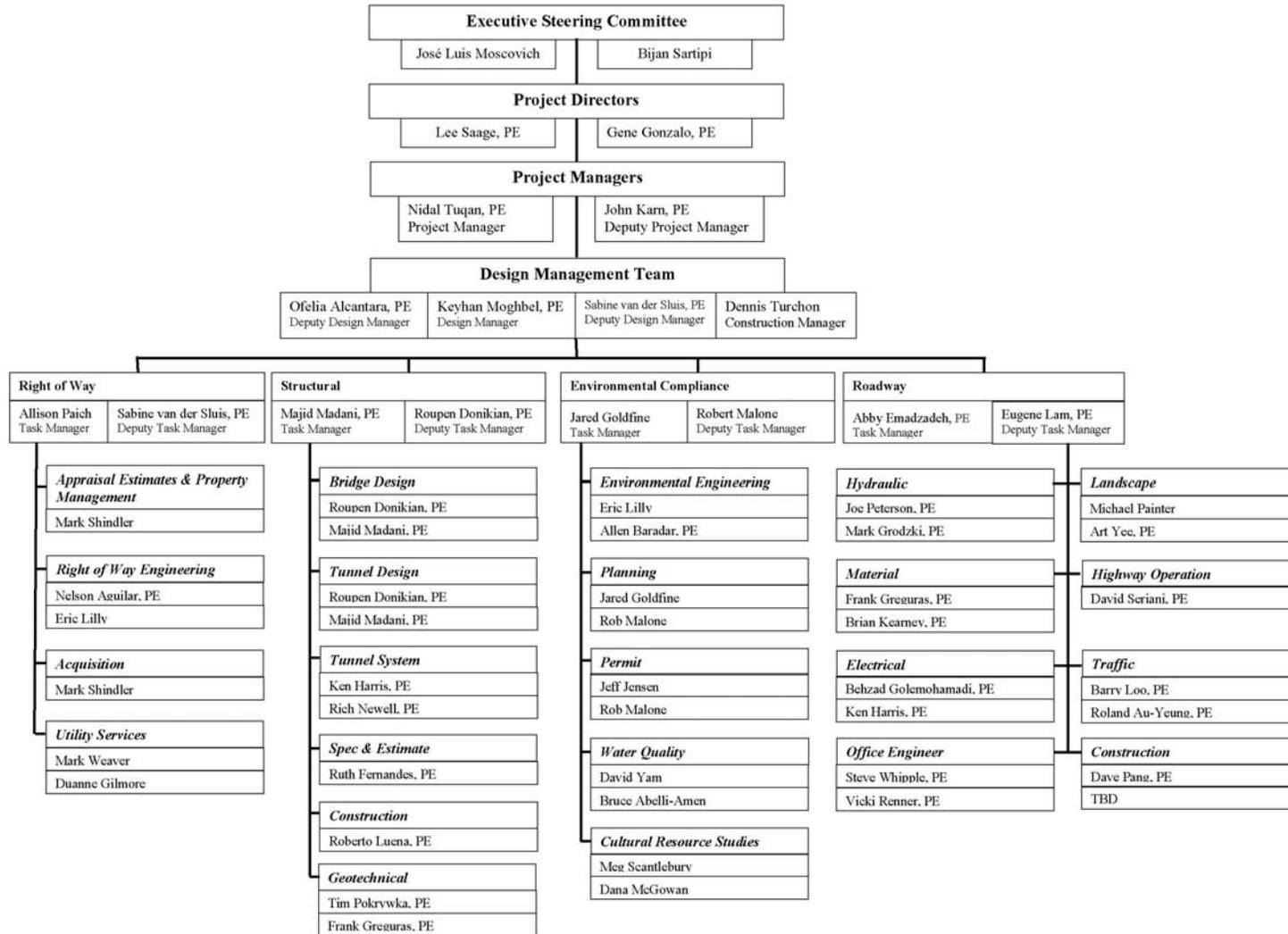
The Doyle Drive Integrated Organization was formed to manage the Project, and consists of the Leadership Committee, Executive Committee, Project Management Team, and Project Development Team. A summary of the organization for the Design Phase is shown in Exhibit 4-1.

The intent of the Integrated Team Concept is to ensure that the detailed design is progressed in the most efficient manner and is well coordinated between disciplines, regardless of which party performs a particular scope of work; and to hold the project schedule as the primary barometer for allocating resources to the various tasks.

Caltrans and the Authority entered into a partnership wherein the Authority leads public involvement and Caltrans leads project delivery. For detailed design, Caltrans acts as Project Manager and Design Manager, with the Authority as Deputy. Caltrans also fulfills the role of Task Manager for key tasks. The Project's organization is then integrated at the resource level for the various tasks. Caltrans stated that its primary assumption for proposing this structure for detailed design is to ensure AAA procurement for 100% PS&E (Design-Bid-Build), which would consequently eliminate the requirement of Caltrans oversight and reduce the project delivery schedule.

As the Project moves into construction phases, the Integrated Organization will be updated as necessary.

**Exhibit 4-1  
 Project Organizational Chart**



## 4.2 Leadership Committee

The Leadership Committee, co-chaired by the San Francisco County Transportation Authority (Authority) and the California Department of Transportation (Caltrans), will provide policy guidance and confirm project decisions. The following is a list of senior representatives from key agencies that will be invited to join the Leadership Committee:

- **San Francisco County Transportation Authority (Co-Chair)**  
José Luis Moscovich, Executive Director
- **California Department of Transportation District 4 (Co-Chair)**  
Bijan Sartipi, District 4 Director  
Dan McElhinney, District 4 Chief Deputy Director
- **City and County of San Francisco**  
Nathaniel Ford, Executive Director and CEO of Municipal Transportation Agency  
Ed Reiskin, Director, Department of Public Works  
Bond Yee, Director of Department of Parking and Traffic  
Jared Blumenfeld, Interim Director, San Francisco Recreation and Parks
- **Golden Gate Bridge, Highway and Transportation District**  
Celia Kupersmith, General Manager and CEO
- **Federal Highway Administration**  
Walter C. Waidelich, Jr., California Division Administrator
- **Metropolitan Transportation Commission**  
Steve Heminger, Executive Director  
Andrew Fremier, Deputy Executive Director, Operations
- **National Park Service's Golden Gate National Recreational Area**  
Frank Dean, Acting General Superintendent
- **Presidio Trust**  
Craig Middleton, Executive Director
- **Department of Veterans Affairs**  
James Metcalfe, Director Golden Gate National Cemetery

## 4.3 Agency Senior Representatives

The Agency Senior Representatives (formerly known as the Executive Committee) includes senior technical and management staff from the agencies represented on the Leadership Committee, additional regional agencies, as well as senior members of the consultant team. The Agency Senior Representatives receive briefings on progress and advise on project issues. Project Directors have been appointed from the Authority and Caltrans to lead the Agency Senior Representatives. The following list of agency and

consultant team members are expected to participate in the Executive Committee activities.

- **San Francisco County Transportation Authority**  
Leroy L. Saage
- **California Department of Transportation**  
Gene Gonzalo, District Division Chief, South Bay, District 4  
Skip Sowko, District Division Chief, Design South, District 4  
James Richards, Deputy District Director - Environmental  
Dennis Turchon, District Division Chief - Construction
- **San Francisco Mayor's Office**  
Justin Roja, Office of Neighborhood Services
- **City and County of San Francisco**  
Gary Hoy, Department of Public Works  
Justin Roja, San Francisco Mayor's Office of Neighborhood Services  
Jerry Robbins, Principle Transportation Planner, MTA  
Bill Wycko, Planning Department  
Daniel LaForte, Recreation and Parks Department  
Sarah Ballard, Supervisor Alioto-Pier's Office
- **Golden Gate Bridge, Highway and Transportation District**  
Denis Mulligan, Chief Engineer  
Alan Zahradnik, Planning Director
- **Federal Highway Administration**  
Cesar Perez, Senior Transportation Engineer  
Lanh Phan, Transportation Engineer  
Cindy Vigue, State Program Director
- **Golden Gate National Recreation Area, National Park Service**  
Rick Foster, Doyle Drive Project Liaison for GGNRA  
Michael J. Savidge, Director of Partnerships & Strategic Initiatives
- **The Presidio Trust**  
Mark Helmbrecht, Transportation Coordinator
- **Department of Veteran Affairs**  
Michael Elliot, Chief, Architectural and Engineering Division  
Bill Jayne, Director of Construction Service  
Cliff Schem, Chief, Engineering Service
- **Transportation Authority of Marin**  
Bill Whitney, Senior Civil Engineer
- **Metropolitan Transportation Commission**

Rod McMillan, Director, Bridge Oversight and Operations

- **San Francisco Bay Conservation & Development Commission**  
Robert Batha, Chief of Permits  
Adrienne Klein, Chief of Enforcement
- **Association of Bay Area Governments**  
Henry Gardner, Executive Director
- **Bay Area Air Quality Management District**  
David Vintze, Air Quality Manager, Planning
- **ARUP PB Joint Venture**  
Ignacio Barandiaran, Principal, ARUP  
Gary Griggs, Principal, PB

#### **4.4 Executive Steering Committee**

The Executive Steering Committee consists primarily of the District 4 Director Bijan Sartipi and SFCTA's Executive Director José Luis Moscovich. It also includes representatives for the Presidio Trust and the National Park Service. The Committee receives briefings on progress and advises on project issues.

#### **4.5 Project Management Team**

Given the complexity and urgency of the Project, it was determined that a Project Management Team (PMT) would be vital to successfully implementing the Project. The PMT was established to serve as a management working group to advance design decisions and to ensure coordination of disciplines.

The PMT is responsible for the coordination of all tasks within the integrated project team, and with other agencies. The PMT is responsible for all written communications and is responsible for the notification of schedule requirements such as mobilization, initiation and monitoring task progress, and schedule and scope changes. The PMT also is responsible for monitoring the quality control plan, and the production and review of all deliverables. The PMT is in charge of developing a progress report and presenting a relevant account of the project's advancement on a monthly basis.

The following organizations and individuals comprise the PMT:

- **San Francisco County Transportation Authority**  
Lee Saage
- **California Department of Transportation**  
Gene Gonzalo, Division Chief, South Bay, District 4  
Skip Sowko, District Division Chief, Design South, District 4  
Nidal Tuqan, Regional Project Manager, West Bay, District 4  
Keyhan Moghbel, District Office Chief, Design South, District 4  
Ofelia Alcantara, Supervising Bridge Engineer, DES Bridge Design West

Majid Madani, Senior Bridge Engineer, DES Bridge Design West  
Dave Pang, Construction Manager

- **ARUP PB Joint Venture**  
John Karn, ARUP  
Sabine van der Sluis, PB

In addition, several groups are structured to support the PMT, as follows:

- **Project Controls**  
Beau Wrightson, ARUP  
Amy Murphy, ARUP  
Azin Zarei, Caltrans
- **Project Administration**  
Bill Sievers, ARUP
- **Public Involvement/Interagency Coordination**  
Ben Strummwasser, CirclePoint
- **Procurement/Funding**  
Ignacio Barandiaran, ARUP  
Nick Amrhein, PB

#### **4.6 Project Development Team**

The Project Development Team includes senior technical staff from the agencies represented on the Executive Committee, as well as senior members of the consultant team. The Project Development Team has the responsibility for carrying out the day to day operations required to maintain progress and coordination towards the goal of completion of the design phase.

A Task Manager is identified for each major area of design to oversee the successful completion of the individual tasks. Each of these Task Managers is identified in the organizational chart and is responsible, as directed by the Design Managers, for communications with the associated agencies and other integrated team members. The Task Managers jointly develop detailed task descriptions, agree to allocation of resources for implementation, and submit their plan to the Project Management Team for review and approval

It is the responsibility of each Task Manager to:

- Produce assigned deliverables on time, within the budget assigned, to meet the requirements identified in each task;
- Advise the Project Management Team of any impediments to providing the assigned deliverables; and
- Advise the Project Management Team of any requests for out of scope work that more properly would be in new or expanded task.

In addition, each of the Task Managers is responsible for the following activities relative to their respective disciplines: implementation of quality control procedures; coordination of efforts with other task managers; reporting scope changes to the Project Management Team; monitoring the budget; preparation of cost-to-complete estimates; and development and implementation of corrective actions

<b>Task</b>	<b>Task Manager</b>	<b>Deputy Task Manager</b>
Roadway	Abby Emadzadeh, PE Caltrans	Eugene Lam, PE ARUP
Survey/Mapping	Edward Krumrei, PE Chaudhary & Associates	Abby Emadzadeh, PE Caltrans
Structural – Bridges	Majid Madani, PE Caltrans	Roupen Donikian, PE PB
Structural – Tunnels	Roupen Donikian, PE PB	Majid Madani, PE Caltrans
Tunnel Systems	Ken Harris, PE PB	Richard Newell, PE Caltrans
Electrical Engineering	B. Golemohammedi, PE Caltrans	Ken Harris, PE PB
Geotechnical Engineering	Tim Pokrywka, PE Caltrans	Frank Gregarus, CE, PE ARUP
Material Engineering	Brian Kearney, PE Caltrans	Frank Gregarus, CE, PE ARUP
Right of Way Engineering	Allison Paich Caltrans	Edward Krumrei, PE Chaudhary & Associates
Environmental Compliance	Jared Goldfine Caltrans	Rob Malone PB
Sustainability Consulting	Amy Murphy ARUP	Rob Malone PB
Landscape Architecture / Urban Design	Michael Painter MPA Design	Lorena Wong Caltrans

## 5.0 PROJECT COMPONENTS (PHASES)

### 5.1 Project Development Process

As detailed in the *Project Management Handbook* and *Project Development Procedures Manual*, Caltrans divides each project into project components, each with its own outcomes or deliverables. Caltrans Guide to Capital Project Delivery Work Plan Standards, formerly known as Work Breakdown Structure (WBS) defines the deliverables for each component. Together, the project phases make up the project lifecycle.

### 5.2 System and Regional Transportation Planning

The planning concept and scope for major transportation improvements are developed during the system planning process. Planning results in the development of a planning concept and scope identifying the type or mode of a facility. Planning also identifies other features relating to the location and length of a project, including the number of lanes and general interchange and intersection spacing. Planning generally focuses on identifying and clarifying the specific transportation system problem and looks for practical solutions. Effective project planning should result in a good statement of a project's purpose and need.

The Project is consistent with the *Route Concept Report* dated September 1986 and it is also consistent with the Caltrans *System Management Plan* for District 4.

While the history of the planning history of the Doyle Drive Project (Project) extends back to the 1950's, the current vision of the Project began with the San Francisco Board of Supervisors establishment of the Doyle Drive Task Force in 1991 and the issuance of the *Report of the Doyle Drive Task Force* in 1993.

Caltrans advanced the Project from the planning phase to the project Initiation phase with the approval of the *Project Proposal Report* on June 26, 1992.

In addition to the studies noted above, the National Park Service published the *Final General Management Plan Amendment (GMPA)*, in July 1994.

Additionally, in 1994, the San Francisco County Transportation Authority (Authority) initiated the *Doyle Drive Intermodal Study*, which was funded by a Caltrans planning and research grant, "to further the development and ultimate implementation of a realistic and fundable replacement for Doyle Drive." The results of the *Intermodal Study* were released in 1996 and supported the recommendations of the Doyle Drive Task Force and the GMPA.

### 5.3 Project Initiation Document (PID)

The project initiation component includes all work involved in the preparation, review, and approval of a PID such as a Project Study Report (PSR), Project Scope Summary

Report (PSSR), Noise Barrier Scope Summary Report (NBSSR), etc. This phase of the project includes three major tasks:

- Compiling and reviewing existing background information that may impact the alternatives or the scope of the alternatives under consideration.
- Developing project constraints and information required determining the extent of the existing problem and future needs. This should include any necessary discussions with internal and external stakeholders.
- Analyzing the existing problem and future requirement to determine the Project's need and purpose.

The PSR for the Doyle Drive Reconstruction, which defined the Project scope, provided a capital and support cost estimate and a project work plan, was signed and approved on August 9, 1993. The *Report of the Doyle Drive Task Force* was incorporated into the PSR as Exhibit 2.

The PSR recommended that the environmental document to be developed should be an Environmental Impact Report/Statement (EIR/S) with the Department as the lead agency.

#### **5.4 Project Approval and Environmental Document (PA&ED) Phase**

For a capital project to advance to the PS&E component, official federal, state, and environmental approvals must be obtained as well as approval from stakeholders and the public. Projects must comply with all applicable environmental laws, including the Endangered Species Act, Clean Air and Water Acts, Wetlands Executive Order, Coastal Zone Management Act, and the National Historic Preservation Act and Section 4(f) regarding taking of parklands, historic sites and other sensitive lands. Compliance with these acts and other State and federal regulations is established in the environmental document after review by agencies with responsibilities in those areas.

The Federal Highway Administration (FHWA) published a Notice of Intent (NOI) in the Federal Register on February 16, 2000.

The Authority distributed a Notice of Preparation (NOP) on February 23, 2000 to advise interested agencies and the public that an Environmental Impact Document would be prepared.

The Authority distributed public meeting announcements to approximately 2,100 interested organizations and individuals, including property owners in the Project area. The Authority also published newspaper advertisements announcing the public meetings in the San Francisco Chronicle (February 28, 2000) and in the Marin Independent Journal (February 29, 2000).

Four formal scoping meetings were conducted by the Authority during March 2000 to gather input and comments prior to the development of the EIS/EIR.

The Draft Environmental Impact Statement/Report (DEIS/R) for the Project was released on December 30, 2005. The comment deadline for the DEIS/R was March 1, 2006.

On September 26, 2006 the Authority selected the preferred alternative to be identified within the Final Environmental Impact Statement/Report (FEIS/R) for the Project. The California Environmental Quality Act requires a preferred alternative to be identified at the time the FEIS/R is prepared.

On October 27, 2008 the Authority distributed letters notifying agencies of their intent to certify the FEIR.

The FHWA published a Notice of Availability for the FEIS in the Federal Register on October 31, 2008.

On December 16, 2008 the Authority board passed a resolution certifying the Final Environmental Impact Report, approving the Findings of Fact, approving the Statement of Overriding Consideration and adopting the Mitigation Monitoring Plan.

On December 17, 2008 the Notice of Determination was filed with the county clerk for the County of San Francisco.

On December 18, 2008 FHWA signed the Record of Decision and the notice of final of federal agency action was published in the Federal Register on January 13, 2009.

## **5.5 Plans, Specifications & Estimates (PS&E)**

The Project Development Team originally thought to allow design-build for this Project, which would have meant that the final design beyond 35-percent might have been performed either by the Project Development Team or as part of the design-build team. However, in the absence of legislation authorizing design-build procurement for the project, the Project Development Team explored other innovative delivery methods to accelerate project delivery. This was important as the largest variable in the cost estimate was the projected cost escalation and committed funds for the total project cost had yet to be identified. See Section 6 for further discussion.

Working within the more typical design-bid-build procurement methods, the Project Development Team has been able to accelerate the project delivery by dividing the original single contract into eight separate contracts and focusing resources to prepare each contract package in sequence. Award of the first two contracts will be accelerated through a Emergency Limited Bid (ELB) in which contract 1 consists of several ELB packages. Contract 2 will be achieved through a single ELB. All other contract PS&E packages will consist of project design plans, detailed project specifications and a cost estimate. The cost estimates per contract are the Engineers Estimate for the construction contract costs only. Each PS&E package forms the basis for the contract bidding process.

During the PS&E component project information will be reviewed and updated, purpose and scope will be refined, design surveys and photogrammetric mapping obtained, and reports including traffic data, hydrology and hydraulic, geotechnical design, pavement design, materials and sound wall design reports are completed. Final right of way (ROW) requirements will be determined and special design culvert and bridge and structure site plans are prepared.

## **5.6 Right of Way (ROW)**

Since the Caltrans owns, operates and maintains the facility, it will be the primary agency responsible for obtaining additional ROW requirements. All anticipated permanent Project ROW requirements are from lands controlled by public agencies. The new ROW requirements will be obtained, through direct negotiations with the various agencies.

At present, privately owned property is not required for this project. If it becomes necessary to obtain additional property, Caltrans will follow the Uniform Act, 49 CFR, and purchase the properties at fair market value. If after a reasonable period of time, a settlement cannot be reached with the property owner, Caltrans may request permission to pursue a condemnation action from the California Transportation Commission. An ordinary uncontested acquisition of a residential property is likely to take about eight months between appraisal and close of escrow. If an owner chooses to exhaust the condemnation process all the way to a court trial, such an acquisition can consume as much as two years or more.

The ROW component involves preparing maps and legal documents, preparing appraisals, obtaining legal and physical possession of property, relocating occupants, clearing all physical obstructions, and relocating utilities. Other required activities include managing properties, selling excess properties, monumentation of the ROW, relinquishments and vacations, and preparing ROW record maps.

## **5.7 Prepare and Advertise Contracts**

At this stage in the Project's lifecycle, each contract's design is complete and the Caltrans ROW Office has certified that all needed properties have been obtained either by easement or acquisition, and all utilities within the contract area have been taken care of. For each contract, the final project documents and bid package are assembled for advertising. After bids have been opened, the project manager reviews the bidding process and recommends approval and aware.

## **5.8 Construction**

Contract approval authorizes construction of the different project components which are identified by each contract. If changes are required during construction, the project engineer will prepare engineering details and calculations, as required. The resident engineer will prepare the final construction project records when the project is complete. The project is not complete until the final contract estimate, project history file and as-built plans are completed, final ROW activities completed, claims are resolved and mitigation is completed.

## 6.0 PROCUREMENT AND CONTRACT MANAGEMENT

### 6.1 Overview

The Project will follow the contract procurement requirements of Caltrans, as described in the following documents: *Project Development Procedures Manual*, the *Ready-to-List Guide, April 2008 (RTL Guide)*, and the *Standard Specifications*. These documents in turn follow Federal, State and local laws and regulations.

The Project awards professional services contracts based primarily on technical qualifications and negotiated contract rates. A complete set of Plans, Specifications and Estimate (PS&E) will be prepared, reviewed and approved under the requirements set forth in the Caltrans *Project Development Procedures Manual* and the *Standard Specifications*.

The Caltrans *RTL Guide* defines the Federal, State and policy requirements for contract advertisement and award. The *RTL Guide* describes activities, roles and responsibilities required to complete the project PS&E, to advertise, open bids and award the construction contract.

Those contracts that utilize Federal funds will include contract clauses required by FHWA Form 1273. Contracts can only be advertised after policy, statutory and regulatory requirements are completed.

Although Public Works contracts will generally be awarded on a low bid basis (Design-Bid-Build) (DBB), at the time the project was initiated, there was legislation pending that would have allowed an alternative form of procurement, Design-Build (DB). AB 1499 would have allowed the use of DB procurement for highway projects through Caltrans. SB 56 is a similar bill in the State Senate that would have authorized a demonstration program to determine the benefits of DB. At the point the project was at the preliminary stage, there was no legislation that would have given Caltrans the authority to pursue the Design-Build approach. Since then, California has launched the Senate Bill 4 (SBX2 4), which passed the California legislature near the end of the second extraordinary 2009-2010 session and was signed into law by Governor Schwarzenegger on February 20, 2009. With this Bill in place, Caltrans and other public agencies are now allowed to enter public-private partnerships (PPPs) resulting in design-build projects for certain types of public projects (including transportation projects).

To present the entire procurement and contract management options considered during the history of the project, both Design-Bid-Build and Design-Build procedures and issues are described herein as they currently are or at least were considered during the project.

### 6.2 Design-Bid-Build (DBB)

Design-Bid-Build delivery is the basis for the procedures described in the Caltrans procurement and contract management policies discussed above. In DBB, Owners provide the design of the facility, either internally or through an engineering consultant contracted by the Owner. The Owner also takes the lead in securing all environmental

permits associated with the overall facility (the Contractor remains responsible for construction specific permits) and in identifying and securing Right of way for the project. The Owner either arranges for utilities to be re-aligned prior to the main facility construction or enters agreements with utilities and/or their contractors to perform re-alignment during the main facility construction to be coordinated with the main facility Contractor by the Owner.

The Contractor is hired to perform the work detailed by the final project design and associated project specifications. The Owner remains solely responsible for the design and thus differing conditions of the site and support for clarifications through construction.

For the Doyle Drive Project the Owner will consist of Caltrans, with the Authority providing assistance to Caltrans for delivering the project. Both entities will have obligations associated with the project as defined in the agreement between the two entities.

Caltrans will maintain the primary responsibility for administration and oversight of the DBB construction contract, following policies and procedures described in the Caltrans *Construction Manual*.

### **6.3 Design-Build (DB)**

Design-Build typically uses a two-phase selection approach, as opposed to the single bidding approach of DBB. These phases consist of a Request for Qualifications (RFQ) phase and a Request for Proposal (RFP) phase. During the RFQ process the Owner is attempting to short-list a select number of firms, generally 3 to 5, that have unique qualifications to bring to the project. This process is critical in DB to limit the number of proposers on a project. The reason to limit proposers is three-fold:

- Generally the Owner will offer a stipend for unsuccessful proposers in DB; limiting the proposers limits the stipend total or allows a larger stipend to fewer proposers for more complete proposals.
- DB proposals are significantly more expensive for Contractors even after considering the stipends offered by Owners. By not limiting the number of proposers that will be short-listed, the Owner runs a risk of Contractors not proposing due to unrestricted competition
- By short-listing the Statement of Qualifications (SOQ) submittals, the Owner can demonstrate best value or other evaluation criteria in their approach providing comfort to Contractors that the process will conform to methods outlined in RFQs and RFPs.

The RFQ process will define critical elements a candidate must possess to be considered for the short-list. This process consists of both pass/fail and quality evaluation factors and is intended to ensure that a limited number of the most qualified teams are allowed to participate in the subsequent RFP/proposal process.

The RFP will be compliant with the local DB enabling legislation and will also contain both pass/fail and quality evaluation factors. The proposals will be evaluated based on predetermined and described evaluation factors and sub-factors.

An evaluation and selection plan will be developed that describes the entire process and all members of the evaluation teams and selection committee will be trained in the methods to be employed for their work. This training will consist of workshops tailored to walk through the evaluation process. Because evaluations of both the designer and contractor are unique to DB, and because California will have unique legislation governing DB, the evaluation process will be unique for this project. Therefore, training by qualified experts generally helps the efficiency and effectiveness of the process.

The process will contain provisions for candidate presentation/ interviews, discussions, final proposal revisions, and Best and Final Offers (BAFO), consistent with the FHWA *Design-Build Contracting; Final Rule* (23 CFR Parts 627, et al.).

It is anticipated that the process will be based on “Best Value”, which is defined as a combination of price and other less quantitative factors (quality). Once the quality evaluations are complete, the price evaluation will be combined with the technical ratings using tradeoff analysis techniques provided for in the FHWA *Design-Build Contracting; Final Rule*.

In DB the Owner has a significantly different role than in DBB. In DB the primary role for the Owner, leading up to project award, consists of:

- preliminary engineering to a level necessary to identify the major issues, convince the project team that the project can be built as envisioned, and satisfy the environmental process. It is anticipated that preliminary engineering will be developed to a 35% level of completion on this project,
- procurement and contract document preparation, and
- Contractor selection.

During execution by the DB Contractor, administration, design and construction services generally vary for the Owner, in comparison to DBB delivery:

- During the design phase the Owner will perform design reviews to confirm that the Contractor is staying within design parameters established in the RFP.
- Oversight would also consist of confirming design change and RFI processes are functioning properly.
- During construction DB varies from DBB in that the Contractor is responsible for confirming Quality Control through tests and inspections. The Owner provides Quality Assurance of these activities, to verify the testing and inspection is performed at the times and frequencies required for the project in accordance with the project Quality Plan. The oversight could also involve testing and inspection, but would be limited to nominal observations and inspections and a statistical subset of tests to provide validation that the Contractor’s tests are appropriate.

Senate Bill 4 (SBX2 4) which was signed into law by Governor Schwarzenegger on February 20, 2009 permits design-build projects and allows the use of public-private partnerships (PPPs) for transportation projects.

*It authorizes Caltrans and regional transportation agencies (RTAs) to enter PPPs for “transportation projects” via “comprehensive development lease agreements” until December 31, 2016. It defines “transportation projects” as highway, public street, rail, or related facilities supplemental to existing facilities currently owned and operated by Caltrans or RTAs. SBX2 4 does not limit the number or location of PPP projects that Caltrans or RTAs can pursue. However, Caltrans and RTAs must nominate candidate PPP projects for approval by the California Transportation Commission. To receive approval, a project must satisfy four performance objectives: (1) improve mobility through improved travel times or reducing delay in the corridor, (2) improve operation/safety in the corridor, (3) provide quantifiable air quality benefits in the region, and (4) address known forecast demand. [Nossaman E-Alerts, California Passes First Significant Transportation PPP Law in 20 Years, authored by: Fredric W. Kessler, Brandon J. Davis, 04/27/2009]*

#### **6.4 Design Phase Plan of Action**

With the Doyle Drive Record of Decision issued in December 2008, the Project Development Team had embarked upon preliminary engineering, not waiting for the State legislature to make a decision regarding DB. The plan was to target the 35% milestone for the entire project as the key threshold for the determination of the appropriate procurement strategy.

The 35% Milestone, completed by Winter 2009, incorporated the following elements:

- Survey and mapping
- Geotechnical investigations and Foundation Recommendations
- Structural Architectural and Aesthetics requirements
- Bridge Site Submittals for all structural elements
- Determine the geometric layout for staging and phasing plans
- Complete Bridge “Type Selection”
- Prepare Structure General Plans to confirm structural continuity

The tasks described above would have been assets to the bidders, irrespective of the selected procurement method, as they reduce the unknown components of the projects, and will assist to obtain better bids.

At the end of the 35% key milestone, if enabling legislation for alternative procurement methods had been passed, and the Project Management Team would have determined that an alternative to DBB is the appropriate procurement method, RFPs could have been sent out.

With the decision to go with DBB, then final design proceeded based on the 35% milestone.

## **6.5 Packaging Strategies**

On completion of the PA/ED phase the estimated project capital cost to construct the Preferred Alternative was \$888.9 million in year of expenditure dollars. This would be an extremely large project for a single contractor to bid, whether it was Design-Bid-Build or Design-Build. The bonding capacity for such a bid would exclude all but the largest contractors and would increase the risk of receiving either a single bid or no bids at all.

The original 35% key milestone construction staging plans proposed construction of the entire facility in one package, broken into three stages. Stage One constructed the southbound high viaduct and Battery tunnel away from the existing facility and a temporary at-grade detour to be built north of the existing facility. An extended weekend closure would have enabled the switching of traffic to the temporary detour. Stage Two constructed the northbound high viaduct and Battery tunnel, the Main Post tunnels, Tennessee Hollow causeway and completed the Girard Road interchange. A second weekend closure would have been used to switch the traffic onto the new facility. Stage Three consisted of reconstructing Halleck Street and completed fill over the Main Post tunnels.

A second approach to packaging was to create two construction contracts. The first would have built the new southbound facilities, temporary detour, and be completed when all traffic switched to the new facility. This would have created two contracts of approximately \$450 million each. These are at the high end of current bonding capacity for a large number of contractors, and would increase the likelihood that multiple qualified bids would have been received. This approach would have minimized interaction between separate contractors, since the second contractor would not have started until the first was substantially complete.

A third approach was considered that would have created four contracts; two contracts to build the new southbound facilities and temporary detour, and two contracts to build the new northbound facility. Each of these contracts would be less than \$250 million and would have ensured the interest and bidding of a large number of contractors.

However, the interface between the contractors for both the southbound and northbound facilities would have been problematic, as traffic shifts would have required coordination and cooperation between two separate construction projects. The most effective way to manage this problem would have been to place the interface between any two contracts at the at-grade roadway between the Battery and Main Post tunnels. The bid documents had to specify that this at-grade roadway had to be built first by both contractors. The completed roadway would have served as a transition zone where staging and schedule differences could have been mitigated without delay.

With the introduction of the American Recovery and Reinvestment Act of 2009 (ARRA), the Project Development Team decided to look into innovative delivery methods to accelerate project delivery and at the same time satisfy the funding needs of the project .

To qualify for federal funding from ARRA, the project team re-planned the original single contract as eight separate contracts generally following the originally proposed construction staging (Exhibit 6-1) to accommodate an accelerated schedule to receive this funding and deliver a safe asset to the public as soon as possible. The accelerated schedule and refined cost estimate is expected to reduce the overall cost by approximately \$115 million compared to the previous cost estimate from December 2008 totaling \$1,045 million.

**Exhibit 6-1 Proposed Project Contracts**

<b>Contract</b>	<b>Delivery Method</b>	<b>Project Description</b>
<b>Contract 1</b>	Emergency Limited Bid	Advanced Environmental Mitigation – (wet land, biological, tree removal). Mitigation prior to construction activities. Environmental mitigation during construction is accounted for in the individual contract budgets.
<b>Contract 2</b>	Emergency Limited Bid	Utility Relocation Prior to Construction Activity, including private utility relocation for items owned by the Presidio. (Public utility relocations included in the ROW data sheet)
<b>Contract 3</b>	Design-Bid-Built	Ruckman, Southern PPL, SB High Viaduct.
<b>Contract 4</b>	Design-Bid-Built	SB Battery Tunnel, At Grade Detour, RW#6, RW#8, Permanent Roadway Sections, Long Weekend Closure, Partial Demo of Low Viaduct Structures & Open At-Grade Detour to Public Traffic.
<b>Contract 5</b>	Design-Bid-Built	Girard UC, Main Post Tunnels, Low Viaduct, Includes Fill Over Tunnels, Electrical and Mechanical Substations, Demo Existing Low Viaduct, Maintain and Removal At Grade Detour, Open Permanent Roadway to Public Traffic.
<b>Contract 6</b>	Design-Bid-Built	NB Battery Tunnels and related roadwork, includes fill over tunnels, conform to existing high viaduct.
<b>Contract 7</b>	Design-Bid-Built	NB High Viaduct, Northern Park Presidio Interchange, NB Roadway to Merchant Road.
<b>Contract 8</b>	Design-Bid-Built	Highway Planting

## **6.6 Contract Management**

The Caltrans Construction Manual, Chapter 5 – Construction Administration provides direction and guidance on all aspects of construction contract management. The six sections described below give step by step instruction on how to document and manage a construction contract.

### **6.6.1 Conduct of the Work**

This section describes the Resident Engineers Pending File, which must contain all pertinent information, comments, and advice. A detailed list of the contents is contained in Appendix GG of the Caltrans Project Development Procedures Manual. The section also details the preconstruction conference with Caltrans personnel and with the Contractor. Further sections outline the Resident Engineer's Daily Report, Maintenance Reviews and FHWA involvement in contract administration.

### **6.6.2 Project Records and Reports**

This section describes the procedures and forms necessary to keep accurate and complete records of the work. It also describes the uniform filing system for organizing project records and reports. The primary tool used to track the project is the Contract Administration System (CAS). Various functional units within construction update and maintain records in CAS from award to final payment. The following are the most commonly used modules:

- Project initiation and update
- Contract transactions
- Contract change orders
- Daily extra work report
- Project record estimate
- Reports
- Online update and inquiry

### **6.6.3 Funds**

Caltrans aims to complete construction projects within the planned scope, allotted time and projected budget. The Resident Engineer (RE) is responsible for managing construction costs, which includes item payments, state-furnished materials, contingencies and supplemental work. The RE must track project expenditures, forecast future costs, determine the need for additional funds and notify the project management team of any apparent funding shortfalls. This section also provides guidance on how the RE must segregate quantities for funding apportionment.

### **6.6.4 Contract Change Orders**

A contract change order is a legally binding document used to make changes to the contract. Form CEM-4900 – Contract Change Order, is used for all contract change orders. Form CEM-4903 – Contract Change Order Memorandum, must be prepared for

each change order. This section describes the Caltrans policies for contract change orders and provides guidelines for completing the two necessary forms.

### **6.6.5 Disputes**

The objective of this section is to provide guidance to the RE and other Caltrans personnel to ensure that contract disputes are addressed and resolved in a timely and consistent manner.

A contract dispute is a disagreement between the Contractor and Caltrans over the need to revise the contract. Resolving a dispute involves ascertaining the relevant facts, determining responsibilities, and compensating the Contractor if merit exists, or refusing compensation with clear reasons when no merit exists.

### **6.6.6 Emergency Contract Administration**

An emergency contract sets aside normal contracting procedures so that Caltrans can quickly initiate and complete emergency work. The Public Contract Code defines an emergency as a sudden and unexpected occurrence that poses clear and imminent danger, requiring immediate action to prevent or mitigate the loss or impairment of life, health, property or essential public services. This section provides guidelines to assist Res in administering emergency force account contracts.

## **7.0 COST, BUDGET AND SCHEDULE**

### **7.1 Project Funding**

Exhibit 7-1 outlines the current funding plan for based on estimated capital costs in Exhibit 7-2 for the Preferred Alternative.

Committed funding programs include the State Highway Operation and Protection Program Funds, Regional Improvement Program Funds, Golden Gate Bridge Highway and Transportation District Funds, Metropolitan Transportation Commission Funds, Proposition K Funds, Urban Partnership Agreement Funds, State Local Partnership Program Funds, Traffic Congestion Relief Program Funds and some ARRA Federal Stimulus Funds.

Detailed information regarding the funding can be found in the Financial Plan that was approved by FHWA in May 2009. In total, the project has a committed funding amount of \$878.8 million which exceeds the estimated total project cost in year of expenditure of \$704,772,960 that is needed to construct the Preferred Alternative. Project costs are described in more detail in section 7.2.

**Exhibit 7-1 Proposed and Committed Funding Sources (in Millions)**

<b>Funding Source</b>	<b>Committed</b>	<b>Anticipated</b>	<b>Total</b>
State Highway Operation and Protection Program Funds	\$405.0	-	\$405.0
ARRA Federal Stimulus Funds	\$50.0	\$50.0	\$100.0
Regional Improvement Program Funds	\$84.1	-	\$84.1
Golden Gate Bridge Highway and Transportation District Funds	\$80.0	-	\$80.0
Metropolitan Transportation Commission Funds	\$80.0	-	\$80.0
Proposition K Funds	\$67.9	-	\$67.9
Urban Partnership Agreement Funds	\$47.3	-	\$47.3
Federal Earmark Funds	\$28.6	-	\$28.6
State Local Partnership Program Funds	\$21.0	-	\$21.0
Port Sonoma Ferry Funds	-	\$20.0	\$20.0
Traffic Congestion Relief Program Funds	\$15.0	-	\$15.0
Devil's Slide Earmark Funds	-	\$6.0	\$6.0
<b>Total</b>	<b>\$878.8</b>	<b>\$76.0</b>	<b>\$954.8</b>

## 7.2 Current Project Cost Estimate

The Doyle Drive cost estimate listed herein is based on the most current Caltrans estimate and is expressed in April 2009 (2009\$) terms. This cost estimate represents a comprehensive re-evaluation of inputs to the Caltrans estimate from December 2008, based on design and schedule refinements and the most recent bid tabulations from projects let by Caltrans in the previous four quarters. The capital cost in 2009\$ for each Project phase is shown in **Exhibit 7-2**, below.

**Exhibit 7-2 Capital Costs in 2009\$ (No Escalation)**

<b>Contract</b>	<b>Project Description</b>	<b>Capital Cost with no Escalation</b>
Contract 1	Advanced Environmental Mitigation – (wetland, biological, tree removal). Mitigation prior to construction activities. Environmental mitigation during construction is accounted for in the individual contract budgets.	\$ 3,574,580
Contract 2	Utility Relocation Prior to Construction Activity, including private utility relocation for items owned by the Presidio. (Public utility relocations included in the ROW data sheet)	\$ 14,700,000
Contract 3	Ruckman, Southern PPL, SB High Viaduct	\$ 120,030,000
Contract 4	SB Battery Tunnel, At Grade Detour, RW#6, RW#8, Permanent Roadway Sections, Long Weekend Closure, Partial Demo of Low Viaduct Structures & Open At-Grade Detour to Public Traffic.	\$ 97,770,000
Contract 5	Girard UC, Main Post Tunnels, Low Viaduct, Includes Fill Over Tunnels, Electrical and Mechanical Substations, Demo Existing Low Viaduct, Maintain and Removal At Grade Detour, Open Permanent Roadway to Public Traffic.	\$ 263,880,000
Contract 6	NB Battery Tunnels and related roadwork, includes fill over tunnels, conform to existing high viaduct.	\$ 63,650,000
Contract 7	NB High Viaduct, Northern Park Presidio Interchange, NB Roadway to Merchant Road.	\$ 89,190,000
Contract 8	Highway Planting.	\$ 7,600,000
<b>Total Cost</b>		<b>\$ 660,394,580</b>

The Project sponsors committed to using a reasonable and rational set of inflation gauges in order to accurately plan and program the Doyle Drive Project. To this end, the Project sponsors participated in a multi-disciplinary “Cost Estimate Review” conducted

by FHWA in April of 2009, which verified the accuracy and reasonableness of the Caltrans cost estimate. The review verified the cost estimating methodology for the Project and identified the key factors contributing to cost uncertainty as, 1) uncertainty in inflation rate, related to ARRA impact on market; 2) cost threat due to change orders, differing site conditions, etc. after construction start; and 3) the need for a comprehensive agreement with the Presidio prior to construction start. To a large degree, these uncertainties are mitigated by the Acceleration Risk Contingency budgets noted above. The Authority and Caltrans are working with the Presidio on contracting and expect to have an agreement in place by mid May.

The Project cost estimate includes an adjustment for inflation, using Caltrans Major Projects Team guidance. Each Project construction phase requires multiple months for construction, so the estimators use the mid-point of each construction phase, based on the current Project schedule, and inflate the current estimate of construction phase accordingly. During the April CER, FHWA and Caltrans determined that a 3.0% escalation factor was reasonable for the Project's timeframe and has been applied to all costs in this Financial Plan.

With the 2009\$ cost estimate and basis for escalation complete, the year of expenditure dollar estimate was calculated based on the following methodology, which is consistent with Caltrans standard practice:

1. Convert the annual escalation rates to monthly equivalent escalation rates.
2. For each Project contract contained in the 2009\$ cost estimate, identify the year expenditures will commence and the duration of construction.
3. Identify the mid-point of construction (to the month).
4. For each cost element contained in the 2009\$ cost estimate, multiply the cost estimate by the appropriate cumulative escalation factor to calculate the year of expenditure cost estimate.

Exhibit 7-3 shows the Project Costs inflated to Year of Expenditure.

***Exhibit 7-3 Project Costs Inflated to Year of Expenditure***

<b>Contract</b>	<b>YOES Cost</b>
Contract 1	\$ 3,700,000
Contract 2	\$ 15,029,525
Contract 3	\$ 124,547,879
Contract 4	\$ 101,700,225
Contract 5	\$ 285,521,670
Contract 6	\$ 69,039,999
Contract 7	\$ 96,742,773
Contract 8	\$ 8,490,889
<b>Total Cost</b>	<b>\$ 704,772,960</b>

Overall, escalation costs contribute approximately \$44.4 million to the total cost of the Doyle Drive Project.

More detailed information regarding the cost estimate can be found in the Financial Plan that was approved by FHWA in May 2009.

**7.3 Schedule**

Final Environmental Impact Statement Record of Decision December 2008

35% PS&E Development (entire project) January 2009

.After the decision was made to break the project into eight contracts, a new schedule was prepared that lists the milestones of construction contract advertisement, award, and completion as indicated in Exhibit 7-4.

(CPM Schedule is contained in Appendix 22.1)

***Exhibit 7-4 Contract Milestones***

<b>Contract</b>	<b>Advertisement</b>	<b>Award</b>	<b>Completion</b>
Non Contract R/W			Aug - 2010
Contract 1	May - 2009	July – 2009	May - 2011
Contract 2	May - 2009	July – 2009	Aug - 2010
Contract 3	Aug - 2009	Oct – 2009	Feb - 2011
Contract 4	Oct – 2009	Dec - 2009	Feb - 2011
Contract 5	May - 2010	Oct – 2010	Dec - 2012
Contract 6	Jul - 2010	Dec – 2010	Dec - 2012
Contract 7	Jul - 2010	Dec – 2010	Dec - 2012
Contract 8	Mar - 2012	Aug – 2012	Jun - 2013

## 8.0 PROJECT TRACKING AND REPORTING

Project tracking and reporting systems are key elements in ensuring that the Project budget and schedule are maintained to the maximum extent possible, that the Project is completed with the highest degree of quality and that compliance with federal regulations are met.

### 8.1 Tracking

The Project is currently completing the PA/ED phase and is beginning the design phase. The Project Management Team is developing tracking systems to monitor the design phase. These systems will be coordinated with the Authority and the Caltrans reporting and tracking systems discussed below. At the completion of the design phase, additional systems will be developed, in coordination with the Authority and Caltrans, to collect, assess and maintain Project status information during construction.

Caltrans has several project tracking systems that are used to collect, assess and maintain project status information and obtain data that is timely, independent, and accurate. These systems provide current information on project progress, changes and issues. This information is used to identify trends and forecast project performance, and to identify and proactively address challenges to eliminate major surprises.

The following Caltrans systems will be used during the design phase:

#### 1. Transportation Accounting and Management System (TRAMS)

The Caltrans mainframe accounting database, TRAMS, provides financial information, including expenditure information, by project.

#### 2. Project Management Control System (PMCS)

PMCS is a mainframe database containing capital cost, scope and schedule data. It describes project characteristics and uses information systems tools to make projections for staffing needs.

#### 3. Transportation Operations and Project Support System (TOPSS)

TOPSS is a mainframe system that allows online reporting of labor and leave data. Its purpose is to furnish timely, cost effective reporting of labor information. Time reporting is done on a weekly basis.

#### 4. Project Management Data Warehouse (PMDW)

PMDW is a database containing general project information, project schedule, capital costs, and operating expense data, extracted and integrated from other, existing, databases.

The Project tracking system will establish a budget for each of the participants for each task to be completed during the Design Phase. The format for these budgets will be the Work Breakdown Structure described in the *Caltrans Guide to Project Delivery Workplan Standards*. A list of key milestones/deliverables will be developed that are associated with the individual tasks. For each key milestone an “Earned Value” will be determined that represents the percentage of project budget that should be expended upon completion of the task. As the project progresses, actual project expenditures will be compared to the appropriate “Earned Value” to monitor project progress.

## **8.2 Progress Reporting**

Reports will be prepared to assess status and track progress on procurement, costs, budgets, schedules, design status, and many other items for the Project. These reports will cover periods ranging from one week to yearly. In addition, special reports concerning a particular topic will be prepared when necessary.

A monthly cost, schedule and status report will be produced and reviewed during the monthly status meeting held with the Project Management Team and on a bi-monthly basis with the Executive Committee.

### **8.2.1 Monthly Status Report Format**

#### **8.2.1.1 Executive Summary**

The executive summary will briefly outline the current status of the project, including any major issues that have an impact on the Project’s scope, budget, schedule, quality or safety. The following list outlines the nature of the items that will be included:

- Current total Project cost (forecast) vs. latest approved budget vs. baseline budget.
- Current overall project completion percentage vs. latest “Earned Value” percentage.
- Delays or exposures to milestone and final completion dates, including the reasons for the delay.
- Significant scope of work changes.
- Significant items identified as having deficient quality

#### **8.2.1.2 Activities and Deliverables**

This section will highlight the Project activities and deliverables occurring during the reporting period, and outline the activities and deliverables expected during the next period.

#### **8.2.1.3 Action Items and Outstanding Issues**

Highly significant and/or sensitive issues requiring action and direction in order to achieve resolution will be discussed in this section. In general, issues that could have a significant or adverse impact to the Project’s scope, budget,

schedule, quality, safety and compliance with Project requirements will be included.

#### **8.2.1.4 Schedule Updates**

The updated master schedule reflecting the current status of the project will be included in this section. The master schedule will be integrated such that any delay occurring in one activity will be reflected throughout the entire Project schedule. Information on the current overall Project completion percentage vs. latest approved plan will be provided, as well as a status description of each major or critical path elements.

#### **8.2.1.5 Cost Updates**

Information relative to the current forecasted cost vs. the latest approved budget vs. the baseline budget will be provided. Narratives, tables and/or graphs will accompany the updated cost information. Reasons for deviation from the approved budget, impacts resulting from the deviation, and initiatives being analyzed or implemented in order to recover any cost overruns will also be provided.

#### **8.2.1.6 Quality Updates**

The Quality activities during the reporting period, and any significant items identified as being deficient in quality will be reviewed.

## 9.0 INTERNAL AND STAKEHOLDER COMMUNICATIONS

### 9.1 Internal Communications

Project internal communications will be conducted in a variety of ways to ensure that all team members and stakeholders receive Project information in a timely and accurate number. The complexity of the Project, combined with the integrated team organization, makes effective and efficient internal communications among Project team members a critical component of the management process. Internal communications among the various team members is conducted in a number of different and, at times, overlapping ways. The primary methodologies for conducting internal communications among Project team members are:

- Project-related meetings
- Project reports
- Project intranet website (controlled access)
- Project internet website (public access)

#### 9.1.1 Project Meetings

The Project team holds a number of regularly scheduled meetings, at various levels in the integrated team structure, throughout the month and year to coordinate Project activities among the various departments and/or agencies. The purpose of the meetings is to convey the latest information regarding Project status and activities to the individuals and/or agencies tasked with the responsibility of delivering the completed Project in compliance with the Project's stated goals and objectives. The hierarchy of the meetings (operating level to executive level) is as follows:

#### 9.1.2 Project Development Team (PDT)

As set forth in the Caltrans *Project Development Procedures Manual*, Chapter 8, Section 4, a formal PDT meeting approach for the Project is required. The PDT will meet not less than monthly.

The PDT will conduct unscheduled meetings, as necessary, to respond to unexpected Project developments and/or situations that, in the opinion of team members, cannot wait for a regularly scheduled meeting to occur.

#### 9.1.3 Project Management Team (PMT)

The PMT was formed to serve as a management working group to advance design decisions and ensure coordination of disciplines. The PMT meets on the first and third Wednesdays of every month.

In addition, the PMT will conduct unscheduled meetings, as necessary, to respond to critical Project developments and/or situations that, in the opinion of team members, cannot wait for a regularly scheduled meeting to occur.

#### **9.1.4 Project Agency Senior Representatives**

As discussed in Chapter 4, the Project Agency Senior Representatives is comprised of senior technical and management staff from the various agencies directly involved in the Project. The Project Agency Senior Representatives meetings are scheduled to occur every two months.

#### **9.1.5 Project Executive Steering Committee**

The Project Executive Steering Committee provides policy guidance and confirmation of Project decisions and Committee meetings were scheduled semi-annually, on an as-needed basis. With the design progressing and construction work nearing, meetings are now scheduled bi-monthly or more frequent on an as-needed basis.

#### **9.1.6 Project Reports**

The Project team produces several documents that detail the Project status and are available to all team members. In addition, development efforts are on-going to prepare monthly status reports that will incorporate the Project elements outlined in the FHWA *Project Management Plan Guidance* dated February 2007.

In addition to the status reports routinely required of projects of this magnitude and complexity, the Project Team, to include the various Project advisory and management committees, prepares “special edition” briefing and status documents at significant Project milestone points and makes those documents available to all Project team members, stakeholders, and the public. (e.g. *Project Briefing Packet* (Fall 2005), *Preferred Alternative Recommendation Information Notebook* (July 2006), and *Project Status Update* (December 2007)). The Project Team will continue to prepare “special edition” briefing and status documents at significant milestone points in the Project’s lifecycle.

#### **9.1.7 Project Intranet Website (ProjectSolve2)**

The Project has established a secure, internet-based collaboration tool, ProjectSolve<sup>2</sup> (PS<sup>2</sup>), which allows the project team to communicate easily, regardless of location. PS<sup>2</sup> provides for project-related services, such as electronic file transfers, project document storage, meeting calendars, automatic e-mail notification of content changes, project team directory, etc.

The website’s secure, password-protected access allows for efficient and private electronic communication among all project team members through use of the PS<sup>2</sup> Project Team directory. E-mail notifications and/or forwarding of Project-related documents can all be accomplished from within the PS<sup>2</sup> application.

The website also serves as a repository for all important project-related documents to include environmental documents, design plans, project-specific procedures, and briefing documents.

An electronic copy of the PMP will be maintained on the Project's intranet website.

### **9.1.8 Project Internet Website**

The Project has also established an internet website specifically for the Project. This website is accessible to the general public and contains general project-related information such as Project's purpose and need, history, frequently asked questions (FAQ's), electronic links to the websites of many of the Project's sponsors and stakeholders, and also provides the capability for website visitors to contact the Project's public involvement consultant with comments and/or questions.

Certain public access project-related documents are also maintained on the Project's public website. Documents such as the *Draft Environmental Impact Statement/Report (DEIS/R)*, the "special edition" briefing and status documents discussed in Section 9.1.2, Reports, above, Citizen Advisory Committee (CAC) meeting agendas and summaries, etc.

The Project's public internet website can be accessed at:

<http://www.doyledrive.com/information/>

## 10.0 PROJECT MANAGEMENT CONTROLS

### 10.1 Overview

The purpose of project management controls is to facilitate project management, cost and schedule integration through all phases of the Doyle Drive Project. It is imperative that the many agencies, consultants, and contractors involved in the Project are provided with proper control tools. Project control process and applications have been established to ensure compliance with the project goals and objectives, including scope, budget, schedule, and quality.

### 10.2 Risk Management Plan

Risk management is a systematic process used to evaluate the possible impacts to a projects scope, schedule or cost due to unforeseen events, either negatively or positively. Risk management typically consists of two distinct phases: Risk assessment and Risk mitigation.

Risk management seeks to:

- Identify issues early in the project development stage before they become problems.
- Identify reasonable solutions early on before their implementation is precluded.
- Provide the opportunity to improve project cost and schedule.
- Provide a process for implementing a risk mitigation

Risk management has value at all phases of project development and is not dependent on project size to provide benefits. The approach and methods employed should however be based on the project owner's and project teams objectives, available information, desired outcomes and types of risks potentially facing the project.

A Risk Management Plan (RMP) was prepared for the Project Approval and Environmental Document (PA/ED) phase of the Project at a risk management workshop held on June 23, 2005. The initial RMP was reviewed and the risk register was last updated in August 2007 in conjunction with the preparation of the Project Report.

#### 10.2.1 Risk Management Team

Structured similarly to the Integrated Organizational Chart for the project, the risk management team consists of the Risk Manager, the Project Management Team (PMT), the Project Development Team (PDT) and the key functional support units as shown in Exhibit 10-1 below. The core members of the Risk Committee consist of the Risk Manager, PMT, and PDT. The Risk Committee may be augmented from time to time with the key Task Managers that act as Risk Owners.

## **10.2.2 Roles and Responsibilities**

### Executive Committee

The Project Directors of the Executive Committee sponsor the risk management process and support the Project Management Team (PMT) as needed.

### Project Management Team (PMT)

The PMT approves the Risk Management Plan, the individual Risk Response Forms, and the Quantitative Analysis, if performed. The PMT also supports the Risk Manager and Risk Committee to ensure the risk management process is carried out as intended.

### Risk Manager

The Risk Manager reports directly to the PMT and is the primary person responsible for ensuring that the risk management process is carried out according to the Risk Management Plan. The Risk Manager also maintains the Risk Register, supports the DMT and individual Risk Owners as needed, and serves as a risk management subject matter expert.

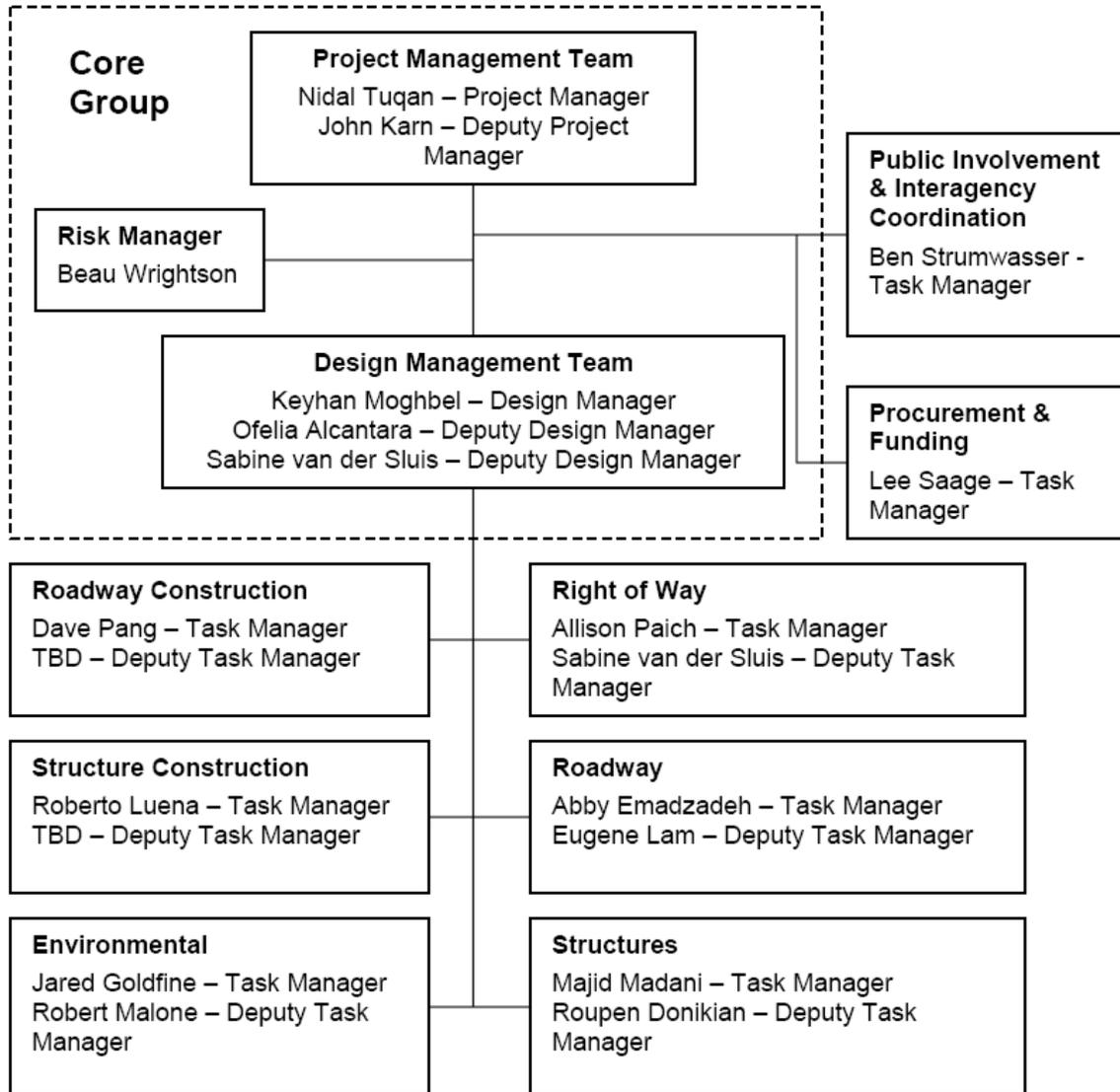
### Project Development Team

The Project Development Team (PDT) is responsible for supervising the engineering Task Managers who will act as the Risk Owners. The PDT also reviews the Risk Management Plan and individual Risk Response Forms and recommends approval to the PMT.

### Risk Owners

The Risk Owners are the Task Managers and are responsible for completing the Risk Response Forms for the risks assigned to them. They are also responsible for reviewing and updating those risks as appropriate. Risk Owners also serve as subject matter experts in the area of their responsibilities and are expected to identify risks as they become aware of them.

**Exhibit 10-1 Doyle Drive Risk Management Team**



### **10.2.3 Planned Activities and Schedule**

#### Initial Risk Committee Meeting – December 2007

The Risk Manager facilitated an initial Risk Committee meeting on December 11, 2007. The agenda for the initial meeting included the following items:

- Process overview;
- Review roles and responsibilities;
- Agree on risk ranking criteria;
- Agree on Risk Response Form and Risk Register format;
- Determine stakeholders and Risk Owners; and
- Review Risk Register

#### Risk Identification Workshop – January 2008

The Risk Manager facilitated a risk identification workshop with the Integrated Project Team and various stakeholders. A summary of the Project Report Risk Register along with a sample risk list served as a baseline for the workshop. A new risk list is being developed as a result of the workshop.

#### Qualitative Analysis and Risk Response Planning – January 2008

Following the risk identification workshop, the Risk Committee reviewed the new risk list to determine which risks should be incorporated into the Risk Register, by assigning them preliminary probabilities and impacts. The risks to be added to the Risk Register were assigned to Risk Owners who will then complete the Risk Response Forms. The Risk Response Forms will be reviewed by the PDT and approved by the PMT. Approved Risk Response Forms will be submitted to the Risk Manager for incorporation into the Risk Register.

#### Quantitative Analysis – TBD

Quantitative analysis is not necessary in the current phase of the project. The need to perform a quantitative analysis will be evaluated by the PMT at each major milestone (35%, 65%, 90% PS&E, RTL, etc.).

#### Risk Monitoring and Control – On-going

Risk monitoring will consist of the following:

1. Project team members will proactively seek to identify and report new risks as they become known. Existing risks will also be actively monitored for trigger conditions or other conditions that may effect the impact or probability of the risk occurring.

2. Project risk will be an agenda item on monthly PDT meetings. During the meeting the Risk Manager will report on current risk activities, and solicit input from the team on new risks or changes to existing risks.
3. The Risk Committee will meet on a quarterly basis for a thorough review and update of the Risk Register.
4. At major milestones, a thorough review of the entire risk management process will be undertaken.

### **10.3 Scope Management Plan**

The Project will be designed and constructed in accordance with Caltrans procedures. As described in the Caltrans *Project Development Procedures Manual*, the Caltrans District Director (or delegated Deputy District Director) approves the project scope, as defined in the Project Initiation Document. The Contractor must construct the project in accordance with the plans and specifications, including changes ordered in accordance with the contract. Both the Contractor and the Resident Engineer must be familiar with the work to be done and the commonly accepted practices, customs, and terms used in the work.

#### **10.3.1 Scope Changes**

Project plans, specifications and other bid documents define the scope of the contract, and describe the details for the construction and completion of the whole work contemplated. Section 10250, of the *Public Contract Code* allows Caltrans to increase or decrease quantities of work to be done under a unit basis contract during the progress of the work.

Caltrans policy is to limit changes to the contract's scope of work unless authorized and as required to complete the work as contemplated at the time the plans and specifications were approved. If proposed changes do not conform to this policy, the work must be performed by a separate contract. To determine if compelling reasons exist to make changes to a current contract the PMT will use the procedures outlined in the Caltrans *Construction Manual*. If any added work is not required immediately, consideration will be given to performing the work with a separate contract.

#### **10.3.2 Control of Work**

The Caltrans *Standard Specifications* details how contract work will be controlled. During the manufacture of products and the execution of the project, the Contractor will perform all actions necessary to ensure the work has the required attributes. The Resident Engineer will sample, test, and inspect the work to determine if the characteristics conform to the contract requirements.

#### **10.3.3 Inspection and Acceptance**

The Resident Engineer and Assistant Resident Engineers have a primary duty to obtain compliance with the *Standard Specifications*, special provisions, and plans

within the tolerances specified in these documents. As a project's completion approaches, the Resident Engineer will schedule appropriate reviews with maintenance, traffic, and safety personnel. The objective is to prevent last-minute delays in contract acceptance. The Resident Engineer will do a final observation of the contract work during the final inspection. The District Director or an engineer from the district construction, such as the District Construction Deputy Director, Construction Engineer, Structure Construction Engineer, or Resident Engineer, will make the final inspection.

Full detail on scope management can be found in the Caltrans *Construction Manual*.<sup>2</sup>

#### **10.4 Scheduling Software**

The Project Schedule is maintained using Primavera Project Planner 3.1 or subsequent version. In addition, the Project Schedule is converted to Microsoft Project and issued as an unofficial copy for use by others as requested. The PMT convenes on the second and fourth Wednesdays of each month to track progress and update the Project Schedule on a monthly basis.

The Project Schedule is based upon Caltrans' Work Breakdown Structure, as published in the *Guide to Project Delivery Workplan Standards Release 8.0B*, as amended on August, 14 2006, with modifications for Project specifics. The Project Schedule is detailed to a 35% PS&E and summarized for the WBS Level 6 (Task Level) tasks from 35% to Ready to List (RTL). Thirty-five percent PS&E is assumed to be comprised of WBS Level 5 (Major Task Level) work element numbers 185 and 215.

#### **10.5 Cost Tracking Software**

The following Caltrans cost tracking software will be used:

##### **10.5.1 California Transportation Improvement Program System (CTIPS)**

CTIPS shows the project description and authorized funding for STIP and SHOPP projects, and the fiscal year of delivery of each STIP and SHOPP project. This information is essential to the Project Management Team because it identifies the scope, budget and schedule that they are expected to meet.

##### **10.5.2 Transportation Accounting and Management System (TRAMS)**

The Caltrans mainframe accounting database, TRAMS, provides financial information, including expenditure information, by project.

##### **10.5.3 Project Management Control System (PMCS)**

The Project Management Control System (PMCS) is a computerized system for monitoring and controlling projects in the district's delivery program from the early planning phase to completion of the contract. The PMCS mainframe database

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<sup>2</sup> <http://www.dot.ca.gov/hq/construc/manual2001/>

contains capital cost, scope and schedule data. It describes project characteristics and uses information systems tools to make projections for staffing needs.

#### **10.5.4 Transportation Operations and Project Support System (TOPSS)**

TOPSS is a mainframe system that allows online reporting of labor and leave data. Its purpose is to furnish timely, cost effective reporting of labor information. Time reporting is done on a weekly basis.

#### **10.5.5 Project Management Data Warehouse (PMDW)**

PMDW is a database containing general project information, project schedule, capital costs, and operating expense data, extracted and integrated from other, existing, databases.

### **10.6 Project Metrics**

The three most important Project Metrics, at this stage of the process, are Cost, Schedule and Quality. The Project is currently finalizing its projected costs, and it will be critical to stay within the established budget. The progress of earned value against the cost budget is reported to the PMT on a bi-weekly basis, and the Project Executive Committee on a bi-monthly basis. Project Schedule is a critical metric because of the strong desire to open potential toll lanes as quickly as possible. The schedule progress is reported to the PMT on a bi-weekly basis.

Project Quality is discussed extensively throughout the PMP and is considered a key metric to gauge the success of the Project. Quality reduces cost overruns and schedule delay, as well as unanticipated long term maintenance costs.

A fourth metric will be included during the construction phase. Road user delay will be used to measure the success of the Project in preventing disruption to the traveling public due to road and lane closures and construction staging.

### **10.7 New and Innovative Contracting Strategies**

There are several items of risk associated with the Doyle Drive Project: that may warrant the use of innovative contracting strategies.

- The likely use of tolls as a funding source for the Project creates strong pressure to open newly constructed roadways for toll collections as quickly as possible. (See Section 10.7.1 for further discussion).
- High traffic volumes and limited number of lanes has created a very sensitive construction management area where disruptions can have severe effects to local and regional traffic. (See Section 10.7.2 for further discussion).

#### **10.7.1 A + B Bidding**

As discussed in Chapter 6, the State of California is considering enacting legislation to allow the use of Design-Build as a construction contract procurement option. If

this legislation were to pass, the Project would have the opportunity to lock in a guaranteed maximum price and a maximum number of contract days, as part of a “Best Value” negotiation with Contractors. However, if the Project were to be procured using the current Design-Bid-Build method, the opportunities for “Best Value” are limited.

One strategy, accepted by the FHWA and Caltrans, for achieving schedule compression is known as A + B Bidding. The Caltrans Chief Engineer issued a Memorandum on *Guidelines for Use of A+B Bidding Provisions*, dated September 30, 2002. This memorandum describes a cost-plus-time procedure that selects the low bidder based on a monetary combination of the Contract Bid Items (A) and the time (B) needed to complete the project.

The bid amount for evaluation is equal to  $A + (B \times \text{Cost per Day})$ , where:

The A component is the traditional bid for the contract items, and is the dollar amount for all work to be performed under the contract.

The B component is a determination of the total number of calendar days required to complete the project. The number of calendar days must be less than or equal to a pre-determined schedule prepared by the owner, or the bid is considered non-responsive.

The Cost per Day is the sum of standard Liquidated Damages (LDs) and additional LDs. Standard LDs, the Caltrans estimated overhead, is calculated in accordance with the formula in the November 29, 2001 memorandum to district directors from the Caltrans Division of Engineering Services, Office Engineer, regarding “*Liquidated Damages*”.

Additional LDs are the lesser of the road user delay cost and 0.1% of the Caltrans estimated cost for construction. Other factors that could be used to determine additional LDs include: delays to adjacent projects, social/economic impacts or business revenue losses. These other costs may only be included as additional LDs if they are tangible, estimated damages to the state and/or the public, and are project specific.

The A + B formula is only used to determine the lowest bid for award, and is not used to determine payment to the Contractor. The contract amount for payment purposes is the A component only.

The intent of the strategy is to ensure that the Contractor is a willing partner in reducing project duration. In addition, allowing the Contractor to determine the project duration opens the door for innovative construction processes and methods required to accelerate the project, and also to encourage innovative construction processes.

Experience has shown that A + B bidding, by generating an optimum number of contract working days, reduces construction-induced congestion and delays. The

cost of work and project duration is balanced through competitive bidding. Benefits include:

- Encouraging bidders to develop more detailed and well thought out plans. Contractors with more efficient operations can generally bid shorter times.
- Encouraging contractors to develop innovative ways of reducing total construction time at the lowest cost when preparing bids and during construction.
- Encouraging contractors to schedule operations to maximize the efficiency of crews and equipment.
- Minimizing road user delay costs and inconvenience to motorists.
- Reducing the number of congestion-related complaints from motorists and local communities.
- Reducing congestion-related pollution and environmental impacts.

Liquidated damages would be assessed for each day that the Contractor fails to complete the project beyond the project duration. Care must be taken to make the liquidated damages large enough to prevent unbalanced bids, where the Contractor increases the A portion of its bid, uses the extra funds during the contract and then returns them as liquidated damages at the end.

#### **10.7.2 Incentives/Disincentives**

Present FHWA policy allows for the use of Incentive/Disincentive provisions for early completion of critical improvements which result in significant savings and/or positive benefits to the traveling public. FHWA *Technical Advisory T 5080.10 – Incentive/Disincentive (I/D) for Early Completion*, dated February 8, 1989, describes a contract provision which compensates the contractor a certain amount of money for each day identified critical work is completed ahead of schedule and assesses a deduction for each day the contractor overruns the I/D time. Its use is primarily intended for those critical projects where traffic inconvenience and delays are to be held to a minimum. The amounts are based upon estimates of such items as traffic safety, traffic maintenance and road user delay costs.

In addition, the Caltrans Director's Office has issued a memorandum on *Conceptual Guidelines for Use of Incentive and Disincentive (I/D) Provisions*, dated June 12, 2000.

Experience has shown that I/D values should be a significant percentage of contract value in order to encourage the contractor to be creative. In addition, I/Ds should be used only for specific, critical, traffic based contract milestones.

I/Ds are not the same thing as Liquidated Damages, which are the daily amount set forth in the contract to be deducted from the contract price to cover additional costs incurred by the owner by the contractor's failure to complete work.

This concept can be applied to both Design-Bid-Build (DBB) and Design-Build (DB) equally well.

## **10.8 Value Engineering / Value Analyses and Constructability Reviews**

### **10.8.1 Value Engineering / Value Analyses**

Caltrans applies Value Analysis (VA) in all functional areas including Project Development, Construction, Traffic, Operations, and Maintenance. VA is used during the development of projects regardless of whether the work is being accomplished by Caltrans' employees, local agencies, consultants, or others. The *Caltrans Project Development Procedure Manual, Chapter 19, Value Analysis*, describes how VA studies are employed during the development of projects. The terms "Value Analysis" and "Value Engineering" (VE) can be used interchangeably; however, Caltrans has adopted the term "Value Analysis."

A Value Analysis study for the Doyle Drive Project was applied in the early planning stages of the project, and completed in November 2006. As a joint venture among Caltrans, URS, Arup, and PB, the purpose of this (second) study was to identify and develop alternatives that could reduce project costs while maintaining the necessary functions in order to assist and accommodate the stakeholder agencies in funding the project. The VA study was organized in three parts: Preparation, VA study, and Report. The Caltrans VA Activity Chart on the next page (Exhibit 10-2) describes each of the fifteen activities needed to complete the study.

The VA Team held a one-day workshop on May 11, 2006 with the project design team, subconsultants, Caltrans, and the Authority to brainstorm creative ideas and alternatives for the project staging, tunneling and structures of the project. The VA team met again on May 25, 2006 to evaluate the alternatives based on cost savings and reduced construction criteria. Ultimately, five VA alternatives were accepted and the cost savings potential for these alternatives is estimated at \$127.4 million.

The VA Team just finished a two-week workshop focusing on contracts 3 and 4. Caltrans and the JV Team are in the process of responding to the Team's suggestions and the Team's report will be delivered within the next month.

Exhibit 10-2

Caltrans Value Analysis Activity Chart

<b>PREPARATION</b>		<b>INITIATE STUDY</b> > Identify study project > Identify study roles and responsibilities > Define study goals > Select team leader > Prepare draft Study Charter 1	<b>ORGANIZE STUDY</b> > Conduct Pre-Study Meeting > Select team members > Identify stakeholders, decision-makers, and technical reviewers > Identify data collection > Select study dates > Determine study logistics > Update VA Study Charter 2	<b>PREPARE DATA</b> > Collect and distribute data > Develop construction cost models > Develop highway user benefit / life cycle cost (LCC) model 3	
	<b>VA STUDY</b>	Segment 1	<b>INFORM TEAM</b> > Review study activities and confirm reviewers > Present design concept > Present stakeholders' interests > Review project issues and objectives > Identify key functions and performance criteria > Visit project site 4	<b>ANALYZE FUNCTIONS</b> > Analyze project data > <del>Expand project functions</del> > <del>Prepare FAST diagram</del> > <del>Determine functional cost drivers</del> 5	<b>CREATE IDEAS</b> > <del>Focus on functions</del> > List all ideas > Apply creativity and innovation techniques (group and individual) 6
Segment 2			<b>DEVELOP ALTERNATIVES</b> > Develop alternative concepts > Prepare sketches and calculations > Measure performance > Estimate costs, LCC benefits/costs 8	<b>CRITIQUE ALTERNATIVES</b> > VA Alternatives Technical Review > VA Alternatives Team Consensus Review > Identify mutually exclusive groups of alternatives > Identify VA sets > Validate performance 9	<b>PRESENT ALTERNATIVES*</b> > Present findings > Document feedback > Confirm pending reviews > Prepare preliminary report *Interim presentation of study finding at July '06 EC's 10
		Segment 3	<b>ASSESS ALTERNATIVES**</b> > Review Preliminary Report > Assess alternatives for project acceptance > Prepare draft implementation dispositions **Activities performed by PDT, Technical Reviewers, and Stakeholders 11	<b>RESOLVE ALTERNATIVES</b> > Review implementation dispositions > Resolve implementation actions with decision-makers and stakeholders > Edit alternatives > Revisit rejected alternatives, if needed 12	<b>PRESENT RESULTS*</b> > Present results > Obtain management approval on implemented alternatives > Summarize performance, cost, and value improvements *Final presentation of study results 13
<b>REPORT</b>			<b>PUBLISH RESULTS</b> > Document process and study results > Incorporate all comments and implementation actions > Distribute Final VA Report > Distribute electronic report to HQ VA Branch > Update VA Study Summary Report (VASSR) > Provide HQ the Final VA Report in pdf format 14		

Note: The dashed boxes indicate steps that may not be required in some VA Studies.

Lined out items were not included in this study.

## **10.8.2 Constructability Reviews (CR)**

All major projects (except for 100% locally funded projects) include a formal Constructability Review (CR) during the project initiation and design phases of the project development process. Caltrans introduced formal constructability study procedures in 1997. This requirement applies to all projects with an escalated construction cost of \$25 million or more. It is aimed at improving overall constructability in an effort to reduce Contract Change Orders (CCO) and delay claims.

A series of five constructability studies occur over the life of major projects: initiation phase, environmental phase, 65% PS&E, 90% PS&E, and pre-bid. Caltrans initiated the first formal constructability review in the early phases of the project in 2002. The initial review, however, was not for the current preferred alternative. The PMT understands the importance of the constructability review and plans to complete a new CR report for the preferred alternative.

## **10.9 Contractor Outreach Meetings**

An initial Contractor and Small Business Meeting was held on April 8, 2009 at the Golden Gate Club to provide a project overview, discuss the construction breakdown and to allow potential prime contractors and small businesses to network.

With Contract No. 1 and No. 2 set to begin working in June/July, the following contractor outreach meetings are scheduled:

### Utility Relocation Pre-Bid Meeting

Small business enterprises and disadvantaged enterprises were invited to learn more about the bid process for the upcoming utility relocation and had the chance to network with prime contractors at a pre-bid meeting that was held on June 2 at the Golden Gate Club.

### Drilling and Foundation Contractor Meeting

The Drilling and Foundation Contractor Meeting which is limited to pile foundation work for Contract No. 3 will focus on the design and soil profiles for the large diameter piles and shafts for the southbound Presidio High Viaduct and will be held on June 15 at the Golden Gate Club.

Further construction contractor meeting will occur prior to any start of construction of the remaining contracts.

## **10.10 Partnering**

To assist in the development and maintenance of productive transportation partnerships with federal, state, and local agencies with public and private stakeholders, Caltrans has produced a *Field Guide to Partnering on Caltrans Projects* written for both "Caltrans and contractor personnel working at the project level to convey Caltrans and industry commitment to partnering, to define responsibilities for partnering, and to provide tools

for successful partnering.”<sup>3</sup> This guide covers subjects from informal and formal partnerships, setting up partnering workshops and meetings, tools to assist in making partnering a success and ways to measure partnering progress. Caltrans, the Authority, and respective team members are committed to creating and maintaining productive partnering relationships to ensure the success of the project, as defined through the team’s “Integrated Approach”, described in Section 4 - Project Organizational Chart, Roles and Responsibilities.

## **10.11 Change Order and Extra Work Order Procedures**

### **10.11.1 Project Initiation Through Project Design Components**

Caltrans has delegated departmental responsibility for approving changes in project scope, cost, and schedules to the Deputy Director for Finance. The Deputy Director for Project Development provides the necessary engineering evaluations of the district’s proposed changes to guide these approvals. Approvals received through this process do not constitute a change in the programming documents. Changes in the programming documents occur either by amendments or through the normal programming process. It should be noted that only the CTC can change the programmed cost and programmed fiscal year for projects in most programming documents; the Division Chief of the Division of Programming approves amendments to the State Highway Operation and Protection Program (SHOPP).

Caltrans has also delegated responsibility for project delivery to the District Directors. Caltrans has made a commitment to use a Project Management Control System (PMCS) to ensure that the individual projects are delivered on time, and within budget.

#### **10.11.1.1 Procedures for Special Funded Projects**

Procedures for management of the cost and schedule of special funded projects, which are not listed in a programming document, are provided for in the Cooperative Agreement for the project if done by Caltrans as reimbursed work, or otherwise are under the control of the local agency or private entity. Project scope must be in accordance with the project Cooperative Agreement Scope Changes.

#### **10.11.1.2 Scope Changes**

The Caltrans District Director (or delegated Deputy District Director) approves the project scope, as defined in the Project Initiation Document. Once a project is programmed, any changes to the scope may require an amendment of the programming document.

Changes in scope will be discussed with the Caltrans Design Coordinator and appropriate Headquarters program advisor prior to requesting approval. A

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<sup>3</sup> [http://www.dot.ca.gov/hq/construc/Partnering\\_Fieldguide.pdf](http://www.dot.ca.gov/hq/construc/Partnering_Fieldguide.pdf)

determination will be made regarding the need for a supplemental project development report.

#### **10.11.1.2.1 Minor Scope Changes**

Minor scope changes usually do not require amendments to the programming document.

- Small changes to project limits
- Eliminating work that is not required to solve the transportation problem
- Providing required shoulders or safety features
- A change in the engineering solution to the transportation problem. (e.g., for a pavement rehabilitation project – changing from crack, seal, and overlay to overlay.

#### **10.11.1.2.2 Major Scope Changes**

Major scope changes may require amendments to the programming document.

- Large changes to project limits
- Adding work that is not required to solve the transportation problem
- Adding lanes
- Not providing project features as defined in the programming document
- Eliminating work that will need to be reprogrammed in the next programming document cycle.

#### **10.11.1.3 Cost Changes**

All cost increases greater than \$300,000 must include a plan outlining how the required funds will be obtained. Trade-offs can only be used among projects listed in the same programming document; in some cases the projects must be in the same county.

A cost change approval is required if the requested project cost – the sum of the escalated construction and right of way (ROW) cost – exceeds the sum of the programmed cost for construction and ROW as indicated in the latest adopted programming document or approved amendment. Approval will also be requested for project deletions and significant cost reductions.

Due to county minimum requirements, it is best to exercise cost management within individual counties; however, it is recognized that this is not always possible. This should not be a problem for the large counties, but could be relevant in counties with small programs.

Caltrans District Program Management or Project Management is responsible for maintaining a separate balance sheet for the SHOPP and STIP programming documents. Individual projects will be listed with their cost change indicated. The balance sheet provides a continuous record of changes

from the latest programming documents. A copy of the balance sheet should be submitted with each cost increase request.

#### **10.11.1.4 Schedule Changes**

Caltrans programming documents establish a fiscal year commitment for construction funding of individual projects. Another delivery commitment is the Caltrans Annual Project Delivery Schedules Report (Operational Plan) which establishes dates for the “RTL” and the “Advertising” milestones. Programming documents and the Annual Project Delivery Schedules Report are used as a base for schedule and control purposes.

If the current schedule for the “Ready to List (RTL)” milestone dates is later than the delivery schedule dates, a schedule change must be approved by the Caltrans District or Headquarters.

#### **10.11.1.5 Database Management**

The Caltrans Districts will keep the PMCS database current. Headquarters staff must be informed of District changes, including scope, cost, schedule, splits and combines, etc., so that the appropriate files and documents can be updated.

Detailed guidance regarding Project cost, scope and schedule changes is contained in the Caltrans *Project Development Procedures Manual, Chapter 6*, and can be accessed at:

[http://www.dot.ca.gov/hq/oppd/pdpm/chap\\_pdf/chapt06.pdf](http://www.dot.ca.gov/hq/oppd/pdpm/chap_pdf/chapt06.pdf)

### **10.11.2 Construction Component**

#### **10.11.2.1 Contract Change Order (CCO) Policy**

The authority for Caltrans to make changes to a contract is cited in *Section 3-403, Changes*, of the Caltrans *Construction Manual*. Section 10250, of the Public Contract Code allows Caltrans to increase or decrease quantities of work to be done under a unit basis contract during the progress of the work.

Work that is outside the scope of an existing contract should be done in a separate contract. In special situations the work may be added to an existing contract if:

- A Caltrans director’s order has been approved for the new work in accordance with Deputy Directive 26, dated May 1, 1999,
- The Caltrans Division of Construction chief concurs with adding new work to the existing contract by co-signing the director’s order,
- On all federal-aid projects, the FHWA engineer approves the change as outlined in Section 5-308, Federal Highway Administration Contract Change Order Requirements, of Caltrans’s Construction Manual,

- On locally funded state highway projects, the contributing agency agrees to the change as outlined in Section 5-310, Locally Funded State Highway Projects, of Caltrans's Construction Manual and
- The contractor agrees to the contract change.

### **10.11.2.2 Initiation of Contract Change Orders**

The Resident Engineer will usually determine the need for and initiate a Contract Change Order (CCO). However, the contractor, other Caltrans units, or outside agencies or individuals may request changes. Other Caltrans units requesting a CCO must clearly document the need for the change and provide information sufficient to demonstrate that the requested change meets Caltrans policy for making changes to a contract.

A CCO must be clear, concise, and explicit. When appropriate, it must include the following:

- What is to be done
- Location and limits of the proposed work
- Any applicable specification changes and references to specifications
- The proposed contract change order's effect on time of completion
- Method and amount of compensation

All CCOs will be processed by the Caltrans District CCO Desk to provide quality control and assess whether a change exists by comparing the contract documents and language to the proposed change.

The CCO Desk routes all CCOs through the District to assure that all parties impacted by the change have the opportunity to adequately review them. The CCO Desk obtains concurrence from project engineers and other functional areas, assures that Caltrans and FHWA prior approval is obtained, when required), and obtains necessary District approval signatures.

### **10.11.2.3 CCO Approval**

Caltrans must approve a contract change order, and whenever possible, the contractor should sign it. When a Contractor signs a CCO, it is referred to as "executed." If a Contractor refuses to sign the CCO, then Caltrans may approve it "unilaterally."

So that the Contractor will execute the CCO, every effort possible will be made to reach agreement. However, work will not be delayed by waiting for the Contractor to respond. If necessary, submit the CCO for unilateral approval. Receipt of an approved CCO establishes a time for protest and, if the CCO is not protested within the specified time, it is considered an "executed" CCO.

#### **10.11.2.3.1 Division of Construction Approval**

The Caltrans Division of Construction must approve the following type of CCOs.

1. Any CCO that does not provide for anticipated supplemental work that would increase the cost of the contract by more than \$200,000.
2. Any CCO that increases the cost of anticipated supplemental work listed in the detailed estimate by more than \$200,000.
3. Once the \$200,000 threshold is reached, each supplemental CCO.
4. Any change in the following:
  - a. Specifications (with the exception of "Lane Requirements and Hours of Work" charts)
  - b. Method of payment
  - c. Method of materials processing
  - d. Type or quality of materials to be furnished (with the exception of minor building materials)
  - e. Proprietary material for which specific or blanket approval has not been previously received
5. Any change that results in a contract time extension of 20 or more working days. Additionally, if time is extended by more than 20 percent of the original contract working days, then that change and each subsequent CCO to extend time.
6. Any work that is outside the scope of the existing contract, refer to *Section 5-302, "Contract Change Order Policy"* of the Caltrans *Construction Manual*.

For a CCO requiring Caltrans Division of Construction approval, the Division of Construction will authorize the District to issue and approve the CCO.

#### **10.11.2.3.2 District Approval**

The Caltrans District Director may approve or delegate authority to approve CCOs that do not fall under the requirements for Division of Construction approval.

District approval of CCOs will not be delegated below the level of a construction engineer or senior-level resident engineer. Within this delegation, senior-level resident engineers or construction engineers may be given authority to approve CCOs that increase the contract cost or approved supplemental work by up to \$50,000.

Only the Caltrans Division of Construction or District construction deputy director may approve CCOs for cost reduction incentive proposals.

#### 10.11.2.4 FHWA Contract Change Order Requirements

##### 10.11.2.4.1 Major CCOs

Major CCOs require FHWA and SFCTA approval. Written and signed FHWA and SFCTA approval is required for any of the following major CCOs:

- CCO that would increase the cost greater than \$200,000.
- CCO that would increase the cost of anticipated supplemental work item listed in the detail estimate greater than \$200,000.
- Supplemental CCOs above the \$200,000 threshold.
- Changes in specifications (with the exception of lane requirements and hours of work charts).
- Changes in method of payment.
- Changes in material processing.
- Changes in type or quantity of materials furnished (with the exception of minor building materials).
- Changes in proprietary or sole source materials for which specific or blanket approval has not been previously given.
- Waivers to the Buy America requirements, above the minimal amount that is allowed in Section 3-605, Certificates of Compliance, of Caltrans's *Construction Manual* and the Project special provisions.
- Cost Reduction Proposal
- Experimental Work Plan
- Changes to federal environmental requirements.
- Introduction of new social, environmental, or economic issues that need to be addressed under applicable federal laws.
- Changes to, or requiring of, mandatory disposal or borrow sites, Public Interest Finding and National Environmental Policy Act (NEPA) clearance may be needed.
- Expansion of project limits beyond the limits set in the environmental document.
- Form of payment (not just a contract change order) to a Contractor resulting from a claim, board of review, exception to proposed final estimate, District Director determination or arbitration.
- Supplemental contract change orders to all of the above.
- Change resulting in a contract time extension of 20 or more working days. Additionally, if time is extended by more than 20 percent of the original contract working days, then that change and each subsequent contract change order to extend time.

##### 10.11.2.4.2 Minor CCOs

Contract change orders other than those listed above are considered minor. Although approval may be granted retroactively, minor CCOs require written and signed FHWA approval. Generally, these approvals occur during FHWA construction reviews, or occur with final approval of the project by FHWA.

#### **10.11.2.5 CCO Records**

Detailed records, correspondence, photographs, invoices, daily reports, etc. of all pertinent aspects of the CCO will be maintained in the Project records.

Detailed guidance regarding Construction Component contract change order process and procedures is contained in the Caltrans *Construction Manual, Chapters 3-403, Changes, and Chapter 5, Section 3*, and can be accessed at:

[http://www.dot.ca.gov/hq/construc/manual2001/chapter3/chp3\\_4.pdf](http://www.dot.ca.gov/hq/construc/manual2001/chapter3/chp3_4.pdf)

[http://www.dot.ca.gov/hq/construc/manual2001/chapter5/chp5\\_3.pdf](http://www.dot.ca.gov/hq/construc/manual2001/chapter5/chp5_3.pdf)

### **10.12 Claims Management Procedures**

The Project procedures for claims management will be consistent with the policies and guidance provided in the Caltrans *Construction Manual, Chapter 5, Section 4, Disputes*. The purpose of established claims management procedures is to ensure that contract disputes are addressed and resolved in a timely and consistent manner.

The Resident Engineer, with the support of the Construction Engineer, other Caltrans resources, and District management, is responsible for administering the dispute resolution process.

Contractors are responsible for providing documentation to the Resident Engineer for full analysis of a contract dispute. Failure to provide a clear understanding of the disputed issue and supporting documentation will make it difficult to determine the merits of the dispute.

#### **10.12.1 Types of Disputes**

Disputes are divided into four categories: notice, protest, potential claim and claim. The *Standard Specifications* and special provisions will outline each category.

During the course of the Project and up to receiving the proposed final estimate, the Contractor must submit a contract dispute in the form of a written notice, protest, or a potential claim to the Resident Engineer. Disputes become claims when the contractor lists them as exceptions to the proposed final estimate.

##### **10.12.1.1 Notice**

A Contractor would submit a written notice when unforeseen conditions are encountered on the project that were not shown in the plans or detailed in the specifications.

##### **10.12.1.2 Protest**

A Contractor would submit a written protest when a dispute concerns the terms or conditions of a contract change order or the determination of contract time.

### **10.12.1.3 Potential Claim**

A Contractor would submit a written potential claim when the contractor believes additional compensation is due.

#### **10.12.1.3.1 Initial Notice of Potential Claim**

An initial notice of potential claim provides an early notice to Caltrans of a dispute issue. It states the nature and circumstances of the dispute and gives the parties the opportunity to mitigate the associated costs, allowing for an early resolution.

#### **10.12.1.3.2 Supplemental Notice of Potential Claim**

A supplemental notice of potential claim provides complete justification for additional compensation and adjustments referencing the appropriate provisions of the contract along with the estimate of the costs. The Contractor must submit the supplemental notice of potential claim within fifteen (15) days of submitting the initial notice of potential claim.

*A Contractor must update the cost estimate or the effect on the scheduled date of contract completion as soon as a change is recognized.*

#### **10.12.1.3.3 Full and Final Documentation of Potential Claim**

The full and final documentation of potential claim quantifies all costs after completion of the disputed work. A Contractor must provide the full and final documentation of potential claim within thirty (30) days of completing the dispute-related work.

### **10.12.1.4 Claim**

A contractor submits a written claim for an unresolved dispute by listing it as an exception to the proposed final estimate.

### **10.12.1.5 Standard / Special Specifications**

Section 9-1.04, Notice of Potential Claim, of the Caltrans *Standard Specifications*, as amended by the Special Provisions, provides the process by which a contractor can notify Caltrans of disputes among the parties arising under and by virtue of the contract at the earliest possible time in order that the matters may be resolved, if possible, or other appropriate action promptly taken.

Section 9-1.07B, Final Payment and Claims, of the Caltrans *Standard Specifications*, as amended by the Special Provisions, provides the process by which a Contractor can submit a written statement of claims arising under or by virtue of the contract so that Caltrans receives the written statement of claims no later than close of business of the thirtieth (30) day after receiving the proposed final estimate.

Section 9-1.10, Arbitration, of the Caltrans *Standard Specifications* provides for the resolution of contract claims by arbitration.

SSP No. S5-150, Partnering, of the Caltrans *Standard Specifications* provides for the formation of a “Partnering” relationship between the State and a Contractor in order to effectively complete the contract to the benefit of both parties. The purpose of this relationship is to maintain a cooperative communication and to mutually resolve conflicts at the lowest responsible management level. S5-150 is used in projects with a value greater than \$1 million.

SSP No. S5-170, Dispute Review Board, of the Caltrans *Standard Specifications* will be incorporated into Project contract documents. Used in projects over \$10 million and 100 or more working days, the special specification provides for the establishment of a Dispute Review Board (DRB) to assist in the resolution of disputes or potential claims arising out of the work of the Project.

Detailed guidance regarding claims management process and procedures is contained in the Caltrans *Construction Manual, Chapter 5, Section 4, Disputes*, and can be accessed at:

[http://www.dot.ca.gov/hq/construc/manual2001/chapter5/chp5\\_4.pdf](http://www.dot.ca.gov/hq/construc/manual2001/chapter5/chp5_4.pdf)

Particular attention is invited to Tables 5-4.1 through 5-4.7 of Chapter 5, Section 4 of the *Construction Manual* which provides detailed flow charts and delegations of authority for the dispute resolution processes.

- Table 5-4.1 Notice of Potential Claim Process
- Table 5-4.2 Dispute Review Board Process
- Table 5-4.3 Claims Resolution Process
- Table 5-4.4 Delegation of Authority
- Table 5-4.5 Audit Process
- Table 5-4.6 Arbitration Process
- Table 5-4.7 Arbitration Payment Process

## **11.0 DESIGN QUALITY CONTROL/QUALITY ASSURANCE**

### **11.1 Design Standards**

The Project design standards and processes are as set forth in the Caltrans *Project Development Procedures Manual* and, as constrained and/or guided by, the following:

- Caltrans Highway Design Manual,
- AASHTO Policy on Geometric Design of Highways and Streets,
- Caltrans Local Assistance Procedures Manual (Chapter 11)
- Current edition of the Manual of Uniform Traffic Control Devices,
- Current edition of the *Roadside Design Guide*,
- Current edition of the *Highway Capacity Manual*, and
- Caltrans Directives and Design Information Bulletins.

The above is not an “all inclusive” listing but is intended to be a general listing of manuals and/or guides that could impact the Project’s design.

### **11.2 Definitions**

#### **Quality Control (QC)**

Refers to a set of actions taken by the Project Engineer and others during the design process to assure the production of a product that meets its purpose and need.

#### **Quality Assurance (QA)**

Refers to review processes taken by Senior Engineers and others in the Project to assure that QC processes and procedures are implemented and are both sufficient and effective.

#### **Independent Assurance (IA)**

Refers to activities performed at the Project Management Team level to assure that quality management practices are in place, functioning, and effective.

### **11.3 QC/QA Process Implementation**

Caltrans has, over the years, implemented a rigorous QC/QA process that consists of various guidance documents and checklists. The requirements are set forth in numerous Caltrans manuals and guideline documents that establish a QC/QA process beginning at the earliest stages of a project and continuing throughout the development and construction phases until the project is successfully completed. The Project will comply with all established Caltrans processes and procedures to assure the Project is managed in an efficient and effective manner.

The purpose of this PMP is not to establish new or different QC/QA processes or procedures for the Project – unless the complexity and/or magnitude of the Project

determine that such a need is warranted. At this early stage of development, the Project Team considers the Caltrans established processes and procedures to be sufficient to meet the needs of the Project.

Accordingly, this Section of the PMP will highlight established Caltrans QC/QA policies, processes, and procedures and identify specific procedures, documents, and/or websites that will be instrumental in assuring a rigorous and detailed QC/QA process for the Project.

In addition, it should be noted that Caltrans (District 4) is currently developing a Division of Design Quality Control/Quality Assurance Guideline that consolidates, in a single reference document, the individual QC/QA processes required by District 4's Division of Design and various Caltrans manuals. It is anticipated that the Guideline will be finalized and implemented during the design phase of the Project and will be used by the Project Team during the course of the Project's lifecycle.

**11.3.1 Project Initiation Document (PID) Component**

Chapter 8, Section 4, Project Development Team, of the Caltrans *Project Development Procedures Manual* establishes the requirement for a Project Development Team (PDT) for certain categories of projects. This Project is designated a Category 1 project and, as such, requires the designation of a formal PDT. One of the primary functions of the PDT is "to ensure design of a quality project that can be safely and efficiently constructed and maintained within scope and budget and on schedule."

The Caltrans *Project Management Handbook*, under the Roles and Responsibilities Section, assigns the following QC/QA responsibilities to specific Project Team members:

<b>Role</b>	<b>QC / QA Responsibility</b>
Project Sponsor	<ul style="list-style-type: none"> <li>Establishes performance measures for evaluating the quality of capital improvements.</li> </ul>
Functional Managers	<ul style="list-style-type: none"> <li>Responsible for ensuring that there are adequate QC/QA processes in place for the deliverables.</li> </ul>
Task Managers	<ul style="list-style-type: none"> <li>Identifies and verifies customer expectations and prepares a Quality Control Plan for each deliverable in his/her portion of the Project scope.</li> </ul>
Engineer, Project Coordinator, etc.	<ul style="list-style-type: none"> <li>Executes the Quality Control Plan to ensure deliverables will meet customer expectations.</li> </ul>

Appendix L, Preparation Guidelines for Project Study Report, of the Caltrans *Project Development Procedures Manual* provides detailed guidance and instructions for the preparation of a PID to include detailed templates. Appendix L also includes a Design Scoping Index, Planning Scoping Checklist and a Traffic Forecasting, Analysis and Operations Scoping Checklist. The checklists assure that all applicable elements required for a complete PID are included.

### 11.3.2 Project Approval and Environmental Document (PA&ED) Component

Chapter 10, Section 3, Environmental Studies, of the Caltrans *Project Development Procedures Manual* provides general guidance for environmental studies. The Caltrans Standard Environmental Reference (SER) website is an on-line resource to assist State and local agencies to plan, prepare, submit, and evaluate environmental documents for transportation projects. The website contains information appropriate to all transportation projects developed under Caltrans and to all local agency highway or local streets and roads projects with funding or approvals by the Federal Highway Administration (FHWA). The SER website address is:

*<http://www.dot.ca.gov/ser/>*

The SER website also provides numerous Forms and Templates designed to assure that environmental documentation is both complete and accurate. The following QC/QA templates are located under the “Forms and Templates” section of the SER:

- Internal Quality Control Certification Sheet
- External Quality Control Certification Sheet
- Environmental Document Review Checklist

The environmental process and document for the Project will comply with the guidance and instructions set forth in the SER website and the various environmental manuals and guidance documents referenced therein. The QC/QA Checklists identified above will be completed and maintained in the Project files.

### 11.3.3 Plans, Specifications and Estimates (PS&E) Component

As noted in Section 11.1, Design Standards, of this PMP, the Project PS&E documents are being prepared in accordance with the current editions of appropriate highway design manuals and guidance. In addition to the manuals and guidance previously listed, the following Caltrans manuals and guidance may, as appropriate, apply to the development of the Project’s PS&E documents:

- *Drafting and Plans Manual*
- *Local Assistance Procedures Manual*
- *Standard Plans*
- *Transportation Management Plan Guidelines*
- *Standard Specifications*
- *Standard Special Provisions*

In addition to the QC/QA processes and procedures implemented by the PDT for deliverables, Caltrans will complete the PS&E Checklist incorporated as Exhibit 12-D in the Caltrans *Local Assistance Procedures Manual*.

#### **11.4 Design Exceptions**

Chapter 21, Exceptions to Design Standards, of the Caltrans *Project Development Procedures Manual* sets forth the procedures to be followed to obtain approval of exceptions from Mandatory Design Standards. The procedures stress the importance of creating a written record that documents the engineering decisions leading to the approval of all exceptions from a design standard.

Exhibit BB, Exception to Design Standards, of the Caltrans *Project Development Procedures Manual* (as modified by *Design Memo dated September 25, 2000*) is a Fact Sheet template for exceptions to Mandatory Design Standards that must be completed to ensure that there is sufficient justification to approve a design exception. A Fact Sheet for Exceptions to Mandatory Design Standards will be completed for all Project design exceptions.

As set forth in Chapter 21, formal FHWA approval is required for Project design exceptions to the 13 controlling criteria (see Index 108.3 of the Caltrans *Highway Design Manual*.) Chapter 21 also describes the FHWA approval process to be followed to obtain formal FHWA approval of Project design exceptions.

#### **11.5 Project Data Checklists**

Chapter 15, Section 2 of the Caltrans *Project Development Procedures Manual* assigns responsibility to the Project Engineer (PE) to furnish the Project's Resident Engineer (RE) with pertinent project data required to administer the construction contract. Appendix GG of the *Project Development Procedures Manual* provides a RE Project Data Checklist for use in determining what project data is considered appropriate for the RE File, the date the data was provided, and any pertinent remarks concerning the data.

The Project's PE, in coordination with the Project's RE, will use the checklist to assure that appropriate project data is furnished to administer the construction contract.

## **12.0 CONSTRUCTION QUALITY CONTROL/QUALITY ASSURANCE**

### **12.1 General**

The Caltrans *Construction Manual*, Chapter 6, Sampling and Testing, provides the detailed guidance for Quality Control/Quality Assurance (QC/QA) processes and procedures that will be in place for the Project during the Construction component.

Chapter 15, Section 2 of the Caltrans *Project Development Procedures Manual* assigns responsibility to the Project Engineer (PE) to furnish the Project's Resident Engineer (RE) with pertinent project data required to administer the construction contract. The information provided will be compiled in an RE file. Appendix GG of the *Project Development Procedures Manual* provides a RE Project Data Checklist for use in determining what project data is considered appropriate for the RE File, the date the data was provided, and any pertinent remarks concerning the data. A completed copy of this checklist will be maintained in the RE File.

#### **12.1.1 Sample Types and Frequencies**

Chapter 6, Section 1 of the Caltrans *Construction Manual* provides detailed instructions/guidance for the sampling and testing of materials and/or products and quality of work to assure they are in compliance with the Project's contract specifications. The Section describes the different types of sampling and testing used by Caltrans.

##### **12.1.1.1 Preliminary Tests**

Preliminary tests are tests made prior to the award of the contract. The tests are generally used for design purposes to provide data for the materials information package for prospective bidders.

##### **12.1.1.2 Initial Samples and Tests**

Initial samples and tests are performed on materials proposed for use in the Project. The tests are used to determine if proposed materials and/or products meet specifications.

##### **12.1.1.3 Acceptance Tests**

Acceptance tests are performed on materials that will be incorporated into the work. Sampling begins as soon as the materials are delivered or in place. Acceptance testing is continued as the work progresses.

#### **12.1.2 Acceptance of Manufactured Material and Sampling Methods**

Chapter 6, Section 2 of the Caltrans *Construction Manual* provides detailed instructions regarding the Caltrans procedures for acceptance of manufactured

material. The Section also describes the types of materials that are considered “manufactured material” and provides guidelines for sampling these materials.

### **12.1.3 Field Tests**

Chapter 6, Section 3 of the Caltrans *Construction Manual* provides detailed instructions/guidance for performing field inspections and testing of materials incorporated into the Project.

### **12.1.4 Inspection**

Chapter 3, Section 5 of the Caltrans *Construction Manual* details how contract work will be controlled. During the manufacture of products and the execution of the project, the engineer samples, tests, and inspects the work to determine if the characteristics conform to the contract requirements.

Section 3-507 of the *Construction Manual* assigns the resident engineer and assistant resident engineer a primary duty to assure compliance with the Standard Specifications, special provisions, and plans within the tolerances specified within those documents.

### **12.1.5 Control of Materials**

Chapter 3, Section 6 of the Caltrans *Construction Manual* provides general guidelines for resident engineers to assure that materials used in the Project’s work comply with specifications.

Section 3-608 of the Caltrans *Construction Manual* provides guidance to resident engineers regarding the testing of materials used in the Project’s work.

## **12.2 Project Certification**

As prescribed by Section 6-108 of the Caltrans *Construction Manual*, a materials certification memorandum will be completed by the construction engineer at the end of the Project. The construction engineer will be required to sign the materials certification memorandum.

## 13.0 ENVIRONMENTAL MONITORING

### 13.1 Status of the Environmental Process

The Doyle Drive project follows both National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) procedures. The Final Environmental Impact Statement and Report (FEIS/R) was approved in October 2008. The Record of Decision (ROD) was approved on December 19, 2008 with the Notice of Availability will be published in the Federal Register on January 13, 2009.

Under CEQA procedures, the Authority Board approved the Findings of Fact and Statement of Overriding Considerations on December 16, 2008. The *Notice of Determination* (NOD) was filed with the county clerk on December 17, 2008. Following the project approval process, the sponsor agencies have moved forward with final design and permitting.

### 13.2 Commitments

The Doyle Drive project team has strived to create a project that:

- Minimizes impacts;
- Respects the environment of the National Park, National Historic Landmark District and surrounding neighborhoods;
- Meets community needs; and
- Provides a safer roadway.

As summarized in Chapter 6 of the FEIS/R, the project team has undertaken an extensive public and agency outreach process that included multiple scoping, design and informational workshops and meetings. Input received from the public and agencies has been integral in the development of the Doyle Drive Project.

During the development of the preliminary alternatives, the project team followed a context sensitive approach that integrated Doyle Drive into its setting in a sensitive manner while working to meet the needs of the users, neighboring communities and the environment. During final design, the project team will continue to work on context sensitive design elements to improve how the Preferred Alternative fits into the surrounding environment and meets the goals of the project within the context of the National Park setting and the natural environment.

In addition to a context sensitive approach, the project incorporates a sustainable design strategy. Sustainable design is a systems approach to design and construction of a facility that ensures consideration of ecological and human needs in light of well-grounded acceptable engineering and economic constraints. Chapter 2 of the FEIS/R provides a detailed description of both the practice of context sensitive design and sustainable design as they relate to the Doyle Drive Project. The reporting for the sustainability program has identified the sustainable strategies that are currently being incorporated into the project and those strategies that are being investigated further for possible integration into the project.

The limited number of impacts associated with the Preferred Alternative is a direct result of the project team working to provide the best possible design using the techniques of context sensitive design and sustainability in addition to being responsive to the concerns and ideas put forth from by the public, agencies and project stakeholders. The collaborative effort led to the implementation of many project features which help minimize the impact of the Preferred Alternative while meeting the goals of the project. Specific refinements made to the Preferred Alternative are described in Chapter 2 of the FEIS/R.

As the Doyle Drive Project moves forward, the project team is committed to continual refinement of the Preferred Alternative during the final design phase. The project team commits to working with the Presidio land managers to ensure:

- The project will avoid, minimize, and mitigate adverse effects to the historic property as much as is feasible;
- The most feasible solution for accommodating the Tennessee Hollow restoration efforts has been identified;
- Any other project concerns are addressed; and
- That all project impacts are successfully mitigated based on the binding mitigation measures presented in the FEIS/R.

Additionally, necessary permits and approvals have been identified based on the analyses and findings of the FEIS/R, as identified in Exhibit 13-1 below.

**Exhibit 13-1**

<b>AGENCY</b>	<b>PERMIT/APPROVAL</b>	<b>STATUS</b>
<i>United States Army Corps of Engineers</i>	<i>Section 404 Clean Water Act/ Nationwide Permit</i>	<i>Section 404 permit was issued on May 14, 2009</i>
<i>United States Fish and Wildlife Service</i>	<i>Endangered Species Act Section 7 Consultation</i>	<i>Caltrans made a "no effect" determination and that formal consultation with USFWS is not necessary</i>
<i>State Historic Preservation Office</i>	<i>Section 106 National Historic Preservation Act Compliance</i>	<i>Have received SHPO concurrence on project identification documents and finding of effect. Programmatic Agreement has been executed.</i>
<i>California/Regional Water Quality Control Board (RWQCB)</i>	<i>The RWQCB must certify that a Corps Section 404 Nationwide permit action meets state water quality objectives by issuing a Water Quality Certification.</i>	<i>Application for the Water Quality Certification was submitted to the RWQCB in May. Certification (Section 401) expected in early June</i>
	<i>The RWQCB regulates waters of the state that are not within federal jurisdiction. For these areas Waste Discharge Requirements must be identified and a WDR permit obtained.</i>	<i>On-going coordination regarding water treatment.</i>
<i>California State Water Resources Control Board (SWRCB)</i>	<i>Notice of Intent and Storm Water Pollution Prevention Program (SWPPP)</i>	<i>DEIS/R was sent to SWRCB. Further consultation will occur during final design.</i>
<i>San Francisco Bay Conservation and Development Commission (BCDC)</i>	<i>BCDC Negative Determination</i>	<i>Had initial coordination with BCDC. Ongoing coordination with BCDC regarding Consistency Determination.</i>
<i>San Francisco Public Utilities Commission (SFPUC)</i>	<i>The SFPUC must be consulted and approve any project-related discharges to the regional sanitary sewer system.</i>	<i>On-going coordination regarding water treatment options.</i>
<i>Presidio Trust Utilities Department</i>	<i>The Presidio Trust must be consulted and approve any project-related discharges to the local sanitary sewer system.</i>	<i>On-going coordination regarding water treatment options..</i>
	<i>The Presidio Trust Utilities Department must approve all relocations of Trust owned utilities</i>	<i>Prior to construction the appropriate approvals will be obtained</i>
<i>Presidio Trust Permitting Department</i>	<i>Contractor must obtain a Dig Permit for any work causing ground disturbance</i>	<i>Prior to construction the appropriate approvals will be obtained</i>
	<i>The Contractor must obtain a hot work permit for any cutting, welding, or heat gun work (no open flame torch will be allowed)</i>	<i>Prior to construction the appropriate approvals will be obtained</i>
<i>Bay Area Air Quality Management District</i>	<i>Naturally-Occurring Asbestos Dust Mitigation Plan (Airborne Toxic Control Measure For Construction And Grading Operations § 93105, Title 17, California Code of Regulations)</i>	<i>Not completed. Should be prepared and submitted to BAAQMD during development of 100 percent construction plans. BAAQMD must also be notified at least 14 days prior to construction activities.</i>
<i>Bay Area Air Quality Management District</i>	<i>Demolition and Renovation Notification (BAAQMD Regulation 11, Rule 2)</i>	<i>Not completed. Must be submitted at least ten working days prior to any non-emergency building demolition or renovation required by the project. Notification is required for any demolition and for each renovation where the amount of Regulated Asbestos-Containing Material (RACM) is greater than or equal to 100 square/linear feet, or for any dry RACM removal. Asbestos surveys should be completed prior to notification submission.</i>

*Note: Management and disposal of excavated soil and groundwater during construction could potentially require additional permits, reviews, and/or approvals by regulatory agencies. These requirements will be determined based on the findings of the ongoing soil and groundwater investigations.*

### 13.3 Environmental Monitoring Plan

The Final Environmental Statement/Report (FEIS/R) details all the environmental impacts and required mitigation for Doyle Drive Project. Exhibit 13-2 below provides a summary of the twenty-two mitigation measures required for the project. The project mitigation and avoidance measures are currently being entered into a tracking database to ensure they are accounted for and carried out during the next phase of the project.

Exhibit 13-2  
 SUMMARY OF MITIGATION MEASURES

	Resource Area	Impact to Be Mitigated	Mitigation Measure
1	Land Use and Planning	Removal of eight buildings	Removal of these buildings would impact development plans of Presidio Trust as described in the Presidio Trust Management Plan (PTMP). To mitigate, the PTMP will be adjusted accordingly upon implementation of the alternative.
2	Parks and Recreation Facilities	No impacts	No mitigation required.
3	Community	No impacts	No mitigation required.
4	Parking	Temporary shortage of parking spaces during construction	The Parade Grounds, located to southeast of project area, will be considered as a location for replacement parking. With coordination, the shuttle service (PresidiGo) currently operated by the Presidio Trust can be used to transport individuals to and from their destinations with the Presidio. Project sponsors will compensate the Presidio Trust for additional shuttle service. Proper signage will be provided in order to inform motorists of any parking changes and to direct them to available parking facilities.
		Permanent unmet parking demand of 142 spaces	As areas of deficiency are generally located to the south of Doyle Drive, the Presidio Trust has indicated area west of Halleck Street and south of Main Post tunnels might be considered for potential location of a new parking facility to mitigate unmet parking demand.  Area to southeast corner of Girard and Eddie Roads, which may be converted to a parking facility to address some of temporary unmet parking demand, may remain as such to offset any long-term parking deficiency.
5	Relocation	Permanent removal of eight buildings and partial removal of another	Project sponsor will provide relocation assistance services to affected homeowners, renters, and tenant businesses. In addition, property owners will be compensated in accordance with the <i>Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970</i> and other applicable law.

**Exhibit 13-2  
SUMMARY OF MITIGATION MEASURES**

	<b>Resource Area</b>	<b>Impact to Be Mitigated</b>	<b>Mitigation Measure</b>
6	<b>Environmental Justice</b>	No impacts	No mitigation required.
7	<b>Traffic and Transportation</b>	No impacts	No mitigation required.
8	<b>Transit</b>	No impacts	No mitigation required.
9	<b>Visual and Aesthetics</b>	Construction-related adverse change to visual character of area due to removal of existing landscaping and vegetation	All areas affected by construction activities will be re-vegetated following agreed upon design guidelines to their appropriate native vegetation in natural areas, or appropriate ornamental vegetation type in landscaped areas. In some areas, full restoration of mature natural species may take between ten and twenty years. Project proponent will monitor restored areas following plant installation using standard ecological methods that qualitatively estimate plant cover and to document survival rates and growth characteristics. Monitoring will continue until the performance criteria have been met.
10	<b>Cultural Resources</b>	Cultural resources impacts	<p>Specific mitigation measures are provided in the Programmatic Agreement (PA) and associated archaeological and built environmental treatment plans, prepared as part of the project. Specific measures will include:</p> <ul style="list-style-type: none"> <li>- Preparation of historic structures reports and condition assessment reports for affected buildings, structures, and cultural landscape features.</li> <li>- Stabilization/monitoring/security for buildings during construction.</li> <li>- Protocols for archaeological monitoring and for the treatment of archaeological resources and collections management and curation of recovered materials.</li> <li>- Recordation of buildings and the cultural landscape in accordance with the requirements of the Historic American Building Survey/Historic American Engineering Record/Historic American Landscape Survey programs.</li> <li>- Development of design guidelines for new construction.</li> <li>- Development of specifications for the building that will be relocated during construction and for buildings that will be altered to accommodate construction.</li> <li>- Architectural resource and cultural landscape monitoring.</li> <li>- Rehabilitation of buildings and restoration of cultural landscape features.</li> <li>- Salvage of demolished buildings and structures.</li> <li>- Preparation of an updated National Historic landmark nomination for the Presidio of San Francisco</li> <li>- Preparation of an updated National Historic landmark nomination for the Golden Gate Bridge.</li> </ul>

Exhibit 13-2  
**SUMMARY OF MITIGATION MEASURES**

	Resource Area	Impact to Be Mitigated	Mitigation Measure
11	<b>Hydrology, Water Quality and Stormwater</b>	Hydrology, water quality, and stormwater impacts	<p>Implementation of standard construction management practices and roadway design features will provide protection to groundwater, treat run-off and stormwater, and protect against extreme tidal events.</p> <p>Due to the potential affects to riparian habitat in the vicinity of the bluffs as a result of tunneling upslope of the bluffs, wetlands would be created in advance to ensure that this habitat is available during and after construction. For details see the Wetlands mitigation.</p>
12	<b>Geology/Soils/ Seismic/ Topography</b>	Disturbance and removal of geologic resources	<p>The disturbance and removal of geologic resources for the construction of the new roadway is an unavoidable impact. No mitigation measures are available for this impact.</p> <p>Soils excavated in one location will be reused as fill or backfill in another location to the extent possible, provided it meets the appropriate requirements. An earthwork management plan will be developed in coordination with the Presidio Trust and NPS.</p>
13	<b>Hazardous Waste/Materials</b>	Hazardous materials impacts	Implementation of standard construction management practices and pre-construction investigations and procedures, including development of a <i>Site Management Program/Contingency Plan (SMP/CP)</i> will ensure that there would be no hazardous waste/material impacts associated with the project.
14	<b>Air Quality</b>	Construction-related impacts	Implementation of BAAQMD basic dust control procedures will maintain project construction-related impacts at acceptable levels. There will be additional PM and NOx emission reductions for future construction equipment, since on May 11, 2004, the EPA signed the final rule introducing Tier 4 emission standards, which are to be phased-in over the period of 2008-2015 [69 FR 38957-39273, 29 June 2004].
15	<b>Noise</b>	Construction-related impacts	Implementation of appropriate avoidance and noise reduction measures would eliminate temporary construction noise impacts and those impacts associated with temporary construction detour (TCD).
		Increase in noise levels at specific locations including residences along Storey Avenue, Armistead Road, Officer Family Housing, and Lyon Street	Initial investigations indicate that a noise barrier located on the north side of Doyle Drive near Armistead Road would be feasible according to Caltrans protocol. However, the soundwall was determined to not be desirable or consistent with the cultural landscape of the Presidio. The Presidio Trust as land managers have indicated that the benefits from building this soundwall would be outweighed by the negative effects on the cultural landscape. This determination was made through the application of the historic preservation and architectural criteria developed for the Doyle Drive Project as part of the built environment treatment plan. The built environment treatment plan is part of the Programmatic Agreement which was developed as part of the Section 106 process to document the measures which will be taken to mitigate the adverse effects of the Project on cultural and historic resources.

Exhibit 13-2  
 SUMMARY OF MITIGATION MEASURES

	Resource Area	Impact to Be Mitigated	Mitigation Measure
16	<b>Vibration</b>	Construction-related impacts	Implementation of proper vibration management measures within the Presidio and/or Palace of Fine Arts will maintain vibrations at acceptable levels during construction and eliminate the need for impact mitigation.
17	<b>Energy</b>	Construction-related impacts	Implementation of appropriate avoidance measures would eliminate energy consumption impacts.
18	<b>Natural Communities</b>	Construction-related impacts	In order to mitigate for impact of vegetation being disturbed during construction, a plan for the revegetation of temporarily disturbed vegetation will be implemented. Details of the revegetation plan are described below under Plant Species. As described above, the Monitoring Program will be implemented to ensure that biological monitoring is effectively administered and results in the avoidance and minimization of adverse effects on sensitive resources.
19	<b>Wetlands and Other Waters of the United States</b>  <b>Wetlands and Other Waters of the United States (cont'd.)</b>	Direct and indirect impacts	<p>Mitigation measures to address direct impacts and indirect impacts to USACE jurisdictional waters are required to comply with <i>Section 404</i> of the <i>Clean Water Act</i>. Similarly, mitigation measures will address impacts to Cowardin wetlands, which are protected by the NPS and Trust. Refer to the <i>Wetland Restoration and Enhancement Mitigation Plan</i> for further information on wetland mitigation measures. Once the plan is finalized it will be adopted by the project proponents and guide the wetland mitigation efforts for the project.</p> <p>The overall goals of wetland mitigation are to:</p> <ol style="list-style-type: none"> <li>1. Avoid, minimize or compensate (in this order) for the temporary and permanent losses of waters of the U.S. and Cowardin wetlands protected by the NPS or the Trust due to the Doyle Drive Project;</li> <li>2. Satisfy the "no net loss" policy regarding type, function and value of wetlands per <i>Executive Order 11990</i> and consistent with the NPS' and Trust's policies;</li> <li>3. Improve wetland and riparian value and increase wildlife habitat quality relative to the quality of waters of the U.S. and Cowardin wetlands protected by the NPS or the Trust that will be disturbed or filled; and</li> <li>4. Create successful mitigation sites that will become self-supporting natural systems over time.</li> </ol>

**Exhibit 13-2  
SUMMARY OF MITIGATION MEASURES**

	<b>Resource Area</b>	<b>Impact to Be Mitigated</b>	<b>Mitigation Measure</b>
			<p>To mitigate the impacts, a <i>Wetland Restoration and Enhancement Mitigation Plan</i> will be implemented. This plan is subject to approval by the Trust and NPS. Temporary impacts will be mitigated by in-kind, in-place restoration after construction at a 1:1 ratio. Following the 2005 <i>NPS/Trust Strategy</i>, three basic strategies for mitigation of permanent and indirect impacts will be acceptable by the Trust and NPS. These are: 1) wetland creation, 2) intensive wetland enhancement, and 3) wetland enhancement. The compensatory value, respectively, are 2:1, 3:1, and 5:1 (or at ratios agreed to by all agencies as described in the final <i>Wetland Restoration and Enhancement Plan</i>), ratios of created or enhanced habitat to impacted habitat based on current discussions with the NPS and the Trust.</p> <p>Six sites were identified providing wetland creation or enhancement opportunities appropriate to address as mitigation for the project. The criteria for the site selection included: a) creation of new in-kind habitat; b) proximity to the impacted area; c) ability to support mature habitat systems, with similar cover, foraging and nesting opportunities to that lost; and d) habitat located in the same wildlife corridor as the impact. These sites, in addition to mitigation goals and values, as presented and discussed in the 2005 and the 2006 <i>NPS/Trust Strategy</i>, and the October 31, 2006 field meeting, provide the basic framework of the compensatory mitigation.</p> <p><u>Compensation Measures</u>  Compensation for permanent impacts on wetlands will include: (1) wetland creation and restoration; (2) funding of Park agency wetland enhancement and creation projects; or (3) a combination of both (1) and (2). See above for mitigation ratios.</p> <p><u>Proposed Wetland Compensation Sites</u>  All of proposed wetland compensation sites would offset permanent and indirect impacts on waters of U.S. and Cowardin wetlands.</p> <p>Six sites were chosen as potential mitigation sites for impacts on permanent and indirect wetland impacts. These sites include Dragonfly Creek, Quartermaster Reach Connection, North Fort Scott, West Crissy Bluffs, Battery East/Marina Drive, and Tennessee Hollow - Eastern Tributary. Conceptual plans for these sites involving creation and various types of enhancement are described in the <i>Wetland Restoration and Enhancement Mitigation Plan</i>.</p>

**Exhibit 13-2  
SUMMARY OF MITIGATION MEASURES**

	<b>Resource Area</b>	<b>Impact to Be Mitigated</b>	<b>Mitigation Measure</b>
	<b>Wetlands and Other Waters of the United States (cont'd.)</b>		<p><u>Implementation and Monitoring Plan</u>  Major construction activities for the Project will be phased over five years. Mitigation efforts will be initiated before, concurrent with, or immediately following construction of the project. At mitigation sites not disturbed by construction activities, creation and/or enhancement activities will be initiated as soon as possible, following completion of environmental review and permitting. Sites disturbed temporarily prior to planting effort will be treated immediately. All terrestrial and aquatic revegetation efforts will be coordinated with and approved by the Trust and NPS natural resource staff. All terrestrial and aquatic revegetation materials, including seeding, mulching and hydroseeding, will be approved by the Trust and NPS natural resource staff.</p> <p>During the design phase, additional geotechnical analysis will be conducted to determine underlying water conveyance in that area. If it is determined that nature of fractures are such that success of water conveyance will be in question, wetland creation will begin in advance of the project. The Trust and the NPS will review and comment on the details of monitoring program and will be included in distribution of those receiving periodic reports of data and findings.</p> <p>General biological monitoring will occur during construction and post-construction. Wetland mitigation monitoring will begin at the initiation of the planting phase of restoration. Plant installation may be phased over three years. Wetland mitigation monitoring would continue after the plants are installed until the plantings demonstrate successful establishment and the performance criteria have been met, which is usually about six years (i.e., three years of monitoring site restoration and plant establishment followed by three years of monitoring post site restoration and plant establishment). Success criteria for wetland mitigation are described in the Wetland Restoration and Enhancement Mitigation Plan. The criteria describes threshold levels for erosion, invasive species, irrigation, vegetation richness, hydrology, wildlife usage, and debris. The success criteria and all aspects of wetland restoration is subject to approval by the Trust and NPS.</p>
20	<b>Plant Species</b>	Special-status plant species impacts	If avoiding special-status plant species is not feasible, federal or state species of concern habitat will be restored at a 1.5:1 ratio. In-lieu funding will be required if federal or state species of concern restoration is impracticable.

**Exhibit 13-2  
SUMMARY OF MITIGATION MEASURES**

	<b>Resource Area</b>	<b>Impact to Be Mitigated</b>	<b>Mitigation Measure</b>
	<b>Plant Species (cont'd.)</b>		<p><u>Revegetation of Temporarily Disturbed Areas</u>  Within the construction corridor, all natural areas disturbed temporarily because of project activities will be revegetated and restored to appropriate native vegetation type in natural areas, or appropriate ornamental vegetation type in landscaped areas. Revegetation and restoration will be completed in accordance with the 2001 VMP and standard NPS and Trust restoration practices. Plants used for revegetating landscape areas will be selected in consultation with the NPS and the Trust forester. Revegetation and restoration methods will include using locally native plant material, protecting and restoring soil conditions, irrigating, and controlling aggressive non-native species. Revegetation will occur as practicable at those sites that will not be subsequently disturbed. Seed collection and propagation will occur from January to December before the year of planting. Sites disturbed before the planting effort will be treated immediately with: (1) a seed mixture and mulch using broadcast methods; or (2) hydroseed. All terrestrial and aquatic revegetation efforts will be coordinated with and approved by the Trust and NPS natural resource staff. All terrestrial and aquatic revegetation materials, including seeding, mulching and hydroseeding, will be approved by the Trust and NPS natural resource staff.</p> <p><u>Maintenance and Monitoring</u>  Project proponent will maintain mitigation site. Maintenance will include replacing plants, maintaining erosion control materials and irrigation systems, controlling weeds, and removing trash and other debris. Maintenance may include monitoring site every 30 days for first three months following planting and every sixty days thereafter during first year of plant establishment. Plants will be checked for disease and pests. Non-native invasive plants will be removed in accordance with <i>Executive Order 13112</i>. Weed removal will occur during the monitoring period if deemed necessary.</p> <p>Restored and revegetated sites will be monitored throughout the plant establishment period. At the end of each monitoring period the success of the restoration effort will be assessed against the restoration goals (e.g., at least eighty percent survival of plantings, 75 percent vegetative cover by desirable species, and a viable, self-sustaining plant community). The project proponent will monitor the mitigation site until the performance criteria have been met, which is usually about six years following plant installation. The Trust and the NPS are expected to manage the revegetated areas after the performance criteria have been met, which will be agreed upon by all agencies.</p>
21	<b>Animal Species</b>	Animal species impacts	Mitigation actions for those impacts to animal species are situation-specific, and need for and type of action are determined by qualified biologists as the work is taking place.
22	<b>Invasive Species</b>	Invasive species impacts	No mitigation measures would be required as implementation of BMPs during construction of the project would limit the spread of invasive species.

## 14.0 RIGHT OF WAY (ROW)

### 14.1 ROW Requirements

Project final ROW requirements will be determined by Caltrans during the course of project design. All anticipated Project ROW requirements are from lands controlled by the Federal government and new ROW requirements will be obtained by Caltrans, through the Federal Highway Administration (FHWA) pursuant to the FHWA's authority under 23 USC 317 as a Federal Land Transfer. The environmental documentation for the Project identifies 2.6 hectares (6.4 acres) of publicly owned land that will be required by Caltrans, in addition to the existing ROW permit from the Federal government.

General guidance and procedures governing the acquisition of ROW, utility easements, rights of entry, and other ROW activities are set forth in the Caltrans *Project Development Procedures Manual*, Chapter 3, Section 4. The Project Team's ROW-related activities will be in compliance with this guidance. Additionally, a member of the Caltrans District ROW branch is an active member of the Project Development Team (PDT) and is tasked with providing detailed guidance to the Project Team for all Project activities relating to Division of Right of Way responsibilities.

Detailed guidance and procedures governing all Project ROW activities are set forth in the Caltrans *Right-of-Way Manual*.

#### 14.1.1 ROW Determination (On-Going Effort)

The Project Team, with the support of the District ROW Engineering Unit, will work closely together to establish the Project ROW lines. Once the geometric base maps are completed, the Project Team will set the lines (including permanent and temporary easements) and, if appropriate, delineate access lines.

#### 14.1.2 ROW Acquisition

ROW acquisition for the Project will be in compliance with the policies and procedures set forth in the Caltrans *ROW Manual*, Chapter 8, Section 18, Federal Lands. The Caltrans Federal Land Transfer Coordinator (FLT Coordinator) will be responsible for preparing the initial information and documentation contained in the Federal Land Transfer (FLT) Package and forwarding of the package to the FHWA.

The FLT Package is forwarded to the FHWA with a request for a Letter of Consent and includes:

- Application Letter.
- Map of the area to be transferred. (The map can be an appraisal map, base map, project map, or a map application.)
- Environmental documents (NEPA and CEQA)

Status of the FLT Package will be an agenda item for the bi-weekly Project Management Team (PMT) meetings as needed.

## **14.2 ROW Updates**

The Project does not currently anticipate any necessity to acquire privately owned properties for ROW. In the event this situation changes and there is a need to acquire privately owned land for ROW, detailed procedures governing the tracking and acquisition of privately owned ROW will be added to this Chapter.

## 15.0 SAFETY AND SECURITY

Federal and California State laws have established occupational safety and health standards with which all employers must comply. The *Caltrans Safety Manual*, in conjunction with the *Caltrans Construction Manual* provides the basis for the official Caltrans Injury and Illness Prevention Program. The *Caltrans Safety Manual* lists mandatory safety policies and procedures.

### 15.1 Standards

The following items are the six (6) major elements of California State law as required in Section 3203 of the General Industry Safety Orders (GISO). For managers and supervisors to be in substantial compliance with the California Division of Occupational Safety and Health regulations (Cal/OSHA) and the Department of Transportation's Injury and Illness Prevention Program they shall:

(1) Schedule meetings with employees to discuss safety and health issues, workplace security, and emergency action plans:

- At least quarterly for office workers.
- At least every ten (10) working days for field employees.

(2) Conduct periodic worksite safety inspections of general office areas, field offices, laboratories, shops, and adjacent work areas, etc., by conducting the following types of inspections:

- Informal – In the course of normal duties, inspect daily to detect and eliminate physical and environmental hazards, and visually review warning signs of potential workplace violence, write reports, and document findings and corrective actions taken.
- Formal – Conduct walk-through inspections (include all items covered in Informal above) at least annually at all fixed worksites, write reports, and document findings and corrective actions taken.
- Special – Performed in response to reports of unsafe conditions, health risks, new products, substances, equipment, or when advised that an incident occurred involving potential and/or actual act of violence, write reports, and document findings and corrective actions taken.

(3) Investigate and document all injuries, illnesses, and actual or alleged acts of workplace violence:

- To identify contributing factors.
- To prevent further occurrences.

(4) Provide training and maintain records of the training covering:

- The hazards basic to all places of employment.
- The hazards unique to each job assignment.
- The recognition of workplace security hazards.

- Use of emergency action plans.

(5) Enforce all safety and health laws, rules, and policies by:

- Counseling and educating employees when appropriate.
- Initiating appropriate disciplinary action when employees violate safety laws, rules, policies, or fail to comply with workplace security practices.

(6) Keep records on safety and health matters:

- Maintain and have records accessible on all safety and health issues.
- Maintain records on all worksite inspections and training programs for at least one (1) year.

## **15.2 Roles and Responsibilities of Safety and Security staff**

As outlined in Chapter 2 of the Caltrans Construction Manual, the following describes the roles and responsibilities for safety on all construction projects:

### District Construction Deputy Director

The district construction deputy director will ensure that a training program is maintained to acquaint all Caltrans construction personnel with the basics of construction safety.

### Construction Safety Coordinator

The district's construction safety coordinator will act as technical advisor and coordinate the district's administration of contractors' compliance with safety requirements. The construction safety coordinator will also do the following:

- Be familiar with highway construction procedures, equipment, and construction zone traffic management, and also be able to recognize and anticipate unsafe conditions created by a contractor's operation.
- Visit projects periodically to observe the contractor's operation and any traffic conditions affected by construction activity.
- Make a written report of each visit, and file a copy of the report with the project records. The purpose of the visit is not to perform a complete safety inspection, but to observe the contractor's overall efforts and answer questions or look at specific areas as requested by the resident engineer.
- Be responsible for administering the district's construction safety training program.
- Be the advisor for the construction safety portion of the preconstruction conference.

### Construction Engineer

The district construction engineer will review construction projects to ensure that the resident engineer is monitoring the contractor's construction safety program adequately and that an effective safety program is being performed. While the construction safety coordinator acts as a technical advisor on construction safety, the construction engineer is responsible for advising the resident engineer on construction safety as it relates to contract administration.

District construction engineers are also accountable for the performance of employees under their supervision. They should document their reviews of employee safety programs.

#### Resident Engineer

The resident engineer will ensure that the contractor complies with all aspects of the contract including the applicable *Construction Safety Orders*. In doing so, the resident engineer will also do the following:

- Identify an unsafe condition as well as the specific regulation involved, if known.
- In a special safety report using Form CEM-4601, "Assistant Resident Engineer's Daily Report," document the construction safety activities of both the contractor and Caltrans project personnel. At least weekly, complete this report and file it in Category 6, "Safety," of the project records.
- Ensure the contractor complies with all safety orders through normal contract administration procedures. The state-enforcing agency for safety regulations is Cal/OSHA.
- Give project safety deliberate attention, both at preconstruction conferences and throughout the duration of the contract.
- Develop the code of safe practices for the project and ensure they are followed.

#### Project Safety Coordinator

The resident engineer may delegate safety responsibilities to an assistant who will act as the project safety coordinator. Usually this delegated work will be in addition to other assigned duties, but on large contracts it may be full time. The project safety coordinator must monitor and document the contractor's compliance with safety requirements and must keep the resident engineer informed. The project safety coordinator also acts as a safety advisor to Caltrans project personnel.

#### Project Staff

Caltrans does not intend that the resident engineer and the project safety coordinator carry the total load of monitoring the contractor's construction safety activities. All construction personnel must consider the safety of the operations in conjunction with their normal inspections.

### **15.3 Safety Meetings**

To meet the safety and health requirements as highlighted in the Caltrans Safety Manual, the project team will ensure that:

- Safety meetings will be scheduled and conducted on a regular basis:
  - Office supervisors shall have quarterly safety meetings.
  - Field supervisors shall have safety meetings every 10-working days.
- Safety meetings are documented;
- Employee attendance is recorded;
- Reports of alleged unsafe conditions, unsafe acts, and other deficiencies are documented, investigated, and corrected;
- A copy of the written record is posted or available for review;
- Second-line supervisors monitor subordinate supervisors to ensure compliance with these requirements; and

- Copies of safety meeting reports are retained by the first-line supervisor for one year.

#### 15.4 Safety Inspections

Section 2-104D of the *Caltrans Construction Manual* outlines what the project team can expect during a Cal/OSHA inspection and what the residential engineer and their assistants should do during a safety inspection. There are three elements to every Cal/OSHA inspection: the opening conference, the walkthrough inspection, and the closing conference.

- Opening Conference — the Cal/OSHA inspector will ask for the highest level of management on-site. Introductions will be made, and the inspector will state the reason and purpose of the inspection. At this time, the inspector will ask questions about the employer, such as the size of the organization, number of employees on-site, addresses and phone numbers, and other information. Questions may also be asked about the employer's injury and illness prevention program. The basis for Caltrans' program is the *Caltrans Safety Manual*. The employer will be asked for permission to make a walk-through inspection of the site, and the employer will be invited to accompany the inspector.
- Walk-through Inspection — the inspector will tour the site observing the work in progress, the condition of the site, and the work practices being followed. Employees may be interviewed concerning the training they have received, work procedures, and protective equipment they are using. The inspector may take photographs and measurements during the inspection. If this is a post-accident investigation, witnesses will be identified and interviewed. Witness contact information, such as name, address and telephone number, may be requested. The inspector will identify any violations that are observed. Any such violation probably will become a citation during the closing conference.
- Closing Conference — after the walk-through inspection has been completed, the inspector will meet with management, supervisors, and employee representatives to discuss the violations and any proposed citations. Citations may be based on the inspector's observations and also on statements made by managers, supervisors, and employees. This conference may be held immediately after the walk-through inspection or may be deferred. Although this conference is usually conducted in person, it may sometimes be conducted by telephone.

In the event of an inspection, residential engineers and their assistants should do the following:

- Opening conference — notify the construction safety coordinator that Cal/OSHA is planning to make an inspection. If the construction safety coordinator is not available, notify the district safety officer of the pending inspection. At the same time, notify the construction engineer. If the construction safety coordinator or safety officer can arrive in a reasonable length of time, request that the walkthrough inspection be delayed pending their arrival. The resident engineer or representative must participate in the inspection. The construction engineer should participate.

- Walk-through inspection — Participate and document the inspection. Record what areas were inspected, who was interviewed, and what violations were mentioned by the Cal/OSHA inspector. If the inspector takes photographs, take the same photograph for Caltrans records. Also, if any measurements are taken, independently take the same measurements.
- Closing conference — the resident engineer must participate in the closing conference, and the construction engineer or a representative (other than the resident engineer) should participate. If the district safety officer or construction safety coordinator is not present, insist that the closing conference be delayed until the district safety officer is present. If citations are proposed, remain open and noncommittal.

### **15.5 Safety Training**

The Construction Safety Coordinator is responsible for administering the construction safety training program. This mandatory training must take place at a frequency of a minimum of four hours per employee per year and must be included in the district's annual training plan. Safety training will include orientation training to all employees at the time of their first assignment to construction. Employees returning to construction following an absence of five years or more must also receive safety orientation training.

The contractor responsible for lead abatement must provide a safety training program that meets the requirements in Section 1532.1, "Lead," of the Construction Safety Orders. Before performing any yellow traffic stripe and pavement marking removal, personnel (including Caltrans employees) who have had no prior lead training must complete the safety training program.

### **15.6 Site Security Plan**

Many construction activities and areas have a tendency to attract onlookers. Resident engineers and assistant resident engineers must be aware of these potential hazards to the general public and potential risk of theft and work with the contractor to take reasonable precautions to exclude the public from the construction area. Fencing, if practical, and "no trespassing" signs should be provided at all sites that may be potentially dangerous or contain valuable assets.

The integrated team will develop a site security plan to document safety and security planning site security plan, possibly including such items as restricted parking near vulnerable structures, physical barriers (fences, barricades, etc.), coordinated efforts with local law enforcement officials during heightened threat levels, video surveillance, alarm systems, emergency telephones, etc.

### **15.7 Emergency Preparedness, Incident Management Plan, and Reporting**

Chapter 19, "Special Reporting of Serious Injury, Illness, or Fatality," of the Caltrans Safety Manual provides detailed guidelines for reporting and dealing with accidents and major incidents on construction projects. The following sections outline guidance presented in Chapter 2 of the Caltrans Construction Manual.

## Reporting Procedures

Construction personnel will immediately report all reportable accidents and major incidents to the district dispatch center, or when this center is closed, to the headquarters Highway Information Center. Construction personnel should use Form CEM-0603, "Major Construction Incident Notification," to fax an initial report to the Office of Safety and Health in the Division of Administrative Services, the Division of Construction, and the district construction safety coordinator. When necessary, construction personnel can also use Form CEM-0603 to fax an updated report providing supplementary information. The following are descriptions of reportable accidents and construction incidents:

- Accidents resulting in serious injury to a contractor's employee.
- Accidents involving death or serious injury to a state or a consultant employee or resulting in the death of a contractor's employee.
- Accidents involving serious damage to equipment owned by Caltrans, by a consultant, or by the contractor.
- Accidents resulting in the serious injury or death of a member of the public within the construction zone, or influenced in any manner by construction related activities, conditions, equipment, or personnel.
- All catastrophic types of accidents or accidents receiving wide media coverage.
- Accidents with no injuries, but with a high potential for being fatal or disabling.

These accidents include falsework or guying system failures, overturned cranes, high-voltage power line contacts, trench excavation or shoring failures, gas or fuel line fire or explosions, hazardous utility breaks, and collisions with structures under construction or their supporting falsework that cause displacement of a major member.

## Major Construction Incidents

### Unusual or Extraordinary Construction Occurrences to Be Reported

Unusual or extraordinary construction occurrences are reportable incidents that may not be classified as accidents. Examples of these incidents include the following:

- Disasters that result in major damage to a state facility or project work.
- Situations that result in the evacuation of the project, the immediate area, or both.
- Any other events that affect the state facility or project work and may generate media coverage.
- Encounters of previously unknown hazardous waste on a construction project.
- A hazardous spill on a roadway within construction project limits.
- Any incident causing major traffic delays.
- Unanticipated damage to historic buildings.

### Highway Closure Notification

Report to the district dispatch center or the traffic management center any situation that requires unplanned closures of traffic lanes or the highway. In advance, report routine

planned lane closures to the district dispatch center or the traffic management center as required by district policy. If the contractor cannot remove a lane closure by the specified pickup time, notify the district dispatch center or the traffic management center as soon as possible. Provide accurate information to allow the traffic management center to notify the California Highway Patrol, the media, and the public of possible delays.

### **Guidelines for Major Construction Incidents**

For all accidents occurring in construction zones, the resident engineer should take sufficient photographs or videotapes to document the conditions that existed at the time of the accident, including all signing and traffic control features that may have been in effect at the time of the accident. Depending on district policy and the nature and severity of the accident, additional documentation may be required. For additional information on accident investigation and documentation, consult the construction safety coordinator.

Caltrans construction personnel responding to major incidents in construction zones must do the following:

- Take appropriate action without jeopardizing public or employee safety.
- Provide timely and accurate information to management to document the extent of the incident and identify major issues and current actions.
- Restore the transportation facility to full operation as quickly as possible in the event of a closure or restriction.
- Minimize or mitigate the effect on the public or the project caused by unusual or extraordinary occurrences.

Information on the procedures to follow in the event of hazardous waste encounters or hazardous spills, see Section 7-106, "Environmental Hazards and Safety Procedures," of the *Construction Manual* (manual). The contractor must have a contingency plan for reopening closed traffic lanes. See Section 3-704B, "Contingency Plans for Reopening Lane Closures," of the manual.

The district construction deputy director must activate a construction incident response team when warranted by the sensitivity and severity of a major incident. The team's principal purpose is to provide information to Caltrans managers and the media. The team enables the resident engineer to focus on restoring the transportation system, the project, or both. The team may also advise the resident engineer on technical matters.

The construction engineer heads the team, which may also include the following personnel:

- A representative of the district public relations staff, depending on the media interest.
- Technical personnel from other functional areas such as safety, traffic, structures, design, or environmental, as required by the situation.

## **15.8 Employee Identification System**

Prior to the beginning of the construction phase of the Project, a system of identification for all employees on the construction site will be developed and implemented. Full detail will appear in future versions of the Project Management Plan.

## 16.0 TRAFFIC MANAGEMENT

Caltrans requires a Traffic Management Plan (TMP) for all projects or activities that occur on the State Highway System.<sup>6</sup> A TMP uses effective applications of traditional traffic mitigation strategies and an innovative combination of public and motorist information, demand management, system management, alternative route strategies, and construction strategies to minimize project-related traffic delays and accidents.

Currently, the Project Development Team has completed a Draft TMP (July 2007) for the Doyle Drive Replacement Project. The Draft TMP analyzes existing conditions and addresses construction-period traffic impacts in the project vicinity that are associated with the construction of the Preferred Alternative, the Refined Presidio Parkway. The objectives of the Draft TMP are to ensure adequate highway capacity to meet project area travel demand during the construction period, minimize disruptions to travelers while preserving efficient and safe movement of traffic throughout the transportation system, maintain transit service in the project vicinity, and inform the public of potential impacts.

The following is a summary of key findings based on the results of the Draft TMP:

- Coordination is required so that the Doyle Drive Project will not conflict with implementation of any concurrent construction projects in the project vicinity.
- Impacts due to construction of the Doyle Drive Project are not expected to significantly impact existing traffic conditions and local residents. In most of the corridor, the existing number of travel lanes will be maintained in both directions.

A detailed TMP will be developed during the Plans, Specifications, and Estimate (PS&E) phase for the project. The detailed TMP will include lane and freeway closure charts and calculations, connector and ramp closure charts and calculations, local roadway closure charts and calculations, construction detour plans, and delay cost calculations.

### 16.1 Traffic Control Development

It is Caltrans policy that a traffic control plan be included in all contract plans and special provisions. Traffic control systems conform to the *Standard Plans*, unless the contract specifies otherwise. All signs, lights, and devices conform to Section 12, "Construction Area Traffic Control Devices," of the *Standard Specifications*. Application of the devices on the traffic control system will conform to the *California Manual on Uniform Traffic Control Devices (California MUTCD)*<sup>7</sup>.

The construction of the Refined Presidio Parkway Alternative is scheduled to last roughly four years. Construction activities will require the development of alternate routes for

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<sup>6</sup> Deputy Directive (DD) 60: <http://www.valleyair.org/Workshops/postings/3-25-2002/caltrans/dd-60.pdf>

<sup>7</sup> California Manual on Uniform Traffic Control Devices (California (MUTCD): <http://www.dot.ca.gov/hq/traffops/signtech/mutcdsupp/pdf/camutcd/CAMUTCD-Introduction.pdf>

traffic, plans for continued transit service and bicycle and pedestrian accessibility, and outreach strategies to inform the public.

Construction staging diagrams have been developed and are provided in the Draft TMP. These diagrams indicate ramp, lane, and mainline closures, as well as describing alternate routes for vehicular traffic during construction. Of particular note are the two planned full-weekend closures of Doyle Drive, occurring at the end of Stage 1 and Stage 2 of construction.

## **16.2 Traffic Maintenance During Construction**

Traffic handling during construction would require locations in the project vicinity, such as Merchant Road through the Golden Gate Bridge Toll Plaza Visitor's area, to be monitored. Appropriate measures will be implemented to maintain an acceptable level of traffic flow.

The Doyle Drive corridor is heavily used by transit services including Golden Gate Transit, Muni, and the PresidiGo shuttle service. During the construction period, coordination with these agencies will ensure that adequate transit service will be maintained. Plans have also been developed to maintain bicycle and pedestrian routes throughout the Presidio.

Efforts to ensure that the public, media, and elected officials and agencies are adequately informed of project progress are a critical component of the TMP. Public outreach efforts include web-based information, telephone hotlines, radio announcements, flyers, and changeable message signs along area roads.

## **16.3 Roles and Responsibilities of Traffic Management Staff**

### **TMP Development and Implementation**

There are three primary individuals who are responsible for developing and implementing TMPs: the Caltrans District Traffic Manager (DTM), the TMP manager, and the construction traffic manager.<sup>8</sup> The roles and responsibilities of these individuals are described below.

#### The District Traffic Manager (DTM)

- Acts as the single focal point for all traffic impact decisions resulting from planned activities on the State highway system.
- Determines the extent of a TMP.
- Facilitates review and approval of TMP measures and planned lane closure requests.
- Directs the termination or modification of active planned lane closure operations when traffic impact becomes significant, without compromising traveler or worker safety.

#### The TMP Manager

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<sup>8</sup> <http://ops.fhwa.dot.gov/wz/practices/factsheets/factsheet11.htm>

- Acts as the single focal point for development and implementation of TMPs.
- TMP responsibility shifts from the TMP Manager to the DTM during conduct of the work. For large-scale projects, the TMP manager leads a TMP team that includes the division involved, as well as the Public Information Officer and California Highway Patrol.

### The Construction Traffic Manager

- Serves as a liaison among Construction, the DTM and the TMP Manager.
- Reviews the TMP and traffic contingency plan for constructability issues.
- Acts as a resource for the Resident Engineer, DTM and TMP Manager during TMP implementation and reviews the contractor's contingency plan.

### **Traffic Control Responsibilities and Procedures<sup>9</sup>**

The following outlines the responsibilities and procedures for each of the key personnel involved in traffic control.

#### Resident Engineer

The resident engineer has the responsibility and authority for administering the traffic control plan and all other aspects of safety on construction projects. The resident engineer may delegate the administration of traffic control to another person assigned to the project, preferably to the project safety coordinator. For the duties and responsibilities of the project safety coordinator, see Section 2-1, "Safety," of the Caltrans *Construction Manual*.

#### State Representative

Where the contract is administered by others, oversight of traffic through and around a construction zone involves overseeing and working with the local entity or private sponsor's resident engineer. The state representative assigned to the project must make sure the resident engineer performs the duties as outlined in Chapter 2, Section 2 of the Caltrans *Construction Manual*.

For all changes to the District approved traffic control plans on contracts administered by others, the State Representative will use the same review and approval process established for projects administered by Caltrans. As a last resort, the state representative has the authority to stop the contractor's operation wholly or in part or take appropriate action when public safety is jeopardized.

#### Construction Safety Coordinator

The District's construction safety coordinator must periodically review the traffic handling for each project. Some reviews should take place at night, particularly when a major traffic change has taken place. The coordinator must document these reviews in the

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<sup>9</sup> Caltrans Construction Manual, Chapter 2, Section 2-204:  
[http://www.dot.ca.gov/hq/construc/manual2001/chapter2/chp2\\_2.pdf](http://www.dot.ca.gov/hq/construc/manual2001/chapter2/chp2_2.pdf)

project records and discuss any apparent deficiencies in the traffic control plan or problems in traffic safety with the construction engineer, traffic engineer, and resident engineer. Instead of the construction safety coordinator, a specialist from the District traffic unit may perform the traffic reviews provided the required documents and discussions are included in the project records.

#### Construction Engineer

A construction engineer is responsible for ensuring that traffic handling through construction projects conforms to the specified traffic control plans. If the plans are modified by contract change order, construction engineers must take the necessary steps to ensure that the modified plans are adequate to provide the highest level of traffic safety and service consistent with the conditions actually encountered. During routine visits to the project, construction engineers should also include reviews of signing, delineation, and general traffic handling.

#### **16.4 Roles and Responsibilities of Project Team**

Specific roles and responsibilities of the project team are shown in Exhibit 16-1.

**Exhibit 16-1: Roles and Responsibilities of Project Team**

<b>TMP Measure</b>	<b>Responsible Agency</b>	<b>Action Required</b>	<b>TMP Cost</b>
Telephone Hotline/511	Caltrans	Handle complaints and provide construction information to public via telephone hotline. Provide traffic-related project information via 511.	\$130,000
Automated Work Zone Information System	Caltrans	Provide real-time traffic information on Caltrans' web site.	\$430,000
Public Awareness Campaign	SFCTA, Caltrans	Develop outreach program, setup PIO, provide project and construction information to the media (e.g., newspaper, radio, and television)	\$780,000
Construction Staging and Detours	Contractor	Establish detour routes, signing, and truck routes.	TBD @ PS&E
Contingency Plan	Caltrans, Contractor	Caltrans – Prepare Traffic Contingency Plan Contractor – Prepare Contractor Contingency Plan	TBD @ PS&E
Changeable Message Signs (CMS)	Caltrans	Activate CMSs announcing delays, detours, and upcoming construction. Message content and deployment supervised by RE.	\$170,000
Portable CMS (PCMS)	Contractor	Install PCMS throughout freeway network announcing delays, detours & construction.	\$660,000
Ground Mounted Signs	Contractor	Install ground mounted signs.	TBD@PS&E
Construction Zone Enhancement and Enforcement Program (COZEEP)	California Highway Patrol, Caltrans	Increase CHP presence during Doyle Drive and ramp closures.	\$3,390,000
Freeway Service Patrol (FSP)	GGBHTD	Provide one truck to patrol construction area during midday weekdays and weekends.	\$1,600,000
Additional Tow Trucks during Full Closure	Caltrans	Additional tow trucks provided to assist disabled vehicles and respond to incidents.	\$30,000
Traffic Monitoring Station (CCTV)	Caltrans	Relocate equipment to accommodate construction, if necessary.	\$80,000
Highway Advisory Radio (HAR)	Caltrans	Prepare and perform HAR broadcasts.	\$60,000
Extinguishable Message Signs (EMS)	Caltrans	Activate EMS during HAR broadcasts, if available.	\$140,000
Coordination with Transit Agencies	SFCTA, Caltrans	Notify Muni, GGT, and PresidiGo regarding scheduled freeway, ramp, and local roadway closures at least five working days in advance.	TBD @ PS&E
Coordination with Local Jurisdictions	SFCTA, Caltrans	Coordinate with City and County of San Francisco, National Park Service, Presidio Trust, GGHTD, and Caltrans via construction coordination meetings. Also notify these local jurisdictions regarding scheduled freeway, ramp, and local roadway closures in advance of planned activity.	TBD @ PS&E
Additional Full Closure Costs	SFCTA, Caltrans	Intense public and media outreach to inform regional transportation users of closures, alternate routes, and transit services (ferries, buses, etc.).	\$4,000,000
<b>Total</b>			<b>\$11,450,000</b>

Note: Total may not add due to rounding. Dollar values presented in 2007 dollars.

## **16.5 Incident Management Plan**

The Incident Management Plan will follow the Caltrans operational procedures as outlined in the Transportation Management Center (TMC) Standardization Plan for all districts. Additionally, the following incident management strategies will be employed in the construction zone to ensure minimal traffic impacts to travelers, rapid response to incidents, and prevention of secondary incidents:

### Construction Zone Enhanced Enforcement Program (COZEEP)

The enhanced enforcement program utilizes law enforcement officers for assistance in enforcing reduced traffic speeds within the construction zone and implementing the traffic control plan for the project by providing enforcement, guidance, and emergency response support. Liaison among the TMP team, Caltrans, and the California Highway Patrol (CHP) is essential for program effectiveness.

### Freeway Service Patrol (FSP)

The FSP consists of a team of tow truck drivers who patrol certain sections of the freeway system, detect and respond to incidents, and remove minor incidents expeditiously, thereby reducing congestion and secondary incidents. On the Golden Gate Bridge, this service is provided by GGBHTD. The tow trucks are equipped with standard auto repair and towing equipment, as well as extra supplies of gasoline and water. The normal hours of operation are during the morning and afternoon commute hours and service is on certain freeways, excluding the toll bridges and approaches. During project construction, supplemental FSP would be provided as part of incident management when proper shoulders are absent.

### Traffic Surveillance

Incident detection and response is important to efficiently remove disabled vehicles or accidents as they block travel lanes and contribute to delays. Closed Circuit Television (CCTV) cameras and detector loops along the freeway corridor help detect and identify incidents, disabled vehicles, and traffic congestion. The equipment is linked by telephone cable or wireless modem to the TMC, where Caltrans and CHP staff could recommend appropriate response action such as the dispatch of the FSP. The RE shall coordinate with the TMC to obtain an updated list and status of CCTV cameras in the project vicinity.

## 17.0 PROJECT COMMUNICATIONS (MEDIA AND PUBLIC INFORMATION)

### 17.1 Program Overview

The Project Development Team has created the *Public Outreach and Communication Plan for the Pre-Design Phase*, which includes goals, issues, and strategies for communicating with the media, the public, and other stakeholders. The Project Development Team understands that proactive communication with the public and all participating interests is critical during the pre-design phase and throughout the project. By building upon the successful public involvement from the environmental phase and initiating new ideas and strategies for the design phase, the project will continue to move forward in a collaborative fashion. The end result will be a project that satisfies the goals of the participating agencies and meets the expectations of the communities that the new Doyle Drive will serve.

Communication is particularly important for the Doyle Drive Project for several reasons:

- To keep the public aware of the design activities and future construction impacts, given that the roadway is a major transportation lifeline in the Bay Area.
- To educate the public about the historic, aesthetic, environmental, architectural, construction and engineering features of the project.
- To provide timely information to the general public and elected officials on the costs, schedule and progress of the project in order to support funding needs.

The plan focuses on communication at two levels:

- Educational communications that focus on promoting the unique, world class design elements of the project and make a case for funding.
- Project-specific communications and public involvement activities tailored to the distinct stakeholders and groups with an interest in or impacted by the roadway changes, construction and potential tolling.<sup>10</sup>

The educational/promotional effort is important to ensure dissemination of information about the project features to the wider public, media and elected officials. In addition, as the general engineering work and development of the pre-design begins, it is imperative that technical issues and community and agency concerns and questions continue to be addressed and processed through a series of hands-on public involvement and other outreach activities.

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<sup>10</sup> A separate, detailed communication plan will be developed in coordination with SFCTA to specifically address potential tolling and associated outreach and education.

**Communication Program Goals**

The communication program is intended to inform the community about the project, encourage participation and solicit meaningful input for the pre-design phase, using a range of outreach tools. Key goals and strategies are highlighted below.

**Exhibit 17-1: Project Communication Goals**

COMMUNICATION TOOLS	KEY OUTREACH STRATEGIES
<ul style="list-style-type: none"> <li>○ Engage a representative cross-section of the public to help ensure the project continues to be designed in a collaborative manner</li> <li>○ Facilitate consensus on design issues and construction planning</li> <li>○ Promote/raise awareness about the project, including the innovative world-class design, the extensive sustainable features and the need for funding</li> </ul>	<ul style="list-style-type: none"> <li>○ Establish an open and balanced process</li> <li>○ Link public participation to the design process so valuable input is provided at important milestones</li> <li>○ Provide clear and accurate information that encourages informed public participation and input</li> <li>○ Provide multiple means through which people can participate in or learn about the project</li> <li>○ Use creative messages, materials and other approaches to reach people who do not typically follow transportation issues</li> </ul>

**Key Audiences**

The Authority considers everyone who lives, works, plays and commutes through the Doyle Drive project area, or has some involvement or oversight in how the roadway operates, to be an important audience for this project. Key audiences include:

- Local, state, and federal elected officials
- Local, regional, and state public agencies
- General public
- Media – print and broadcast
- Special interest – The Presidio, destinations, historic interests, environmental, business, neighborhood associations, urban planning, commuters.

These audiences cover a broad spectrum of people and require different approaches to reach and involve them, which are described in the *Public Outreach and Communication Plan for the Pre-Design Phase*.

**17.2 Communication Materials**

To support the outreach and communication activities described in this plan, the Authority will provide communication and educational materials, including the following:

## **Website**

Redesign of the Project website ([www.doyledrive.com](http://www.doyledrive.com)) is planned. The redesign will focus on the Project design and construction activities and to match the current, more updated project collateral. The website will continue to provide regular and current updates on Project developments, and serve as the portal for meeting notices, presentations and other outreach materials. The Project documents prepared during the environmental process will be stored in the website archives. The public will continue to be able to submit comments or questions through the website.

## **Fact Sheets**

Fact sheets will be developed as needed throughout the Project. These updates will serve as tailored, current information pieces that highlight key project topics and will be used primarily for supporting the community briefings and public workshops. Proposed topics include a Project overview, geotechnical investigation activity, construction staging, sustainability, protection measures for historic resources, and design details/aesthetics. The Authority anticipates producing up to four fact sheets.

## **Workshop Notices**

The Project Development Team prepare and mail notices of public workshops to all entries in its database and other interested parties to help generate public interest in the Project.

## **Media Relations**

Media relations efforts will be conducted to help inform the community and manage the Project's public profile. These efforts will focus on:

- Providing Project materials and up to four press releases to print and broadcast media to promote activities and meetings and air stories regarding the Project.
- Providing media kits and public service and calendar announcements to the media, as appropriate.
- Submitting project overview articles to local newsletters and alternative papers, as appropriate.

## **17.3 Public Information Team**

The Authority will continue to engage the community, receive input and make consensus-based decisions on key issues throughout the life of the Project. The public outreach activities for the pre-design phase will focus on receiving input on targeted issues such as design details, aesthetics, sustainability and construction staging -- rather than the wide range of input solicited during the environmental process.

**Committee Coordination**

Technical and policy-level coordination and direction occurs regularly through the Authority Board of Directors and a series of advisory committees. Input from all of these entities shapes the information provided to the public during public workshops and neighborhood and citywide outreach activities. Comments from the public, in turn, are considered by the Authority at every step of the project. The graphic below shows the overall process the Authority follows to seek and incorporate direction and public comment into the development of the project.

**Exhibit 17-2: Communication Review and Input Loop**



Full detail on the communications plan for the project is available in the attached *Public Outreach and Communication Plan for the Pre-Design Phase*.

## 18.0 CIVIL RIGHTS PROGRAM

Title VI of the 1964 Civil Rights Act states, “No person shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.” Title VI prohibits recipients of Federal funds from actions that reflect “intentional discrimination” or that exhibit “adverse disparate impact discrimination” on the basis of race, ethnicity or national origin.

### 18.1 Program Overview

In addition to Title VI of the Civil Rights Act, the following Presidential Executive Orders and related statutes fall under the umbrella of Title VI. Presidential Executive Order 12898 addresses environmental justice in minority and low-income populations. Presidential Executive Order 13166 addresses services to those individuals with limited English proficiency. The rights of women, the elderly and the disabled are also protected under related statutes.

Federal-aid recipients, sub recipients and contractors are required to prevent discrimination and ensure nondiscrimination in all of their programs, activities and services whether these programs, activities and services are federally funded or not. The California Department of Transportation Civil Rights Title VI Coordinator is responsible for providing leadership, direction and policy to ensure compliance with Title VI of the 1964 Civil Rights Act and environmental justice principles.

### 18.2 Program Goals

Caltrans, as the recipient of Federal aid, established Title VI Program goals and measurements to attain nondiscrimination in all of its operations. The Five Title VI goals for preventing discrimination in a Federal-Aid Program as outlined by the Caltrans are:

- **Goal 1** – Create, implement and maintain a Title VI Interdisciplinary Team. The Title VI Interdisciplinary Team is a coordinated and cooperative effort by functional programs and civil rights specialists to ensure Title VI and related statute requirements are identified and considered in advance of any decision-making activity.
- **Goal 2** – Create awareness of statutory non-discriminatory requirements. This goal is accomplished by disseminating statutes/regulations via a Title VI Resource Directory and educating staff through training and presentations statewide.
- **Goal 3** – Establish a systematic and on-going public involvement process that engages communities affected by transportation projects.
- **Goal 4** – Identify potential discriminatory impacts early. Early detection can often minimize and reduce negative impacts to minority and low-income populations and delays to project delivery.
- **Goal 5** – Avoid, eliminate or minimize adverse impacts. Transportation agencies may encounter some situations where negative impacts are unavoidable. In

these situations, Transportation agencies must work with communities to develop mitigation measures to minimize impact.

Refer to the Civil Rights Title VI Program Plan, Annual Title VI Element Update and Brochures and Resource Directory or Guidelines for more details.<sup>11</sup>

### **18.3 Small Business Enterprise (SBE)**

The Small Business Procurement and Contract Act, as defined in the California Government code, Section 14835<sup>12</sup>, was enacted in 1973 to enable small businesses the same free enterprise opportunities as their non-small business-certified competitors.

The definition of small business enterprises (SBE) for the project goes hand in hand with its federal definition:

*“An SBE is a for-profit, small business concern with a three (3) year average gross revenue not exceeding \$12 million dollars and is certified under any of the following programs: the State of California’s Small Business Program with the Department of General Services (“State Program”), the City and County of San Francisco’s LBE Program (“City Program”), or the California Unified Certification Program (“Federal DBE Program”).”*

State law allows certified small business (SB) and microbusiness (MB) firms and non-small businesses who subcontract with a certified SB/MB firm to receive a 5% bidding preference on applicable state solicitations<sup>13</sup>. The effect of the preference is to help SBs/MBs be more competitive in the bid process, thereby enhancing state contract awards directly or indirectly to SB/MB. The preference is only used for computation purposes to determine the winning bidder, and the contract is awarded at the actual bid amount.

### **18.4 Disadvantaged Business Enterprise (DBE)**

In order to continue receiving federal transportation funds, the California Department of Transportation must submit an overall annual goal for FHWA approval and demonstrate an overall goal for DBE participation whether or not it implements race or gender conscious measures to achieve that goal. As a result, Caltrans had commissioned BBC Research & Consulting to conduct a DBE Program Availability and Disparity Study Report<sup>14</sup>.

It is also the policy of the Caltrans that DBEs have the maximum feasible opportunity to participate in the performance of contracts financed in whole or in part with Caltrans funds. The Caltrans and its employees shall not discriminate on the basis of race,

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<sup>11</sup> [http://www.dot.ca.gov/hq/bep/title\\_vi/t6\\_prog\\_overview.htm](http://www.dot.ca.gov/hq/bep/title_vi/t6_prog_overview.htm)

<sup>12</sup> <http://www.leginfo.ca.gov/cgi-bin/waisgate?WAISdocID=21675423692+0+0+0&WAIAction=retrieve>

<sup>13</sup> <http://www.pd.dgs.ca.gov/smbus/sbpref.htm>

<sup>14</sup> [http://www.dot.ca.gov/hq/bep/study/disparity\\_study.htm](http://www.dot.ca.gov/hq/bep/study/disparity_study.htm)

national origin, color, religion, sex, sexual orientation, age, or disability in the award and performance of Caltrans contracts.

In March 2009, Caltrans released statements directing local agencies receiving federal-aid funds, including the San Francisco County Transportation Authority, to return to the development of a race-conscious Disadvantaged Business Enterprise (DBE) program. Between 2006 and 2009, Caltrans had issued guidance directing the development of race-neutral DBE programs. The first step in the Authority's implementation of the race-conscious DBE program was the adoption of a new DBE Program Implementation Agreement. This Agreement states that the Authority will develop a race-conscious DBE goal for federal fiscal year 2009/10, and, from June 2, 2009 until this new goal is adopted by Caltrans, develop a race-conscious goal for each federal-aid procurements undertaken by the Authority.

### **18.5 Disabled Veteran Business Enterprise (DBVE) Participation Program**

The Disabled Veteran Business Enterprise (DVBE) Participation Program was established to acknowledge disabled veterans for their service and to increase DVBE participation in state contracting, promote competition and encourage greater economic opportunity.<sup>15</sup>

The established state DVBE participation goal is at least three percent. The goal applies to the total contract dollars expended each year by an awarding department. Each state agency establishes their own method for attaining the goal and they have the discretion to include the program goal within individual contracts. State agencies are required to report to the governor and the legislature their total DVBE contracting participation on an annual basis. If the minimum three percent goal is not met, the state agency must provide an explanation for not meeting the goal and an implementation plan for future DVBE participation improvement. They may also be required to stand before a legislative panel to further clarify their results and efforts.

As of October 2007, The Department of General Services (DGS) established a DVBE incentive pursuant to Senate Bill 115 (2005)<sup>16</sup> and the Military and Veterans Code section 999.5(a). The DVBE incentive is required in solicitations that include DVBE program requirements and each state agency is encouraged to incorporate the use of the DVBE incentive into their plan or strategy to ensure achievement of at least three percent DVBE participation on their total contract dollars.

### **18.6 Good Faith Effort**

For each applicable contract, prime contractors must achieve the minimum DVBE participation goal or demonstrate they made a "Good Faith Effort" to achieve

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<sup>15</sup> <http://www.pd.dgs.ca.gov/dvbe/default.htm>

<sup>16</sup> <http://www.pd.dgs.ca.gov/dvbe/dvbeincentive.htm>

participation. The law intends DVBE participation, however should a bid be submitted with less than minimum participation, to be program responsive the prime contractor must make and document their efforts to attain participation.

The five legally defined "Good Faith Effort" steps are:

Contact was made with the awarding department to identify DVBEs.

- Contact was made with other state and federal agencies and with local DVBE organizations to identify DVBEs.
- Advertising was published in trade papers and papers focusing on DVBEs, unless time limits imposed by the awarding department do not permit that advertising.
- Invitations to bid were submitted to potential DVBE contractors.
- Available DVBEs were considered.

### **18.7 Environmental Justice**

Caltrans issued a final DOT Order to comply with Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. The Order provides that the Office of the Secretary and each Operating Administration within DOT will develop specific procedures to incorporate the goals of the DOT Order and the Executive Order with the programs, policies and activities which they administer or implement.

### **18.8 Limited English Proficiency (LEP)**

Individuals who do not speak English as their primary language and who have a limited ability to read, speak, write, or understand English can be limited English proficient. To ensure protection of Title VI of the Civil Rights Act of 1964 and related regulations, Executive Order 13166 – “Improving Access to Services for Persons With Limited English Proficiency” was signed in August 2000. The Order prohibits recipients of Federal financial assistance from discriminating based on national origin by failing to provide meaningful access to service to individuals who are LEP. These protections require that LEP persons be provided with an equal opportunity to benefit from or have access to services that are normally provided in English.

Some of the factors constituting reasonable steps to ensure meaningful access will consider:

- The number or proportion of LEP persons in the eligible service population,
- The frequency with which LEP individuals come in contact with the program,
- The importance of the service provided by the program,
- And the resources available to the recipient.

### **18.9 Title VI Requirements for all Programs**

All potential Title VI issues and guidelines for various programs can be found at:  
[http://www.dot.ca.gov/hq/bep/title\\_vi/t6\\_guidelines.htm](http://www.dot.ca.gov/hq/bep/title_vi/t6_guidelines.htm).

## 18.10 Authority

The Federal laws prohibiting job discrimination are:

- Title VII of the Civil Rights Act of 1964 (Title VII), which prohibits employment discrimination based on race, color, religion, sex, or national origin;
- The Equal Pay Act of 1963 (EPA), which protects men and women who perform substantially equal work in the same establishment from sex-based wage discrimination;
- The Age Discrimination in Employment Act of 1967 (ADEA), which protects individuals who are 40 years of age or older;
- Title I and Title V of the Americans with Disabilities Act of 1990 (ADA), which prohibit employment discrimination against qualified individuals with disabilities in the private sector, and in state and local governments;
- Sections 501 and 505 of the Rehabilitation Act of 1973, which prohibit discrimination against qualified individuals with disabilities who work in the federal government; and
- The Civil Rights Act of 1991, which, among other things, provides monetary damages in cases of intentional employment discrimination.

The U.S. Equal Employment Opportunity Commission (EEOC) enforces all of these laws. EEOC also provides oversight and coordination of all federal equal employment opportunity regulations, practices, and policies.

Other federal laws, not enforced by EEOC, also prohibit discrimination and reprisal against federal employees and applicants. The Civil Service Reform Act of 1978 (CSRA) contains a number of prohibitions, known as prohibited personnel practices, which are designed to promote overall fairness in federal personnel actions. 5 U.S.C. 2302. The CSRA prohibits any employee who has authority to take certain personnel actions from discriminating for or against employees or applicants for employment on the bases of race, color, national origin, religion, sex, age or disability. It also provides that certain personnel actions can not be based on attributes or conduct that do not adversely affect employee performance, such as marital status and political affiliation. The Office of Personnel Management (OPM) has interpreted the prohibition of discrimination based on conduct to include discrimination based on sexual orientation. The CSRA also prohibits reprisal against federal employees or applicants for whistleblowing, or for exercising an appeal, complaint, or grievance right. The CSRA is enforced by both the Office of Special Counsel (OSC) and the Merit Systems Protection Board (MSPB).

## 18.11 Additional Outreach Sources

San Francisco Chamber of Commerce, Small Business Programs:  
<http://www.sfchamber.com/>

Small Business Advisory Council: <http://www.sfchamber.com/SBAC/index.htm>

San Francisco Small Business Commission: [http://www.sfgov.org/site/sbc\\_index.asp](http://www.sfgov.org/site/sbc_index.asp)

San Francisco Small Business Network: <http://www.sfsbn.org/members/index.htm>

Small Business Resource Guide:  
[http://sfmerchants.com/merchant\\_associations/sfcdma/resources.htm](http://sfmerchants.com/merchant_associations/sfcdma/resources.htm)

## 19.0 CLOSEOUT PLAN

The systematic and orderly closeout of the Project will be the final element of the project life cycle and one of the project components most susceptible to unsatisfactory completion. Combinations of factors are generally responsible for the failure to complete project closeout in a timely manner. These factors are:

- Need to accomplish other higher priority activities,
- Lack of resources, and
- Poor activity tracking.

These factors frequently result in lack of urgency for completing these final, but still important, project activities.

In order to focus on project closeout activities and ensure timely completion, the Project Leadership Team will keep the closeout activities within the Project's work plan until they are complete.

### 19.1 Closeout Requirements

The Project will utilize the Caltrans formalized closing processes for projects and specific project components to assure bringing projects to an orderly end. The Caltrans policies and procedures for closing our projects and specific project components are detailed in various Caltrans manuals and guidance documents. Some of these manuals and guidance documents are: *(not an all-inclusive listing)*

- *Project Development Procedures Manual* (Chapter 15, Final Project Development Procedures)
- *Construction Manual* (Chapter 5, Contract Administration)
- Implementing Agency Responsibilities For Projects on State Highways (Section Titled: Close-Out of Each Component)
- Local Assistance Procedures Manual (Chapter 17, Project Completion)
- *Project Management Handbook* (Section Titled: Project Processes)

The Project Leadership Team will, in addition to developing specific procedures for the Project, ensure that current Caltrans policies and procedures are followed during the Project's life cycle.

#### 19.1.1 Project Approval and Environmental Document (PA&ED) Component

At the completion of PA&ED the implementing agency, San Francisco County Transportation Authority (Authority) will provide a set of project documents filed in accordance with the Uniform Filing System (Chapter 7 of the Caltrans *Project Development Procedures Manual*).

If the Project Leadership Team has used consultants to perform work on the Project and the consultant contracts are complete, the Project will prepare a final report on

the Utilization of DBEs (Chapter 17 of the Caltrans *Local Assistance Procedures Manual*).

### **19.1.2 Plans, Specifications & Estimates (PS&E) Component**

At the completion of PS&E the Project will prepare a set of project documents filed in accordance with the Uniform Filing System (Chapter 7 of the Caltrans *Project Development Procedures Manual*).

If the Project Leadership Team has used consultants to perform work on the Project and the consultant contracts are complete, the Project will prepare a final report on the Utilization of DBEs. (Chapter 17 of the Caltrans *Local Assistance Procedures Manual*).

The Project, with the Authority as the Implementing Agency for Construction, will prepare the plans in an electronic format that is compatible with the drafting software used by Caltrans.

### **19.1.3 Right of Way (ROW) Component**

At the completion of the ROW component, the Project will prepare:

- A Report of Completion of Right of Way Expenditures
- A parcel list, monumentation map (Record of Survey) and final right of way Record Maps with electronic files.
- Certification of relinquishments, vacations, director deeds and all other final clearance and conveyance documents, maps and supporting data required for the Project.

### **19.1.4 Construction Component**

At the end of the Construction component the Project, with the Authority as the implementing agency, will prepare the following documentation:

- As-built plans and other records in accordance with the Cooperative Agreement and Local Agency Resident Engineer Guidelines for Projects on the State Highway System.
- A report on changes in horizontal and vertical clearances and Bridge Permit ratings.
- A Federal Report of Expenditures with its attachments (Chapter 17 of the *Local Assistance Procedures Manual*).
- A final report on the utilization of DBEs (Chapter 17 of the *Local Assistance Procedures Manual*).
- A close-out package, consisting of a Project Final Record Estimate, Material Certification, PR 47 (Statement of Material and Labor), and any other charges to the Project (i.e.: contract change orders, director days, dispute review board, arbitration, etc.)

### **19.1.5 FHWA Close-Out Process**

The FHWA closeout process for “Full Oversight” projects involves a six-step process:

- 1 The Project’s Resident Engineer or Oversight Engineer forwards the Project’s closeout package to the FHWA.
- 2 The FHWA will conduct a final inspection of the Project at or prior to receipt of the closeout package.
- 3 The FHWA Engineer will complete a Project Final Acceptance Report (FA) on Form 1446A. The FHWA Engineer will use the Final Acceptance Checklist to assure that correct documentation is in files. The FHWA Engineer will send a copy of PR 47 to FHWA Headquarters. Any ineligible costs and/or liquidated damages not already addressed in the FA (per FHWA determination) will be documented on a Federal-aid Ineligible Notice.
- 4 The FHWA Engineer will add applicable information into the Project Tracking system throughout the life of the Project.
- 5 The FHWA will furnish a copy of the Final Acceptance Report (and FIN if applicable) to FHWA Finance to allow payment of the final voucher.
- 6 FHWA Finance alerts the FHWA Engineer that Project records (Pre and Post) are being sent to archives.

### **19.2 Excess Property**

The acquisition of ROW may include property that is no longer required at the end of the Project. All anticipated ROW for the Project is expected to be obtained by Caltrans, through the FHWA as a Federal Land Transfer, and no excess acquisitions are expected. However, at this stage of development, the Project must plan for the unexpected.

Assuming that all Project ROW is, as expected, acquired through the FHWA as a Federal Land Transfer, it is assumed that any excess acquisitions would be disposed of through a direct conveyance to another governmental agency for public use. It is further assumed that if such a method of disposal is required, that compensation for the excess acquisition would be consistent with the manner of acquisition by Caltrans. If no payment was made by Caltrans in connection with the original Federal Land Transfer then no payment would be received in connection with the excess acquisition disposal.

In the event that additional Project ROW acquisitions involved privately owned property and such property, at the end of the Project is determined to be excess, disposal will be in compliance with the policies and procedures set forth in Chapter 26, Section 5 of the Caltrans *Project Development Procedures Manual*.

### **19.3 Project History File and As-Built Plans**

After completion of the Construction component of the Project, the last activity of the Project closeout process to be completed will be the preparation of the Project History File. The Project History File and As-Built plans are a record of how public funds were

expended throughout the Project's life cycle – from the System and Regional Transportation Planning component through the Construction component. The As-Built plans represent the existing field conditions at the end of the Project.

Accurate Project records are necessary for the following purposes:

- Potential litigation involving construction claims and tort liability suits,
- To document changes that occurred during the Project's life cycle,
- Provide a reference to what the existing conditions should be, and
- To serve as an existing information base needed for developing a future project.

The records in the Project History File will be those identified in the Caltrans *Project Development Procedures Manual*, Chapter 7, Uniform File System and the *ROW Manual*, Chapter 5, Project Records and Reports.

#### **19.4 Project Closeout Checklist**

Before beginning the Construction component of the Project, Caltrans will develop a Project-specific Closeout Checklist that will incorporate all closing processes into a checklist format that will reflect whether required actions have been completed, pending, or not required.

The Project work plan will not be closed out until the checklist has been completed and all required activities have been completed.

## 20.0 PROJECT DOCUMENTATION

### 20.1 General Guidelines

#### 20.1.1 Project Development Phase

The document control policies and procedures, for the South Access to the Golden Gate Bridge: Doyle Drive Project (Project), establishes a means of records management, retention, and control for project-related documentation. The basis for the Project's document control during the development phase will be the Uniform File System as set forth in Chapter 7 of the Caltrans *Project Development Procedures Manual* (PDPM).

Local agencies and consultants will use the Uniform File System classification scheme for any records exchanged with Caltrans.

Items will be classified and filed according to the source that generated them, rather than by subject. Because documentation can cover more than one project issue, filing by subject can result in duplication of materials because the documentation needs to be updated for all relevant subject areas.

The Project is a "Major Project", by FHWA definition, and, as such, can be expected to generate sufficient correspondence and/or documentation in some categories to warrant the development of subcategories. Discretion should be exercised when developing sub-categories for filing purposes.

#### 20.1.2 Project Construction Phase

During the Construction Phase of the Project, the basis for the Project's document control will be the uniform filing system set forth in Chapter 5, Section 5-102 of the Caltrans *Construction Manual*.

The construction uniform filing system uses numbered categories for filing project documentation.

### 20.2 Project Filing System

In conformance with the general guidance set forth in Chapter 7 of the Caltrans *PDPM*, no master index of the Project's files has been developed. A master index may be developed and incorporated as an appendix to this PMP if the scope and complexity of the Project warrants such an action. The Project's management team will periodically review and assess the need for such an index.

The procedures set forth in the Caltrans *PDPM* and *Construction Manual* are detailed and complete and considered sufficient for the Project at this stage of development. A Project-specific document retention and controls procedure may be necessary as the Project evolves. The Project's management team will periodically review and assess the

need for such a procedure and, if determined necessary, will incorporate the procedure as an appendix to this PMP.

### **20.3 Project History File**

A Project History File will be compiled for the Project when completed. The file will consist of selected project development records and final project construction records and will include all letters, memos, reports, etc. that document project decisions or would be useful in developing a subsequent project. Chapter 7, Section 2 of the *PDPM* identifies those project development records that will be included in the Project History File.

The completed Project History File will be permanently filed in a central file location.

### **20.4 ProjectSolve2 Project Documentation Role**

ProjectSolve<sup>2</sup> (PS<sup>2</sup>) is a secure, internet-based application that allows all members of the Project team to electronically communicate easily regardless of location. PS<sup>2</sup> also serves as a secondary repository of electronic copies of important Project-related documentation and allows all designated Project team members to access appropriate documentation as required. The secure login and document access control features allows the Project management team to restrict document access to properly authorized personnel.

All team members and stakeholders have access to the Project's PS<sup>2</sup> website.

PS<sup>2</sup>, as an component of the Project's overall communications strategy, is discussed in greater detail in Chapter 9, Internal and Stakeholder Communications, and Chapter 17, Project Communications (Media and Public Information), of this PMP.

## 21.0 UTILITY RELOCATIONS

Local agencies which will be actively involved in right of way acquisition and relocation must comply with the Uniform Relocation Assistance and Real Property Acquisition Policy Act of 1970 as amended in 1987 (the Uniform Act). This law can be found in the Caltrans *Right of Way Manual*, the FHWA *Project Development Guide* (see Appendices A and B) and at Section 49 of the Code of Federal Regulations (CFR) Part 24.

Pursuant to the Uniform Act, the Project Team will follow the approved Caltrans procedures for Utility Relocations as defined in Chapter 13 of the Caltrans Right of Way Manual and Chapter 14 of the Local Assistance Procedures Manual.

### 21.1 Overview

The existing utilities within the Doyle Drive corridor include Presidio Trust storm water drainage, sanitary sewer, natural gas, water, communication, and electricity. Portions of all of these utility systems would be relocated prior to, or during, reconstruction of the Doyle Drive facility. The majority of the utilities cross the Doyle Corridor, but are not part of this project. During the construction of the tunnels, which is proposing cut and cover methods, temporary utility systems would be provided for continued service during construction. Where appropriate, relocated utilities will be replaced above the completed tunnels.

The condition of the existing utility system varies greatly. Parts of some systems are very old and in poor condition, while others have recently been replaced or repaired by the United States (US) Army, NPS, or the Trust. The Trust has an on-going program to upgrade utility systems, and plans to repair or replace some of the utilities within the Doyle Drive corridor in the near future. The Trust also has plans to develop a water recycling facility within the project limits near Girard Road and Gorgas Avenue. At present, there are no approved plans for the recycling system; however, a Draft Environmental Assessment was circulated.

Comments were provided to the Trust requesting future coordination to address and coordinate the needs of both projects. Utility agreements will be necessary for both facilities owned by PG&E and the Trust. PG&E owns the gas and electric utilities. The Trust owns the remainder of the utilities, including storm water drainage, within the project corridor. Initial contact with the Trust determined that the Doyle Drive Project would be liable for the costs of all project related utility relocations. The Right of Way Data Sheets in Attachment H of the Draft Doyle Drive Project Report (February 2008) identify the owners of public utilities within the project corridor.

### 21.2 Mitigation of Utility Impacts

Preliminary utility relocation plans (for non-State owned facilities) for each of the build alternatives are provided in Attachment I of the Doyle Drive Project Report (February 2008). A review of available existing utility information indicates the following existing companies/agencies are present in the project area:

- Presidio Trust
- Pacific Gas and Electric

Mitigation of utility impacts will be conducted during the PS&E phase prior to the commencement of Caltrans Contractor work. The three general steps to be taken following verification of existing utilities are to (1) inform the utility owners of project impacts, (2) detail the location and extent of excavation required, and (3) notify the utility owner when the utilities need to be relocated or removed by. PG&E will take responsibility for the design of utility relocations for its respective facilities. The Project Team will be responsible for the utility relocation designs for the facilities owned by Presidio Trust.

### **21.3 Master Utility Agreements**

Pursuant to State Administrative Manual 8300, et seq., and S&H Code Division 1, Chapter 1, Article 3, Section 94, the State and the Utility Owner must enter into a Utility Agreement (Form RW 13-5) whenever the State is paying or receiving payment for all or a portion of the cost of relocation of a utility facility, regardless of who performs the work.

Caltrans will prepare a Utility Agreement for each facility being relocated or adjusted by the Utility Owner or its contractor with State reimbursement of the cost or being relocated or adjusted by the State's contractor, regardless of who is responsible for the cost. The Utility Coordinator is responsible for preparing the Utility Agreement.

The Project Team, in coordination with the Presidio Trust, is currently verifying existing utilities in the project area. Agreements will move forward after verifications have been made and the project reaches the PS&E phase. The following local utility owners have been identified for utility agreements:

- PG&E Electric
- PG&E Natural Gas
- AT&T
- San Francisco Public Utilities Commission
- San Francisco Fire Department's Auxiliary Water Supply System (AWSS)
- TCI

In addition to the above, a Master Utility Agreement with the Presidio Trust is needed to cover the following facilities:

- Sanitary Sewer
- Storm Water
- Water
- Telecomm

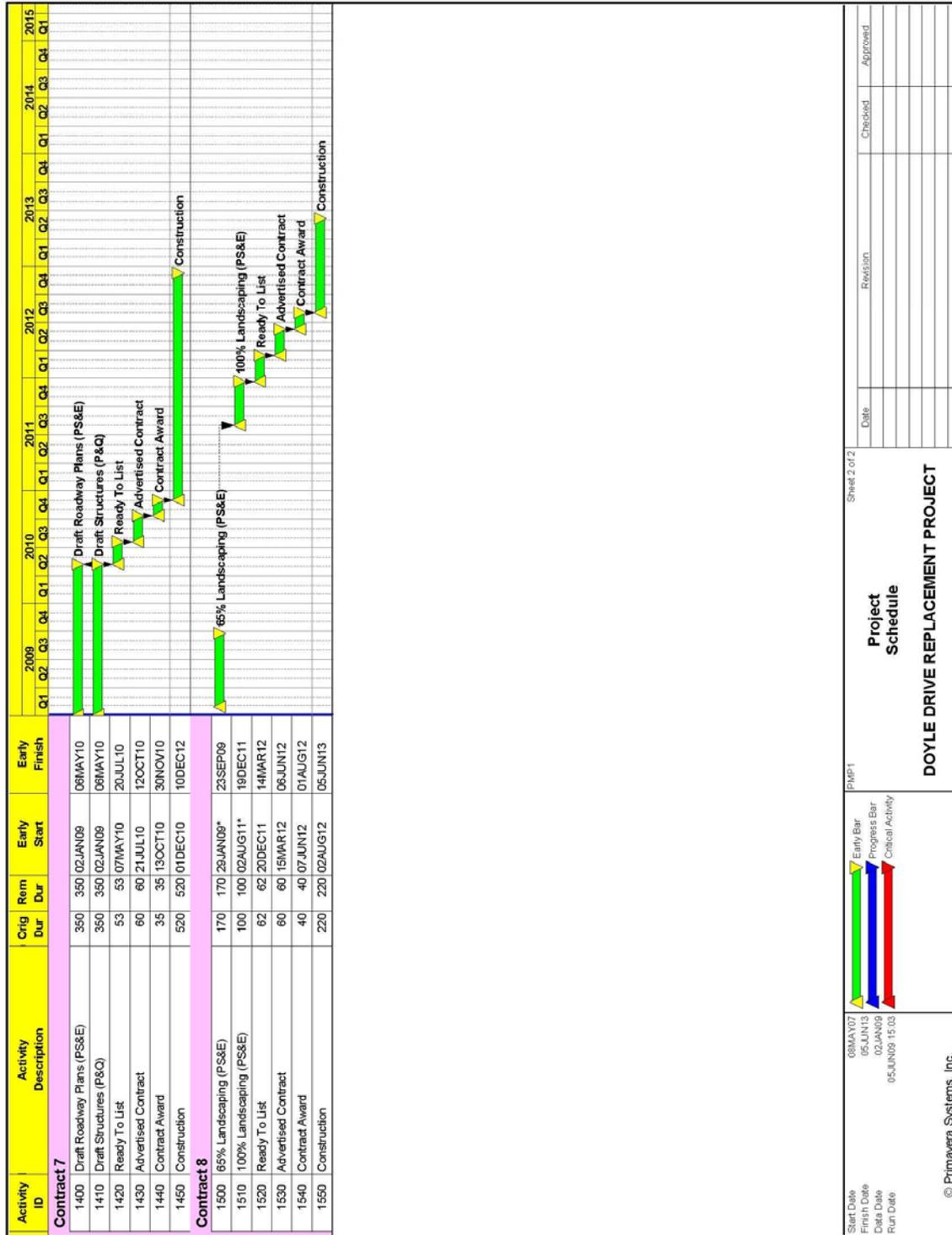
### **21.4 Utility Relocation Process**

Utility Relocations for the project will follow the Caltrans guidelines for Utility Relocation Procedures as outlined in the Caltrans *Right of Way Manual* and Section 106

procedures under the National Historic Preservation Act as they relate to ground disturbance of potential archaeological resources resulting from utility relocation. Recordation of the historic landscape will be completed prior to any utility relocation. Detailed information on the relocation procedures can also be viewed in Chapter 14 of the Caltrans *Local Assistance Procedures Manual*:  
<http://www.dot.ca.gov/hq/LocalPrograms/lpp/LPP07-04.pdf>.

1. Utility Verification
2. Identifying Conflict
3. Requesting Conflict Resolution Plan
4. Liability Determination
5. Notifying Owner
6. Right of Way Utility Clearance Memo
7. Managing the Physical Relocation
8. Managing Relocation Invoices
9. Utility Records Keeping





## 23.0 EXECUTIVE LEADERSHIP ENDORSEMENTS

The California Department of Transportation (Caltrans), the San Francisco County Transportation Authority (SFCTA) and the Federal Highway Administration (FHWA) jointly developed the South Access to the Golden Gate Bridge Doyle Drive Project Project Management Plan. It represents an overall Plan that all entities agree to accept and adopt as a general description of the management procedures to be used in implementing the Project objectives. The Plan will be periodically reviewed to ascertain if any changes are required and as the Project progresses, revisions will be issued to ensure management is meeting the Project objectives.

### **Caltrans and SFCTA approve the Project Management Plan for South Access to the Golden Gate Bridge Doyle Drive Project:**

\_\_\_\_\_  
Bijan Sartipi, District 4 Director  
California Department of Transportation

\_\_\_\_\_  
Date

\_\_\_\_\_  
José Luis Moscovich, Executive Director  
San Francisco County Transportation Authority

\_\_\_\_\_  
Date

### **Federal Highway Administration (FHWA) accepts the Project Management Plan:**

\_\_\_\_\_  
Walter C. Waidelich, Jr., Division Administrator  
Federal Highway Administration (FHWA)

\_\_\_\_\_  
Date

## **GLOSSARY of ABBREVIATIONS/ACRONYMS**

ABAG	Association of Bay Area Governments
ACHP	Advisory Council on Historic Preservation
ADTV	Average Daily Traffic Volumes
APE	Area of Potential Effects
BAAQMD	Bay Area Air Quality Management District
BCDC	San Francisco Bay Conservation and Development Commission
BMP	Best Management Practice
Caltrans	California Department of Transportation
CCA	Construction Contract Acceptance
CCSF	City and County of San Francisco
CEQA	California Environmental Quality Act
CO	Carbon Monoxide
FEIR	Final Environmental Impact Report (CEQA Document)
FEIS	Final Environmental Impact Statement (NEPA Document)
DFG	Department of Fish and Game
EPA	Environmental Protection Agency
ESA	Environmentally Sensitive Area
FEMA	Federal Emergency Management Agency
FHWA	Federal Highways Administration
FOE	Finding of Effect
GGBHTD	Golden Gate Bridge Highway and Transportation District
GGNRA	Golden Gate National Recreation Area
GMPA	Final Presidio General Management Plan Amendment
ITIP	Inter-regional Transportation Improvement Plan

LDAC	Letterman Digital Arts Center
LPA	Locally Preferred Alternative
MCE	Maximum Credible Earthquake
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MSAT	Mobile Source Air Toxics
MTC	Metropolitan Transportation Commission
MVM	Million Vehicle Miles
MVMT	Million Vehicle Miles Traveled
NPDES	National Pollutant Discharge Elimination System
NEPA	National Environmental Protection Act
NHLD	National Historic Landmark District
NOx	Nitrogen Oxides
NPS	National Park Service
PA	Programmatic Agreement
PAED	Project Approval / Environmental Document
PM	Particulate Matter
PS&E	Plans, Specifications & Estimates
PSR	Project Study Report
PTIP	Presidio Trust Implementation Plan
PTMP	Presidio Trust Management Plan
RIP	Regional Improvement Plan
RTL	Ready to List
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board

SAGGB	South Access to the Golden Gate Bridge
SFCTA	San Francisco County Transportation Authority
SF-TDM	San Francisco Traffic Demand Model
SHOPP	State Highway Operation and Protection Program
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
TASAS	Traffic Accident Surveillance and Analysis System
TCP	Traffic Control Plan
TCRP	Traffic Congestion Relief Plan
TIP	Transportation Improvement Plan
TMP	Transportation Management Plan
Trust	Presidio Trust
USACE	United States Army Corps of Engineers
USFW	United States Fish and Wildlife Service
VA	Value Analysis, Department of Veterans Affairs
VOC	Volatile Organic Compounds