

SFCTA Contract Number 99/00-7

SOUTH ACCESS TO THE GOLDEN GATE BRIDGE  
**DOYLE DRIVE**

# MITIGATION IMPLEMENTATION PLAN

San Francisco County, US101 KP 12.8-15.7 (PM 8.0-9.8) / SR1 KP10.9-11.4 (PM 6.8-7.1), EA 04-163700

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**ATTACHMENT B: DOYLE DRIVE CONSTRUCTION PHASING**

## ACRONYMS AND ABBREVIATIONS

AC	architectural criteria
ACHP	Council on Historic Preservation
APE	area of potential effect
ATP	Archaeological Treatment Plan
BETP	Built Environment Treatment Plan
Caltrans	California Department of Transportation
CFR	Code of Federal Regulations
ESA	environmentally sensitive area
FHWA	Federal Highway Administration
HABS/HAER/HALS	Historic American Building Survey/Historic American Engineering Record/Historic American Landscape Survey
HSRs	Historic Structures Reports
MIP	Mitigation Implementation Plan
MMR	Mitigation Monitoring Report
NAGPRA	Native American Graves Protection and Repatriation Act
NHPA	National Historic Preservation Act
NPS–Golden Gate)	National Park Service–Golden Gate Recreation Area
NRHP	National Register of Historic Places
PA	Programmatic Agreement
PNHLD	Presidio National Historic Landmark District
SFCTA	San Francisco County Transportation Authority
SHPO	California State Historic Preservation Officer
TOP	treatment oversight panel
Trust	Presidio Trust
Undertaking	South Access to the Golden Gate Bridge, Doyle Drive Replacement Project
VA	Veterans Administration

## SECTION 1: INTRODUCTION

This Mitigation Implementation Plan (MIP) is a communication tool for coordinating cultural resources mitigation with construction phasing of the South Access to the Golden Gate Bridge, Doyle Drive Replacement Project (Undertaking) as stipulated by the Programmatic Agreement (PA) described below. The adverse effects are identified in the Finding of Effect (December 2005) and Finding of Effect Addendum (February 2007). The MIP combines mitigation requirements described in detail in the Archaeological Treatment Plan (ATP) and the Built Environment Treatment Plan (BETP) with design and construction information to provide detailed guidance for the temporal and geographical phasing of treatment measures to be implemented. The MIP provides the schedule for preconstruction-phase treatment, treatment implemented during construction, and postconstruction treatment. This plan also includes a process for communication between the signatories and concurring parties to the PA.

Because the Undertaking has been accelerated, much of the preconstruction mitigation is in process. As stipulated in the PA, a biannual report will provide a summary of the mitigation activities and their status. Additionally, the attached table (Attachment A), which indicates treatment by resource, will also indicate the status of the mitigation at the time this MIP is distributed.

### 1.1 EXECUTIVE SUMMARY

The Federal Highway Administration (FHWA), the California Department of Transportation (Caltrans), and the San Francisco County Transportation Authority (SFCTA) propose to replace Doyle Drive, located in the Presidio of San Francisco, within the National Park Service–Golden Gate National Recreation Area (NPS–Golden Gate) and the City and County of San Francisco (Undertaking). The Undertaking consists of replacing the existing facility with a new 1.5-mile-long six-lane facility and an eastbound auxiliary lane between the toll plaza for the Golden Gate Bridge on the west, and the east end of Doyle Drive where it splits and feeds into Richardson Avenue and Marina Boulevard (Figure 1).

This Undertaking will adversely affect historic properties listed in or eligible for the National Register of Historic Places (NRHP), including the Presidio National Historic Landmark District (PNHLD) and its contributing historic resources; individually eligible Doyle Drive and its two individually eligible viaducts; and the Golden Gate Bridge as a result of the loss of Doyle Drive, which is a contributing element to the bridge. The analysis of these effects can be found in the *South Access to the Golden Gate Bridge—Doyle Drive Project Finding of Effect* (San Francisco County Transportation Authority 2005) and the *South Access to the Golden Gate Bridge—Doyle Drive Project Finding of Effect Addendum* (San Francisco County Transportation Authority 2007) (Figure 2 [APE maps])

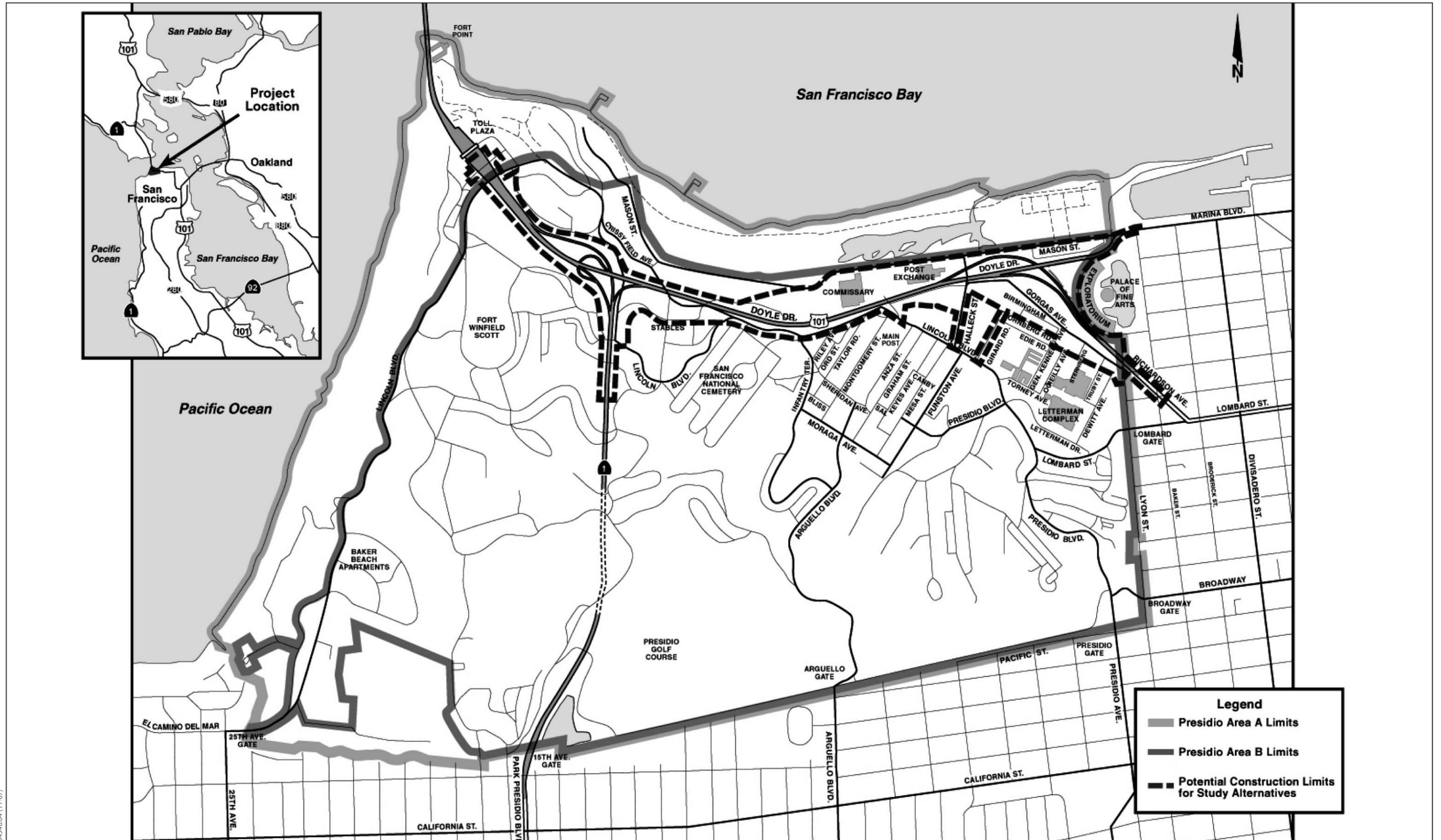
A single prehistoric archaeological site, CA-SFr-6/26, has been identified within the archaeological area of potential effects (APE) and was determined to be individually eligible for the NRHP. The construction and alignment of the new Doyle Drive will not affect the site; furthermore, the site will be protected to prevent use of the area throughout construction.

The FHWA has consulted with the California State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (ACHP) pursuant to *36 Code of Federal Regulations (CFR) 800*, regulations implementing Section 106 of the National Historic Preservation Act (NHPA) of 1966 (*16 U.S. Code 470f*) and with the Secretary of the Interior pursuant to *36 CFR 800.10* with regards to special requirements for protecting National Historic Landmarks. The Secretary has delegated authority for the purposes of commenting on the Undertaking to the National Parks Service. The Presidio Trust (Trust), as the federally appointed land manager for the areas of the Presidio within the Undertaking's designated APEs, has been consulted. The United States Department of Veterans Affairs (VA) has also been consulted because the San Francisco National Cemetery is within the architectural APE. However the Undertaking is not expected to affect the cemetery.

The FHWA developed a PA among the consulting parties, pursuant to *36 CFR 800.14*, following guidance for the resolution of adverse effects resulting from this Undertaking, pursuant to *36 CFR 800.6*. The PA outlines the treatment of historic properties that will be affected by the Undertaking. It includes stipulations that the FHWA prepare two historic property treatment plans: an ATP and a BETP. The ATP encompasses treatments for effects on archaeological resources and the BETP identifies treatments for effects on the built environment and cultural landscape. These treatment plans describe the work that needs to be conducted prior to construction, during construction, and after construction. Caltrans and the SFCTA and their consultants will perform the prescribed work.

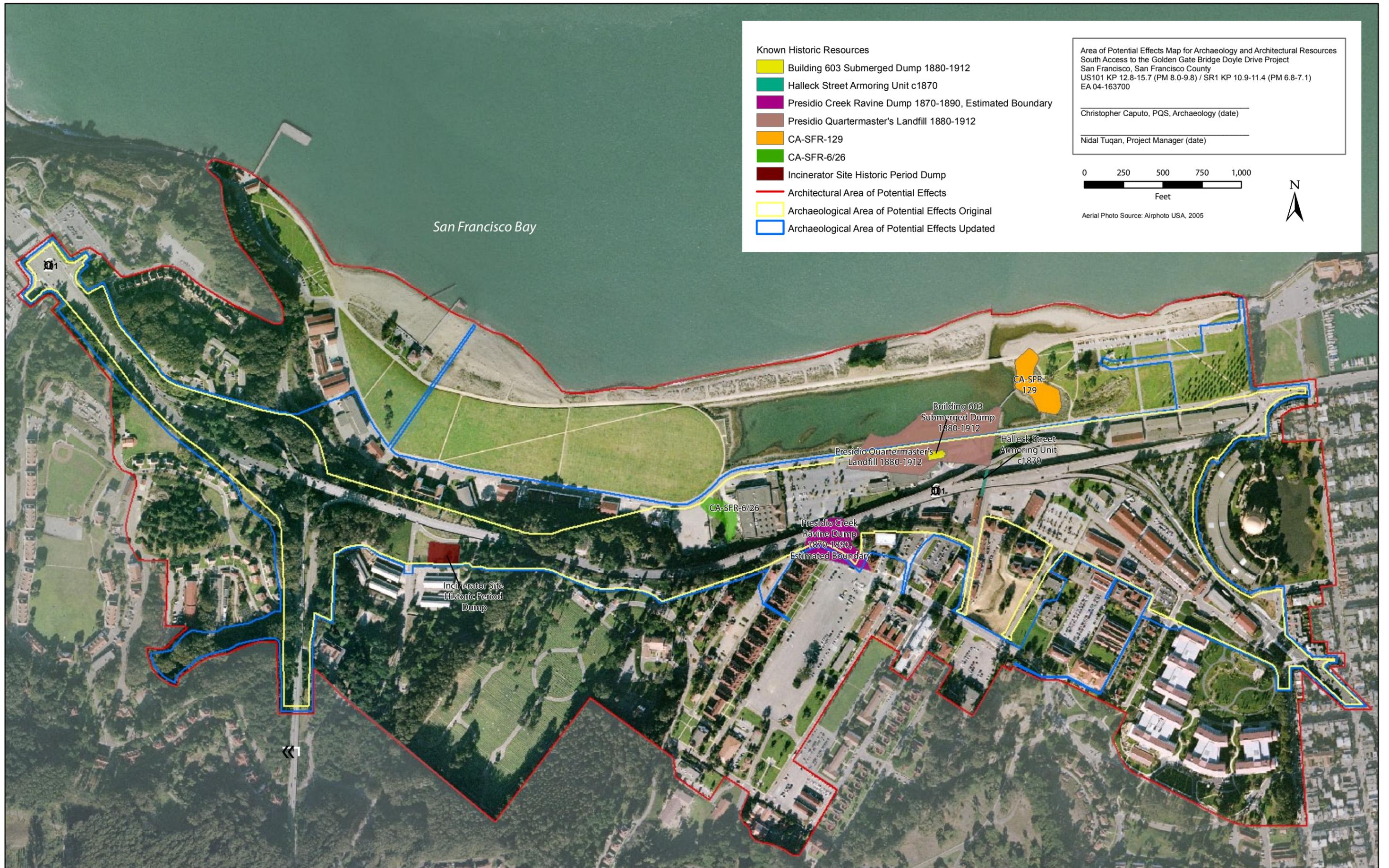
The BETP provides detailed descriptions of measures developed to reduce, minimize, or mitigate adverse effects on contributing buildings, structures, and elements of the PNHLD cultural landscape and the Golden Gate Bridge resulting from the Undertaking. It also includes descriptions of measures that will be taken to protect historic properties and to avoid unanticipated adverse effects on historic properties. The BETP establishes protocol regarding preparation of recordation and documentation to Historic American Building Survey/Historic American Engineering Record/Historic American Landscape Survey (HABS/HAER/HALS) standards and the preparation of Historic Structure Reports (HSRs). The BETP also describes specific and appropriate levels of investigations, preparations, and treatment measures that will be undertaken by Caltrans and SFCTA and their consultants prior to construction, during construction and after construction. These include conditions assessments; vibration analysis; requirements for the moving, storing, shoring, stabilizing, monitoring, and rehabilitation of buildings; and the rehabilitation of cultural landscape features and areas. Also described are provisions for architectural criteria, protection/avoidance measures, responses to inadvertent damage, deconstruction and salvage procedures, and a public interpretation program.

The ATP describes detailed protection measures for known and predicted prehistoric and historical archaeological resources and resources of importance to Native Americans. These treatments include the establishment of an environmentally sensitive area (ESA) to protect CA-SFr-6/26, preconstruction archaeological excavation, a plan for monitoring during construction, procedures to follow should unanticipated discoveries be encountered, processes for evaluation and data recovery of discoveries, responsibility to Native Americans, Native American Graves Protection and Repatriation Act (NAGPRA) compliance, and curation of recovered materials.



04548.04 (11-07)

Figure 1  
Project Location and Vicinity



**Figure 2.**  
**Revised Area of Potential Effects**

Over the course of the execution of the ATP and BETP, Caltrans and SFCTA will convene regular meetings of a treatment oversight panel (TOP) that will review and coordinate mitigation activities among responsible parties and communicate progress. The TOP will comprise professionally qualified representatives from Caltrans, SFCTA, the Trust FPO, and NPS and include FHWA and others as deemed appropriate by FHWA. Caltrans and SFCTA are responsible for scheduling and convening the TOP. The TOP will meet to review the development and finalization of the treatment details and resulting reports. The TOP will also confer as needed regarding concerns about the implementation of the stipulations outlined in the ATP and BETP. When appropriate, the TOP will also consult with interested parties during the implementation of the ATP and BETP. FHWA will also receive minutes of TOP meetings and have final authority over the plans reviewed by the TOP.

The MIP is not a static document, and it is anticipated that changes to the Undertaking and schedule will occur during the design process and possibly during construction. Consequently, the MIP will also serve as a communication tool to describe those project changes and/or additional effects on historic properties and will schedule additional mitigation measures to be implemented. Although Caltrans and SFCTA and their consultants will use the MIP to document changes and schedule mitigation, the consultation process to determine adverse effects and appropriate mitigation as defined in the PA will be followed. Consultation may result in amendments to the APEs and FOE; changes in the mitigation of adverse effects and/or treatment of resources will be captured in the MIP rather than amending the ATP and BETP. A semiannual Mitigation Monitoring Report (MMR) will be circulated to signatories and concurring parties to describe the status of efforts to comply with the treatments described in the BETP, ATP, and possibly the MIP and scheduled in the MIP.



## SECTION 2: DESCRIPTION OF THE UNDERTAKING

### 2.1 PROJECT DESCRIPTION AND SCHEDULE

The Undertaking, known as the Presidio Parkway Alternative, will replace the existing Doyle Drive facility with a new six-lane facility and an eastbound auxiliary lane between the Park Presidio interchange and the new Presidio access at Girard Road. The new facility will consist of two 11-foot lanes and one 12-foot outside lane in each direction, with 10-foot outside shoulders and 4-foot inside shoulders. In addition, the southbound direction will include an 11-foot auxiliary lane from the Park Presidio Interchange to the Girard Road exit ramp. The width of the proposed landscaped median will vary from 16 feet to 41 feet. The total roadway width will be 105.3 feet, and the overall facility width, including the median, will vary from 121.3 to 146.3 feet. To minimize impacts on 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.

A 1,475-foot-long viaduct will be constructed between the Park Presidio interchange and the San Francisco National Cemetery. The height of the high viaduct will vary from 66 to 115 feet above the ground surface. Two cut-and-cover tunnels (one for each direction) will extend 787 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 13 and 26 feet high will be constructed along the south side of the facility between the battery and the second set of cut-and-cover 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), the second set of tunnels—one of which is up to 984 feet long—will extend east to Halleck Street. The amount of fill over the tunnels is being coordinated with the Trust based on requirements of their Vegetation Management Plan and structural considerations. The expected minimum depth to support native vegetation and accommodate maintenance equipment is 6 feet. The facility will then rise slightly on a low-level causeway 525 feet long over the site of the proposed Tennessee Hollow creek restoration and then pass over a depressed Girard Road. The low causeway will rise to approximately 10 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 facility includes a transition zone starting from the Main Post–area tunnels to reduce vehicle speeds prior to merging with 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 more southerly realignment of Doyle Drive. The exit ramp from eastbound Doyle Drive to southbound Veterans Boulevard will be replaced with standard exit-ramp geometry and widened to two lanes. The loop of the westbound Doyle Drive exit ramp to southbound Veterans Boulevard will be improved to provide standard exit-ramp geometry. The northbound Veterans Boulevard connection to westbound Doyle Drive will be realigned to provide standard entrance-ramp geometry. The northbound Veterans Boulevard connection to

eastbound Doyle Drive will be reconstructed in a similar configuration as the existing directional ramp with improved sight lines and exit and entrance geometry.

The Undertaking 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 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, providing access to the two-way 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. The Preferred Alternative will include extended bus bays on both sides of Richardson Avenue that will accommodate up to four buses each and improved crosswalks to provide safer and enhanced pedestrian circulation in the area. The extended bus bays will keep the buses out of the main flow of traffic during stops; provide safer merging capability for the buses; and facilitate transfers between Golden Gate Transit, Muni, and PresidioGo vehicles. Fences will be required along the edge of the at-grade portions of the roadway to restrict pedestrian access onto the roadway.

In early 2009, the APE was expanded to accommodate utilities relocation and other project refinements, including the temporary relocation of Crissy Center to East Beach within Area A of the Presidio. A new APE map was redrawn to illustrate these project changes (Figure 2). Procedures outlined in Stipulation V of the PA were followed.

Due to the complexity of the project, the construction of Doyle Drive has been divided into eight separate contracts, portions of which will overlap during construction. Consequently preconstruction mitigation activities for one contract may run concurrently with construction mitigation and monitoring activities for another contract, while postconstruction mitigation will be underway for yet another contract. Please see Attachment B for maps that illustrate the location of each contract or phase.

- Contract #1 is for environmental mitigation, which includes the activities described in this plan. The contract runs throughout the entire construction schedule and extends beyond the completion of Doyle Drive to accommodate postconstruction rehabilitation and reevaluations of historic resources.
- Contract #2 is specific to utility relocation throughout the entire corridor. The details of this contract are currently being developed.
- Contract #3 includes the permanent southbound roadway section from Merchant Road to Veteran's Boulevard, the Ruckman Boulevard bridge, the ramp from northbound Veteran's Boulevard to southbound Doyle Drive, the elevated portion of the loop structure from northbound Doyle Drive to southbound Veteran's Boulevard, and the southbound high viaduct.
- Contract #4 contains the temporary detour from Richardson Avenue and Marina Boulevard west to where Lincoln Boulevard runs along Doyle Drive, the permanent southbound roadway from the west end of the temporary detour to the eastern portal of the southbound Battery Tunnel, and the southbound Battery Tunnel. Retaining Wall 8 in preparation for the Main Post Tunnel will be constructed adjacent to Building 106 and along Lincoln Boulevard.

- Contract #5 includes the demolition of the existing low viaduct structures and construction of the new low viaduct structures; Girard Road undercrossing; both northbound and southbound main post tunnels and the fill over the tunnels; the electrical and mechanical substations; and several portions of permanent at-grade roadway, including Gorgas Avenue, Richardson Avenue connection, Halleck Street, the low viaduct to Main Post Tunnels eastern portals connection, and the east half of the connecting roadway from Main Post Tunnels west portals to the east portals of the Battery Tunnels.
- Contract #6 consists of the northbound Battery Tunnel, the northbound western half of the at-grade roadway from where contract # 5 left off, and the at-grade roadway between the west portal of the northbound Battery Tunnel to the northbound high viaduct.
- Contract #7 is the final construction contract. It includes the northbound Battery Tunnel, northbound high viaduct, the loop-ramp structure from northbound Doyle Drive to southbound Veteran’s Boulevard, and the remaining at-grade northbound roadway from the northbound high viaduct to Merchant Road.
- Contract #8 is for postconstruction landscaping. Upon completion of the landscaping, the NHL nomination will be updated to include changes to the resource.

The mitigation schedule has been developed in response to this phased construction schedule. The mitigation implementation plan is based on completing the work in accordance with this schedule.



## **SECTION 3: SUMMARY OF HISTORIC PROPERTIES**

The BETP identifies treatment for those historic resources that will be adversely affected by the Undertaking and identified as such in the FOE and FOE Amendment. The ATP does not identify any known archaeological resources that will be affected by the Undertaking. As was stated earlier, as project design is further developed, additional resources could be affected. The process to identify these resources and mitigate the effects will follow the process as defined in the PA. The MIP will initially schedule mitigation efforts for the following properties, which are those identified in the FOEs. If additional resources is affected and appropriate mitigation is agreed upon following the process defined in the PA, the MIP will be amended.

### **3.1 HISTORIC PROPERTIES ADVERSELY AFFECTED**

Four historic properties within the architectural APE will be adversely affected through the destruction or alteration of the resources and/or contributing elements within the properties. These properties are the two Doyle Drive viaducts, the Golden Gate Bridge, and the PNHLD. The two Doyle Drive viaducts, the Marina Viaduct and the Presidio Viaduct, have been identified as bridges that are individually eligible for the NRHP. Doyle Drive, in its entirety, has also been identified as a contributing element to the PNHLD in the 1993-updated documentation of the PNHLD. Furthermore, Doyle Drive has been identified as a contributor to the Golden Gate Bridge in its National Historic Landmark nomination, which is still pending.

The PNHLD contains individually eligible components, as well as contributing elements, including buildings, structures, objects, and landscape and linear features. Additionally, these contributing elements can be combined and considered to be significant in the manner in which they relate to one another, as in building clusters and circulation networks. Landscape features can include designed features or natural features that have influenced the design or the pattern of the historic property's development. These historic functional areas or groupings of related resources are considered cultural landscapes.

In its entirety, the PNHLD covers approximately 1,491 acres; about 115 acres, less than 8% of this cultural landscape, will be directly affected by the Undertaking. The Trust has divided the landmark into several planning districts; portions of almost all of them extend into the focused architectural APE. The archaeological APE is within the architectural APE. The individually eligible and contributing resources that will be affected, or undergo protective measures to prevent damage, are listed in Attachment A as is the planned treatment for each.

### **3.2 HISTORIC PROPERTIES THAT WILL NOT BE ADVERSELY AFFECTED**

Although it has been determined that the Undertaking will adversely affect the PNHLD as a whole due to the alteration of the transportation corridor within the focused APE, the majority of the individual contributors will not be directly affected. There are about 280 contributing buildings and structures to the PNHLD within the focused architectural APE; approximately 210 of these are not in close proximity of the Undertaking alignment and thus will not experience direct or indirect adverse effects.

Individually listed or eligible properties not part of the PNHL— including the San Francisco National Cemetery, the Palace of Fine Arts, and the Golden Gate Bridge—are located near the existing Doyle Drive and will also be near the replacement facility; they are therefore included in the architectural APE. Although it is anticipated that these buildings, the cemetery, as well as some landscape features, will not be directly affected by demolition or construction activities related to the Undertaking, treatment measures will be taken to protect those that are in close proximity from inadvertent damage.

As previously stated, a single prehistoric archaeological site within the archaeological APE, CA-SFr-6/26, was determined to be individually eligible for the NRHP. The alignment of the new Doyle Drive does not affect the site; furthermore, the site will be protected and avoided throughout construction.

## **SECTION 4: SUMMARY OF MITIGATION MEASURES**

### **4.1 BUILT ENVIRONMENT**

The BETP provides detailed descriptions of measures to avoid, minimize, and mitigate adverse effects on the PNHLD; its contributors; including buildings, structures, and elements of the cultural landscape; the Golden Gate Bridge, the San Francisco National Cemetery, and the Palace of Fine Arts. Many of the proposed treatments need to be undertaken prior to the commencement of construction activities. Others are in response to construction activities, and the remaining treatments address adverse effects of the completed facility and associated construction activities. The MIP will schedule the measures as appropriate in conjunction with the construction schedules.

#### **4.1.1 Measures to Avoid Adverse Effects**

Information from the Historic Structures Reports (HSRs), preconstruction-conditions assessments, vibration and elevation studies, known soil characteristics, and proposed construction activities will be compiled to identify the best measures to avoid adversely affecting buildings and some landscape features. The efficacy and maintenance of the measures will be monitored during construction.

#### **Vibration Studies and Monitoring**

These studies and the resultant monitoring plan will be prepared by a registered geophysicist or a professional with at least a bachelor of science from a qualified program in engineering, physics, or geology offered by an accredited university or college, and with a minimum of 5 years experience in vibration monitoring and control and in the measurement and early evaluation of ground-borne vibration caused by construction activities consistent with the scale and methods proposed for in this Undertaking. They will also demonstrate experience in preparing and implementing construction vibration monitoring plans and analyzing vibration impacts to historic structures, including unreinforced-masonry buildings. They will have experience in determining vibration-mitigation requirements for historic buildings through design and construction to the completion of a project, experience in determining the potential for structural damage due to building vibration or destabilization of foundation soils, and appropriate instrumentation and analysis procedures for quantifying ground and building vibration.

#### **Elevation Survey**

Project plans, geotechnical findings, and precondition surveys will identify buildings that need elevation surveys. Three months prior to any impact work, a professional land surveyor will conduct elevation surveys to obtain vertical elevations of these buildings. After the impact work or dewatering is completed in the specified location, the elevations will be documented on a daily basis for 5 days, at which time a report

documenting the monitoring will be prepared and verified by a professional land surveyor. Should the survey determine that stabilization is necessary, the professional qualifications identified in the following paragraph will be applied.

### **Stabilization Design and Implementation**

Structural engineers with demonstrable experience in working with historic buildings, including unreinforced-masonry buildings, will prepare stabilization designs for specified buildings. All designs will be reviewed and approved by either an architectural historian or historical architect who is professionally qualified according to the Secretary of the Interior's standards and will follow the Secretary's guidelines for the treatment of historic buildings. The Trust FPO will also review and have the opportunity to comment on any protective measures that will be applied directly to any building or structure. Contractors will implement the stabilization design under the supervision of structural engineers in conjunction with a qualified historical architect or architectural historian.

Upon completion of the Undertaking, any temporary stabilization materials will be removed and the building will be returned to its preconstruction condition. Permanent stabilization, such as repairs to weakened structural material to ensure no additional deterioration is caused by the Undertaking, will be done according to the Secretary of the Interior's standards under the supervision of a qualified architectural historian or historical architect and will not be removed. All postconstruction removal of stabilization materials and consequent repairs will be reviewed and approved by a qualified architectural historian or historical architect. The Trust FPO will also review and approve the adequacy of any necessary repairs.

### **Historic Structures Reports**

HSRs are generally completed by an interdisciplinary team of specialists which, depending upon the subject building, may include a historian, architectural historian, historical architect, structural engineer, mechanical engineer, conservator, materials scientist, photographer, and other specialties as needed. The TOP will define and approve the project team that is appropriate for each subject building. Each professional will have demonstrable experience in the preparation of HSRs; historians, architectural historians, and historical architects will also be qualified according to the Secretary of the Interior's professional standards.

### **Preconstruction Condition Assessments**

Preconstruction condition assessments, although less detailed than HSRs, may also require an interdisciplinary team, depending upon the subject building. This team may include an architectural historian, historical architect, structural engineer, and photographer. Selected architectural historians or historical architects will have demonstrable experience in assessing character-defining features of historic buildings and historic integrity of the features and will be qualified according to the Secretary of the Interior's standards. Structural engineers will review the buildings selected for

assessment and determine the need for them to perform structural assessments by subject building. The TOP will review and approve the qualifications of the team as well as the resulting assessments.

To avoid duplication of effort, condition assessments will be done in cooperation with Caltrans right-of-way agents or their contractors. An architectural historian or historical architect working with the right-of-way agent will ensure that the historic features are adequately documented. The architectural historian or historical architect will be responsible for adhering to the reporting requirements outlined in this treatment plan.

### **Protection from Construction-Related Damage**

Architectural historians, historical architects, and landscape architects meeting the Secretary of the Interior's professional qualifications will develop appropriate protection measures. The implementation of the protection measures will be done under the supervision of these same professionals. All protection measures will be included in the construction contracts and specifications. The measures will be determined by the proximity of the Undertaking and developed with information resulting from the precondition assessments. Protection measures will be reviewed and approved by the TOP. Prior to the commencement of the Undertaking, the TOP will review the measures with the contractor to ensure that the measures are clearly understood.

### **Protection Prior to Construction**

For the protection of buildings 201, 204, 230, and other unoccupied buildings, a service charge will be paid for all unoccupied buildings within the temporary construction easement as a means to provide fire and intrusion protection.

### **Monitoring**

All monitoring and reporting will either be conducted by a qualified architectural historian or qualified archaeologist, or under the direct supervision of a qualified architectural historian and/or qualified archaeologist as appropriate. Monitoring will occur during all construction phases of the Undertaking; the monitoring schedule is dependent upon defined construction phases. A monitoring diary will be kept daily. The monitor will have a field binder of completed and approved conditions-assessments reports on hand so that any indication of damage will be quickly verified. The schedule will also be dependent upon the findings of the precondition assessments and the protection needs of each subject building. It will be determined by the TOP and scheduled in the MIP.

#### **4.1.2 Measures to Minimize Adverse Effects**

##### **Architectural Criteria**

A single measure to minimize adverse effects was the development of architectural criteria (AC) to be applied to the design of the new construction and the rehabilitation of the landscape resources affected by the construction.

The AC was developed by an interdisciplinary team made up of professionals from the Trust, Caltrans, NPS, and representatives of SFCTA. This team included architectural historians, architects, and landscape architects. The TOP will regularly review the design and implementation of the Undertaking to ensure that the criteria are being followed.

#### **4.1.3 Measures to Mitigate Adverse Effects**

Measures to mitigate adverse effects include the recordation of affected properties to the standards of HABS/HAER/HALS NPS programs; moving, storage, rehabilitation of half of one affected building (201); the salvage of buildings planned for deconstruction (the other half of 201, all of 204 and 230); rehabilitation of affected landscape resources; reevaluation of the significance of affected properties; updating National Historic Landmark documentations; interpretation; and final reporting.

##### **Historic American Building Survey**

Similar to HSRs, HABSs are generally completed by interdisciplinary teams which, depending upon the subject building, may include a historian, architectural historian, historical architect, structural engineer, mechanical engineer, conservator, materials scientist, draftsman, photographer, and other specialists as needed. The TOP will define the project team that is appropriate for each subject building. Each professional will have demonstrable experience in the preparation of HABSs; historians, architectural historians, and historical architects will also be qualified according to the Secretary of the Interior's professional standards. The TOP will approve the team.

##### **Historic American Engineering Record**

HAERs are also most often completed by an interdisciplinary team, with a greater emphasis on appropriately qualified engineers, including structural and mechanical engineers. A single historic property—Doyle Drive itself, including the individually eligible viaducts—will be subject to a HAER. The documentation will also include a Secretary of the Interior professionally qualified historian or architectural historian, a draftsman, and a photographer. Each professional will have demonstrable experience in the preparation of HAER reports. The TOP will approve the team.

### **Historic American Landscape Survey**

A HALS also requires interdisciplinary teams. The HALS work will be a large body of work because it will record portions of several planning districts throughout the length of Doyle Drive that will be altered by the Undertaking. Consequently, the areas to be recorded have been divided into logical sub areas. As with HABS, the team will depend upon the specific subject area. The HALS will include a historian, an architectural historian, and a landscape architect, each of whom will be qualified under the Secretary of the Interior's professional standards; the team will also include an appropriately experienced photographer and similarly experienced draftsman. Depending upon the subject area, the team may also include a GIS practitioner, an arborist, horticulturalist, geomorphologist, and/or botanist, all of whom will have demonstrable experience in recording historic landscapes. The TOP will approve the team.

### **Building 201 Relocation**

The stabilization design and implementation undertaken to prepare Building 201 for moving will follow the professional qualifications described in the *Stabilization Design and Implementation* section above. Additionally, the stabilization design will be prepared by an engineer or engineering firm with demonstrable experience in the relocation of historic buildings; this professional will work with the moving contractor to ensure that the stabilization is appropriate for their determined method of relocation. The moving contractor will also have demonstrable experience in the moving of wood-framed historic buildings. The TOP will approve the contractor.

### **Deconstruction and Salvage**

Deconstruction and salvage procedures will follow those already established by the Trust. All deconstruction activities will be under the supervision of an architectural historian or historical architect. Once the building is dismantled and the salvage items have been segregated and recorded, the professional qualifications of those stockpiling and storing the materials will be the responsibility of the Trust.

### **Rehabilitation**

An interdisciplinary team, including architectural historians, historical architects, structural engineers, and possibly mechanical engineers, will rehabilitate Building 201. Each professional will have demonstrable experience in the application of the Secretary of the Interior's standards for the rehabilitation of historic buildings; architectural historians and historical architects will also be qualified according to the Secretary of the Interior's professional standards.

An interdisciplinary team, including architectural historians, historical architects, and landscape architects, will be included in the rehabilitation of the cultural landscape. The architectural criteria, developed as a means to minimize harm, will be followed as much as is feasible. Each professional will be qualified as above and approved of by the TOP.

## **Reevaluation**

As appropriate, historians, architectural historians, and landscape architects meeting the Secretary of the Interior's standards of professional qualifications will perform all reevaluation activities. Photographers, drafts people, and GIS practitioners with demonstrable experience in the documentation of historic properties will also be involved in the preparation of the document. Preparers' qualifications will be reviewed and approved by the TOP.

## **Interpretation**

In cooperation with the Trust's interpretation program, professionally qualified historians will establish interpretive themes and compile information for possible interpretation. Individuals and/or companies contracted to produce interpretive materials will have demonstrable experience in working in the media specific to the interpretive task. This may include printers, photographers, illustrators, designers, writers, fabricators, GIS practitioners, and/or computer programmers, depending on the interpretation form. All contractors will be approved by the TOP and the Trust's interpretive program managers and will be expected to work closely with the Trust.

## **4.2 ARCHAEOLOGY**

The ATP was prepared to address known and predicted archaeological resources within the archaeological APEs. The ATP defines specific procedures to identify, evaluate, and treat new discoveries. Efforts to completely identify resources prior to project approval were not practical primarily because the existing Doyle Drive prevented access. The one known individually eligible prehistoric site, CA-SFr-6/26, will be avoided.

The ATP includes thorough environmental and cultural contexts for both prehistoric and historic resources and a detailed assessment of archaeological sensitivity of the entire corridor based on depositional history, geomorphology, and known sensitivity. Anticipated property types have been identified and research themes and questions have been developed in the advent of unanticipated discovery. Treatment approaches include a pretesting plan, a construction monitoring plan, and a strategy for dealing with unanticipated discoveries that may include test evaluations and data recovery (the necessity of the evaluations and data recovery will be based on the determination of the resource's significance).

Treatment approaches, Native American consultation, and reporting are briefly described below because if unanticipated archaeological resources are discovered, the treatment will be scheduled in the MIP.

### **4.2.1 Environmentally Sensitive Areas**

An ESA boundary around CA-SFr-6/26 will be in place prior to construction (including the utilities relocation work under Contract #2) and be designated in project plans and specifications. The ESA will be discussed in a preconstruction meeting; its importance will be discussed with construction personnel, and it will be stressed that no

construction or deconstruction activities occur within the ESA. The installation of the boundary and informational meetings with the construction personnel are scheduled in this MIP. Monitoring the integrity of the boundary fencing throughout construction is also scheduled in this plan.

### **Pretesting**

Two testing methodologies will be employed prior to construction. First, monitoring will occur for all utilities relocation, and construction and demolition activities that include excavation or exposure of previously inaccessible locations. Second, in conjunction with utilities relocation, a series of mechanical test trenches will be used to establish stratigraphy within the APE and to test for deeper, buried resources. The testing program will be based on the archaeological sensitivity of the APE as set forth in the ATP and will be focused on those areas possessing high and medium sensitivity for archaeological resources (Figure 3). Attempts will be made by the testing crew to fit the trenching program within the utilities relocation plan and schedule being developed under Contract #2 and the excavation and demolition schedule to be completed under Contracts # 3 through 7. As the utilities relocation plan and schedule and the excavation and demolition plan and schedule become available, the testing plan will be refined and the locations of testing trenches will coincide as much as possible with the locations of the work.

### **Construction Monitoring**

Construction monitoring will commence with the beginning of each contract. Areas to be monitored will be refined when construction plans are made available. Construction, and therefore archaeological monitoring, may occur under two or more Contracts simultaneously. Archaeological monitoring will be conducted by a qualified archaeologist during construction in those areas identified as likely to contain historic properties (high to moderate sensitivity). Low sensitivity locations will be periodically spot-checked during construction monitoring. It may also be necessary to monitor construction in areas where pretesting was unable to completely access areas that showed indications of archaeological deposits because of engineering or environmental constraints. A monitoring diary will be kept daily. The monitor will have a field binder of the ATP and any other reports directly pertaining to the archaeological sensitivity in the APE on hand for reference. All activities associated with the construction monitoring will be summarized in a monitoring report to be written at the conclusion of this phase of work.

### **Archaeological Test Evaluation and Data Recovery**

Test excavation will only be undertaken if cultural materials that may meet the standards of potentially significant archaeological resources are identified during pretesting. If deposits are identified and, in consultation with the Trust, are determined to be significant, they will be fully excavated and brought back to the Trust lab for processing. If the determination cannot be made in the field, collected materials may be brought back to the lab for further analysis. If a deposit is deemed to not meet

significance criteria as outlined in the ATP, archaeological investigation of the deposit will be abandoned. Determination will be carried out in consultation with the Trust and will be based on previous assessments of significance, integrity, data potential, association, and interpretive value.

### **Field Methods**

Hand excavation will be used, if possible, and fully documented through recordation on Excavation Sheets and Feature Sheets, as well through field photography, cartography and videography, as appropriate. If features are potentially significant, the investigation will be expanded areally until the horizontal boundaries of the site can be determined. Hollow refuse features will be halved and excavated by stratigraphic layer, refuse pits, or sheet scatters will be sampled, and associated soils will be screened as appropriate. Architectural features and infrastructure features should be cleared to establish integrity and to determine the extent of any associated material or temporal markers. If a large feature extends below the level of planned excavation, a sampling strategy will be developed and implemented to obtain an adequate sample for subsequent analysis. A field director, in consultation with Caltrans, the Trust, and NPS will determine the appropriate level of effort.

### **Safety**

An approved health and safety plan is required by the Trust and Caltrans prior to beginning any fieldwork. The plan is currently in preparation.

### **Laboratory and Analysis Procedures**

The Presidio Archaeology Lab has published the *Archaeological Collections Management Policy* (Clevenger 2008), which will be used to guide the laboratory and analysis procedures should any archaeological materials be discovered.

### **Discard and Deaccession Policy**

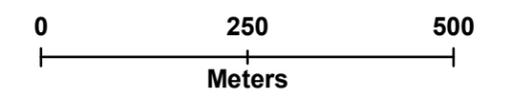
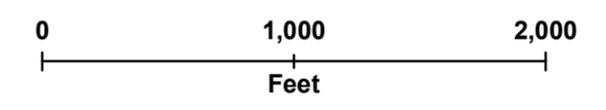
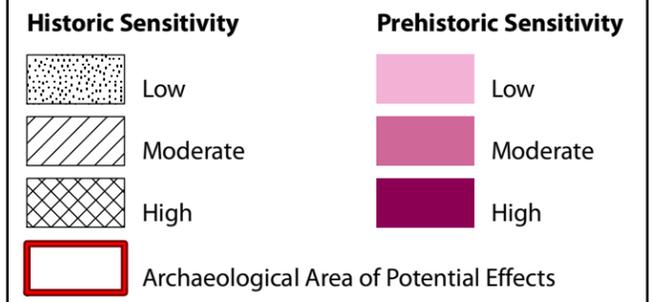
The *Archaeological Collections Management Policy* will also be used to guide any discard or deaccessioning of materials.

### **Native American Participation**

Ohlone/Costanoan descendants and representatives have expressed an interest in participating in the archaeological investigations. If prehistoric archaeological materials are discovered during construction, all Native Americans that were party to the consultation process for the project will be notified immediately. A descendant will monitor all prehistoric evaluation efforts and keep a daily field log of project activities and inform others in the Native American community of the findings. Materials will be analyzed at the Presidio, and no destructive testing will be conducted without prior



**Figure 3**  
**Archaeological Sensitivity in the**  
**Area of Potential Effects**



Source: ICF Jones and Stokes

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consultation with Ohlone/Costanoan respondents. An open house will be scheduled as detailed in the ATP.

### **Burials, Human Remains, and Related Materials**

Should human remains be discovered, the field director will follow the regulations outlined by NAGPRA. The field director will determine if remains are human, and, if so, if they are Native American. If it cannot be determined that the remains are Native American, the coroner will be contacted. The field director will seek the advice and active participation of the Native American monitor (if applicable) of the treatment of the remains and notify all Native Americans that were party to the consultation process for the project. Treatment of the remains is dependent upon how they were discovered. If they were discovered in trench spoils or backhoe bucket, the soils will immediately be segregated and screened, subjected to minimal in-field analysis, and bagged and stored in a secured facility on the Presidio. If they are discovered in a trench floor or sidewall, the remains will be subjected to in-field analysis and stabilized using trench shoring. Work on that particular trench will be abandoned and the trench will be covered with a steel plate. The remains will undergo thorough in-field analysis.

### **Reporting**

A comprehensive technical report will be prepared subsequent to analysis of recovered materials. Based on findings, recommendations for further investigations will be made. Such investigations may include a plan for further data recovery and recommendations for monitoring during construction. Site records (CA DPR 523) will be prepared for all archaeological deposits that are encountered. Public interpretation will be considered, if merited. Caltrans, the Trust, and NPS will decide upon the topics and medium after the technical report is complete.

### **Ownership and Curation**

All archaeological material, except human remains and associated grave items, will remain the property of the Trust. The Trust will also receive copies of field notes, drawings, photographs, special studies, copies of relevant historical documents, and the final report.



## **SECTION 5: MITIGATION IMPLEMENTATION PLAN**

This plan serves as the tool to communicate and record the treatment of a variety of types of resources and kinds of mitigation. It includes the scheduling of mitigation of adverse effects on individual buildings and structures; the recordation of the landscape the entire length of the Undertaking; the protection of buildings, landscape features, and the single known prehistoric archaeological site; and mitigations that are not necessarily associated with specific resources or driven by construction schedules, such as interpretive plans. It is also the tool by which the signatories and concurring parties to the PA are informed of the progress of the mitigation program, changes to the mitigation program, and the adequacy of the process by which decisions are made in response to changes to the Undertaking, unanticipated effects on historic properties, or unanticipated archaeological discoveries.

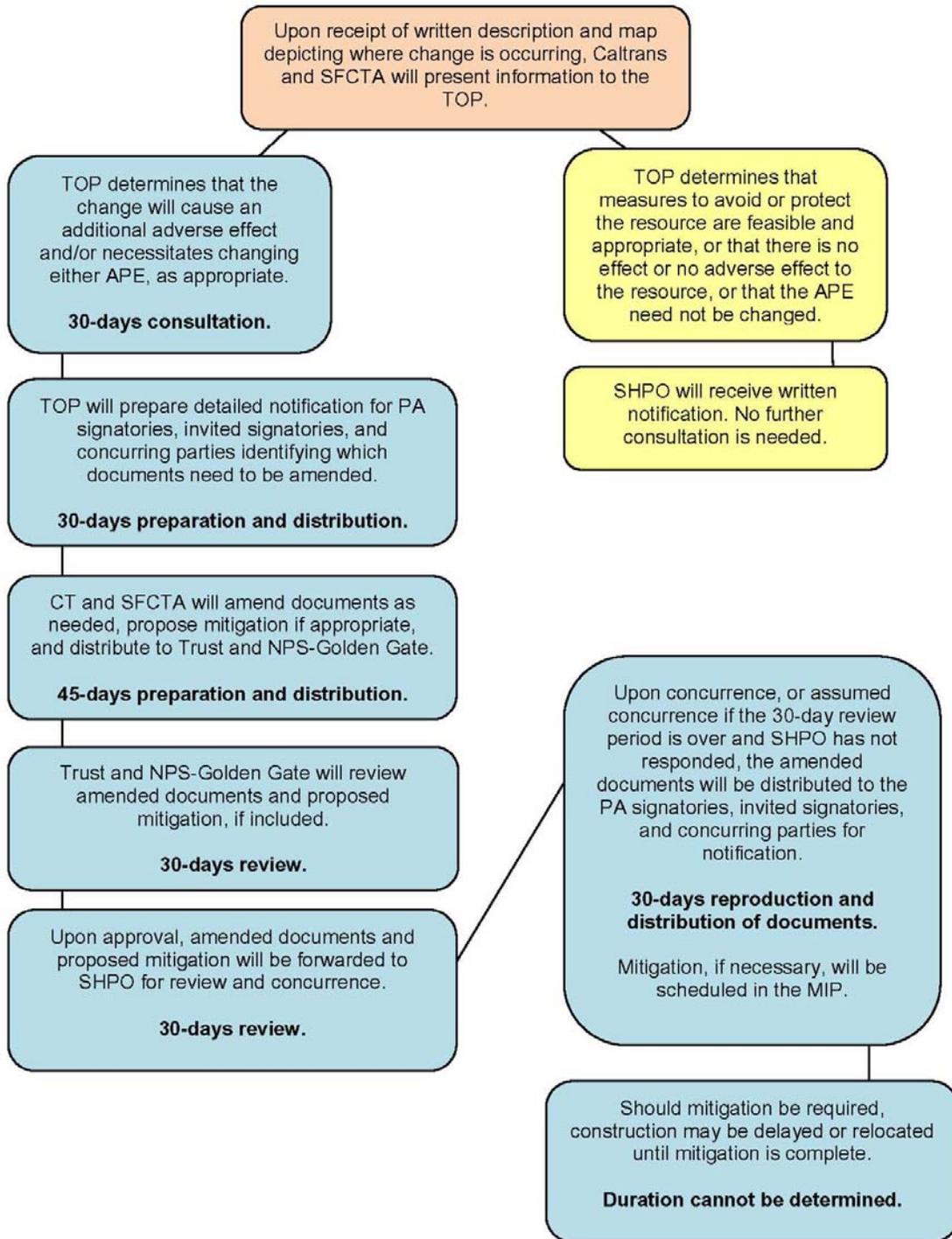
The details of the MIP are presented in Attachment A and consist of a series of spreadsheets, with generally a single sheet for each historic property or contributing resource; mitigation measures or treatments are defined as preconstruction, during-construction, and postconstruction. Tasks that are independent of the construction schedule and not associated with specific properties are organized by task as performed throughout the duration of the Undertaking. Caltrans will regularly update the spreadsheets to document the progress, changes, goals, and note any milestones that have been reached and forward that information as appropriate to the PA signatories.

### **5.1 PROCESS FOR CHANGES TO THE UNDERTAKING**

This plan is designed to be flexible so that it can address project changes as they arise and document and schedule treatment responsive to the project changes. It is also the tool by which the signatories and concurring parties to the PA are informed of the progress of the mitigation program, changes to the mitigation program, and the adequacy of the process by which decisions are made in response to changes to the Undertaking, unanticipated effects on historic properties, or unanticipated archaeological discoveries.

Exhibit 1 is a flowchart showing the process for communicating changes in the Undertaking to the PA signatories and concurring parties.

**Exhibit 1: Process for Undertaking Changes, Amendment of APEs, and Additional Section 106 Compliance**



### **5.1.1 Mitigation Monitoring Report**

The MIP will be used to prepare a semiannual MMR. As stipulated in the PA, Caltrans, in consultation with FHWA, will prepare and provide a report on or before January 30 and June 30 of each reporting year that describes how the agreed-upon mitigation is being carried out; this report will be available to all parties. Caltrans will ensure that the report is made available to the public and that potentially interested persons and members of the public are invited to provide comments to FHWA via Caltrans, as well as to the ACHP and SHPO. At the request of ACHP or SHPO, Caltrans, acting on behalf of FHWA, will supplement this process through meetings to address comments and/or questions. At a minimum, the report will include the items below.

1. List of all studies, reports, actions, evaluations, or monitoring reviewed or generated.
2. Efforts to identify and/or evaluate potential historic properties, monitoring efforts, archaeological management assessments, or research designs and treatment of historic properties.
3. Any recommendations to amend the PA or improve communications among the parties.



## **SECTION 6: REFERENCES CITED**

Clevenger, Liz. 2008. *Archaeological Collections Management Policy*. Presidio Archaeology Lab—Presidio Trust: San Francisco, CA.

San Francisco County Transportation Authority. 2005. *South Access to the Golden Gate Bridge—Doyle Drive Project Finding of Effect*. December. San Francisco, CA.

San Francisco County Transportation Authority. 2007. *South Access to the Golden Gate Bridge—Doyle Drive Project Finding of Effect Addendum*. February. San Francisco, CA.



**APPENDIX A. MITIGATION PLAN AND PROGRESS, BY HISTORIC PROPERTY  
AND CONTRIBUTING ELEMENT**



Doyle Drive  
Cultural Resources Mitigation Schedule

Historic American Landscape Survey (HALS)	Field Work	Photography	Methodology Outline	TOPS approval of format	NPS Regional approval of format/ fieldwork	Completion of existing-conditions plan sheets, views and vista plans, etc.	Completion of historical research and writing	TOPs approval of draft	NPS Regional approval of draft	SHPO approval of draft	Final report distributed			General Comments
<b>Schedule</b>	3/1/2009	4/28/2009	4/28/2009	4/29/2009	5/15/2009	10/1/2009	11/1/2009	11/1/2009	12/1/2009	1/1/2010	3/1/2010			
<b>Comments/Risks</b>	Completed	Completed.	Completed.	Approved.	Approved	In progress. 50% built environment, 33% veg plans complete. All other work in progress	In progress. Methodology determined and approved.							All signatories have agreed that construction may commence provided NPS regional program manager approves adequacy of fieldwork. However trees cannot be removed until HAER photography approved to ensure context is adequately photographed.
<b>Historic American Engineering Record (HAER) Doyle and Hwy 1</b>	Field Work	Photography	Methodology Outline	TOPa approval of format	NPS approval of format	Completion of draft report	TOP approval of draft	NPS Regional approval of draft	SHPO approval of draft	Final report distributed				<b>General Comments</b>
<b>Schedule</b>	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/30/2009	11/1/2009	12/1/2009	12/15/2009	1/15/2010	3/1/2010				
<b>Comments/Risks</b>	Includes gathering and organizing as-built plans to ensure that existing structure is adequately recorded.	Complete.	In progress.	Meeting set 6/29/09. Approval is anticipated.	Meeting set 6/30/09. Approval is anticipated.									Trees cannot be removed nor can any part of the landscape be altered that would affect the accuracy of the photographic record of Doyle and Hwy 1 context, prior to fieldwork approval from NPS-Region.
<b>Historic American Building Survey (HABS)</b>	Field Work	Photography	Methodology Outline	TOPS approval of format	NPS approval of format	Completion of draft report	TOP approval of draft	NPS Regional approval of draft	SHPO approval of draft	Final report distributed				<b>General Comments</b>
<b>Building 670 Schedule</b>	6/1/2009	6/29/2009	6/29/2009	6/29/2009	6/30/2009	10/1/2009	11/1/2009	12/1/2009	1/1/2010	3/1/2010				
<b>Comments/Risks</b>	complete	complete	complete	Meeting set 6/29/09. Approval is anticipated	Meeting set 6/30/09. Approval is anticipated.									Cannot be demolished until TOP, NPS Regional concur that it has been adequately photographed and drawn.
<b>Building 106 Schedule</b>	6/1/2009	6/29/2009	6/29/2009	6/29/2009	6/30/2009	12/1/2009	1/15/2010	2/1/2010	3/1/2010	6/1/2010				
<b>Comments/Risks</b>	complete	complete	complete	Meeting set 6/29/09. Approval is anticipated	Meeting set 6/30/09. Approval is anticipated.									Cannot be stabilized until TOP, NPS Regional concur that it has been adequately photographed and drawn. See HSR schedule for construction-related issues.
<b>Building 228 Schedule</b>	6/1/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009	12/1/2009	1/15/2010	2/1/2010	3/1/2010	6/1/2010				
<b>Comments/Risks</b>	complete	complete	complete	Meeting set 6/29/09. Approval is anticipated	Meeting set 6/30/09. Approval is anticipated.									Cannot be stabilized until TOP, NPS Regional concur that it has been adequately photographed and drawn. See HSR schedule for construction-related issues.
<b>Building 201 Schedule</b>	6/1/2009	6/29/2009	6/29/2009	6/29/2009	6/30/2009	12/1/2009	1/15/2010	2/1/2010	3/1/2010	6/1/2010				
<b>Comments/Risks</b>	complete	complete	complete	Meeting set 6/29/09. Approval is anticipated	Meeting set 6/30/09. Approval is anticipated.									Cannot be moved/deconstructed until TOP, NPS Regional concur that it has been adequately photographed and drawn. See moving and deconstruction schedule for construction-related issues.

Doyle Drive  
Cultural Resources Mitigation Schedule

Historic American Landscape Survey (HALS)	Field Work	Photography	Methodology Outline	TOPS approval of format	NPS Regional approval of format/ fieldwork	Completion of existing-conditions plan sheets, views and vista plans, etc.	Completion of historical research and writing	TOPs approval of draft	NPS Regional approval of draft	SHPO approval of draft	Final report distributed			General Comments
<b>Building 204 Schedule</b>	6/1/2009	6/29/2009	6/29/2009	6/29/2009	6/30/2009	12/1/2009	1/15/2010	2/1/2010	3/1/2010	6/1/2010				
<b>Comments/Risks</b>	complete	complete	complete	Meeting set 6/29/09. Approval is anticipated.	Meeting set 6/30/09. Approval is anticipated.									Cannot be deconstructed until TOP, NPS Regional concur that it has been adequately photographed and drawn. See deconstruction schedule for construction-related issues.
<b>Building 230 Schedule</b>	6/1/2009	6/29/2009	6/29/2009	6/29/2009	6/30/2009	12/1/2009	1/15/2010	2/1/2010	3/1/2010	6/1/2010				
<b>Comments/Risks</b>	complete	complete	complete	Meeting set 6/29/09. Approval is anticipated.	Meeting set 6/30/09. Approval is anticipated.									Cannot be deconstructed until TOP, NPS Regional concur that it has been adequately photographed and drawn. See deconstruction schedule for construction-related issues.
<b>Historic Structures Reports (HSR) and Stabilization as necessary</b>	3-D surveys	Draft Report	Approval of report by TOP	Specific Construction Activities Defined	Design of Stabilization for ELB/Final	Vibration Threshold Determined	Approval of stabilization design by TOP	Approval of stabilization design by Trust	Contract stabilization	Construct stabilization	Determine protection during construction	Include protection in Project Plans and Specifications		<b>General Comments</b>
<b>Building 106 Schedule</b>	5/15/2009	7/30/2009	8/15/2009	5/20/2009	6/30/09, 8/30/09	6/12/2009	10/1/2009	11/1/2009	12/1/2009	2/1/2010	8/1/2009			
<b>Comments/Risks</b>	complete	95% done. Priority shifted to stability design for ELB.		Done. Vibration information provided. Lead and asbestos surveys due by end of June.	This will be an ELB contract. Design will be incomplete, refined by 8/30/09	Determined to be .3ppv sec/in. provided stabilization completed prior to construction.								This building is in very good condition and, with the retaining wall further away than originally anticipated, extensive stabilization may not be needed. Work will be performed under a separate contract (ELB) from general construction contracts 3-7.
<b>Building 228 Schedule</b>	5/15/2009	7/30/2009	8/15/2009	5/20/2009	6/30/09, 8/30/09	6/12/2009	1/1/2010	3/1/2010	4/1/2010	6/1/2010	6/1/2010			
<b>Comments/Risks</b>	complete	95% done. Priority shifted to stability design for ELB.		Done. Vibration information provided. Lead and asbestos surveys due by end of June.	This will be an ELB contract. Design will be incomplete, refined by 8/30/09	Determined to be .3ppv sec/in. provided stabilization is completed prior to construction								This building is in very poor condition. Much of the problem appears to be related to foundation failure and may also necessitate stabilization of a contributing rock retaining wall north of the building. Crack monitors were placed week of June 8, 2009 to measure changes prior to construction. Trenches were dug to access foundation and to determine stability of soil. Results pending.
<b>Building 201 Schedule</b>	5/15/2009	7/1/2009	8/1/2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6/1/2010		
<b>Comments/Risks</b>		95% done. Priority shifted to stability design for ELB for 106, 228.		See moving section.	See moving section.		See moving section.	See moving section.	See moving section.	See moving section.	See moving section.	Depends upon where the building is temporarily located.		The top floor of this building will be moved, mothballed, and returned to its original location; the bottom floor will be deconstructed. See moving section for details.

Doyle Drive  
Cultural Resources Mitigation Schedule

Historic American Landscape Survey (HALS)	Field Work	Photography	Methodology Outline	TOPS approval of format	NPS Regional approval of format/ fieldwork	Completion of existing- conditions plan sheets, views and vista plans, etc.	Completion of historical research and writing	TOPs approval of draft	NPS Regional approval of draft	SHPO approval of draft	Final report distributed			General Comments
<b>Pre-Construction Conditions Assessments</b>	3-D surveys	Structural Assessments	Architectural Assessment	Elevation Report	Vibration Threshold Determination	Report	TOP approval of report	Pre- construction stabilization determination	Design stabilization	Contract stabilization	Construct Stabilization	Determine Protection During Construction		<b>General Comments</b>
<b>Contract #3 Area</b>														
681 barracks	Done	Done	Done	n/a	Done	7/1/2009	7/15/2009	none needed				Done, none,		Building currently being rehabilitated. Will have to re-assess when complete, likely October.
682 en. barracks and mess	Done	Done	Done	n/a	Done	7/1/2009	7/15/2009	none needed				Done, none,		Building currently being rehabilitated. Will have to re-assess when complete, likely October.
683 warehouse	Done	Done	Done	n/a	Done	7/1/2009	7/15/2009	none needed				Done, none,		Building currently being rehabilitated. Will have to re-assess when complete, likely October.
1263 enlisted family housing	Done	Done	Done	n/a	Done	7/1/2009	7/15/2009	none needed				Done, none,		
1266 enlisted family housing	Done	Done	Done	n/a	Done	7/1/2009	7/15/2009	none needed				Done, none,		
1270 enlisted family housing	Done	Done	Done	n/a	Done	7/1/2009	7/15/2009	none needed				Done, none,		
1289 enlisted family housing	Done	Done	Done	n/a	Done	7/1/2009	7/15/2009	none needed				Done, none,		
1290 enlisted family housing	Done	Done	Done	n/a	Done	7/1/2009	7/15/2009	none needed				Done, none,		
1291 enlisted family housing	Done	Done	Done	n/a	Done	7/1/2009	7/15/2009	none needed				Done, none,		
1293 enlisted family housing	Done	Done	Done	n/a	Done	7/1/2009	7/15/2009	none needed				Done, none,		
649 Army reserve center	Done	Done	Done	n/a	Done	7/1/2009	7/15/2009	none needed				Done, none,		
650 Stilwell Hall	Done	Done	Done	n/a	Done	7/1/2009	7/15/2009	none needed				Done, none,		HQ Structures provided memo justifying no need to stabilize.
651 Administration (Stabilization Required)	Done	Done	Done	n/a	Done	7/1/2009	7/15/2009		completed	7/1/2009	9/1/2009	Done,		ELB. Stabilization of roof truss system needed. TOP and Trust will have to approve stabilization plans. To make the schedule, we will assume approval and prepare contract concurrent with approval process.
652 transformer vault	Done	Done	Done	n/a	Done	7/1/2009	7/15/2009	none needed				Done, none,		
654 guard house	Done	Done	Done	n/a	Done	7/1/2009	7/15/2009	none needed				Done, none,		
661 stable	Done	Done	Done	n/a	Done	7/1/2009	7/15/2009	none needed				Done, none,		
662 stable	Done	Done	Done	n/a	Done	7/1/2009	7/15/2009	none needed				Done, none,		
667 stable	Done	Done	Done	n/a	Done	7/1/2009	7/15/2009	none needed				Done, none,		
669 Incinerator	Done	Done	Done	n/a	Done	7/1/2009	7/15/2009	none needed				Done, none,		
670 chemical storehouse	Done	Done	Done	n/a	Done	7/1/2009	7/15/2009	none needed				Done, none,		
<b>Contract #4 Area</b>														
	3-D surveys	Structural Assessments	Architectural Assessment	Elevation Report	Vibration Threshold Determination	Report	TOP approval of report	Pre- construction stabilization determination	Design stabilization	Contract stabilization	Construct Stabilization	Determine Protection During Construction		Unless otherwise stated below, field review found that none of the buildings in Contract #4 area need stabilization.
107 Switching Station	9/1/2009	9/1/2009	9/1/2009	9/1/2009	9/1/2009	10/1/2009	10/15/2009					9/15/2009		
108 Electric Shop	9/1/2009	9/1/2009	9/1/2009	9/1/2009	9/1/2009	10/1/2009	10/15/2009					9/15/2009		
123 Garage	9/1/2009	9/1/2009	9/1/2009	9/1/2009	9/1/2009	10/1/2009	10/15/2009					9/15/2009		
150 VAC chapel	9/1/2009	Done	9/1/2009	9/1/2009	9/1/2009	10/1/2009	10/15/2009					9/15/2009		
151 VAC house	9/1/2009	Done	9/1/2009	9/1/2009	9/1/2009	10/1/2009	10/15/2009					9/15/2009		
152 VAC restroom	9/1/2009	Done	9/1/2009	9/1/2009	9/1/2009	10/1/2009	10/15/2009					9/15/2009		
153 VAC garage	9/1/2009	Done	9/1/2009	9/1/2009	9/1/2009	10/1/2009	10/15/2009					9/15/2009		
154 VAC maint. Garage	9/1/2009	Done	9/1/2009	9/1/2009	9/1/2009	10/1/2009	10/15/2009					9/15/2009		
VA Cemetery to first road	9/1/2009	not needed	9/1/2009	9/1/2009	9/1/2009	10/1/2009	10/15/2009					9/15/2009		
105 barrack	9/1/2009	Done	9/1/2009	9/1/2009	9/1/2009	10/1/2009	10/15/2009					9/15/2009		
122 gymnasium	9/1/2009	9/1/2009	9/1/2009	9/1/2009	9/1/2009	10/1/2009	10/15/2009					9/15/2009		
128 enlisted family housing	9/1/2009	9/1/2009	9/1/2009	9/1/2009	9/1/2009	10/1/2009	10/15/2009					9/15/2009		
129 enlisted family housing	9/1/2009	9/1/2009	9/1/2009	9/1/2009	9/1/2009	10/1/2009	10/15/2009					9/15/2009		
603 commissary	9/1/2009	9/1/2009	9/1/2009	9/1/2009	9/1/2009	10/1/2009	10/15/2009					9/15/2009		
631 Ammunition storage	9/1/2009	9/1/2009	9/1/2009	9/1/2009	9/1/2009	10/1/2009	10/15/2009					9/15/2009		
632 Ammunition storage	9/1/2009	9/1/2009	9/1/2009	9/1/2009	9/1/2009	10/1/2009	10/15/2009					9/15/2009		
Palace of Fine Arts	9/1/2009	9/1/2009	9/1/2009	9/1/2009	9/1/2009	10/1/2009	10/15/2009					9/15/2009		
1151 Pool	9/1/2009	9/1/2009	9/1/2009	9/1/2009	9/1/2009	10/1/2009	10/15/2009					9/15/2009		

Doyle Drive  
Cultural Resources Mitigation Schedule

Historic American Landscape Survey (HALS)	Field Work	Photography	Methodology Outline	TOPS approval of format	NPS Regional approval of format/ fieldwork	Completion of existing-conditions plan sheets, views and vista plans, etc.	Completion of historical research and writing	TOPs approval of draft	NPS Regional approval of draft	SHPO approval of draft	Final report distributed		General Comments
1152 Gym	9/1/2009	9/1/2009	9/1/2009	9/1/2009	9/1/2009	10/1/2009	10/15/2009				9/15/2009		
1160 warehouse	9/1/2009	9/1/2009	9/1/2009	9/1/2009	9/1/2009	10/1/2009	10/15/2009				9/15/2009		
1170 warehouse	9/1/2009	9/1/2009	9/1/2009	9/1/2009	9/1/2009	10/1/2009	10/15/2009				9/15/2009		
1182 warehouse	9/1/2009	9/1/2009	9/1/2009	9/1/2009	9/1/2009	10/1/2009	10/15/2009				9/15/2009		
1183 warehouse	9/1/2009	9/1/2009	9/1/2009	9/1/2009	9/1/2009	10/1/2009	10/15/2009				9/15/2009		
1184 warehouse	9/1/2009	9/1/2009	9/1/2009	9/1/2009	9/1/2009	10/1/2009	10/15/2009				9/15/2009		
1185 warehouse	9/1/2009	9/1/2009	9/1/2009	9/1/2009	9/1/2009	10/1/2009	10/15/2009				9/15/2009		
1186 warehouse	9/1/2009	9/1/2009	9/1/2009	9/1/2009	9/1/2009	10/1/2009	10/15/2009				9/15/2009		
1187 warehouse	9/1/2009	9/1/2009	9/1/2009	9/1/2009	9/1/2009	10/1/2009	10/15/2009	7/15/2009	9/1/2009		9/15/2009		Possible ELB. One post and pier footing rotted. To be determined if stabilization needed. If so, CT HQ to design stabilization.
1188 warehouse	9/1/2009	9/1/2009	9/1/2009	9/1/2009	9/1/2009	10/1/2009	10/15/2009	7/15/2009	9/1/2009		9/15/2009		See 1188 comment. Not clear which building has problem.
<b>Contract #5 Area</b>													Unless otherwise stated below, field review found that none of these buildings in Contract #4 area need stabilization.
210 Guard House	2/1/2010	2/1/2010	2/1/2010	2/1/2010	2/1/2010	4/1/2010	4/15/2010				6/1/2010		
222 Warehouse	2/1/2010	2/1/2010	2/1/2010	2/1/2010	2/1/2010	4/1/2010	4/15/2010				6/1/2010		
223 Warehouse	2/1/2010	2/1/2010	2/1/2010	2/1/2010	2/1/2010	4/1/2010	4/15/2010				6/1/2010		
227 warehouse	2/1/2010	2/1/2010	2/1/2010	2/1/2010	2/1/2010	4/1/2010	4/15/2010				6/1/2010		
229 bakery	2/1/2010	2/1/2010	2/1/2010	2/1/2010	2/1/2010	4/1/2010	4/15/2010				6/1/2010		
1161 warehouse	2/1/2010	2/1/2010	2/1/2010	2/1/2010	2/1/2010	4/1/2010	4/15/2010				6/1/2010		
1162 warehouse	2/1/2010	2/1/2010	2/1/2010	2/1/2010	2/1/2010	4/1/2010	4/15/2010				6/1/2010		
1163 warehouse	2/1/2010	2/1/2010	2/1/2010	2/1/2010	2/1/2010	4/1/2010	4/15/2010				6/1/2010		
1169 warehouse	2/1/2010	2/1/2010	2/1/2010	2/1/2010	2/1/2010	4/1/2010	4/15/2010				6/1/2010		
1063 med supply	2/1/2010	2/1/2010	2/1/2010	2/1/2010	2/1/2010	4/1/2010	4/15/2010				6/1/2010		
1167 warehouse	2/1/2010	2/1/2010	2/1/2010	2/1/2010	2/1/2010	4/1/2010	4/15/2010				6/1/2010		
<b>Contract #6 Area</b>													
Battery Slaughter	2/1/2010	2/1/2010	2/1/2010	2/1/2010		4/1/2010	4/15/2010				6/1/2010		It is not anticipated that vibration is an issue for these structures.
635 Battery Blaney	2/1/2010	2/1/2010	2/1/2010	2/1/2010		4/1/2010	4/15/2010				6/1/2010		It is not anticipated that vibration is an issue for these structures.
636 Battery Sherwood	2/1/2010	2/1/2010	2/1/2010	2/1/2010		4/1/2010	4/15/2010				6/1/2010		It is not anticipated that vibration is an issue for these structures.
<b>Contract #7 Area</b>													
966 Radio	2/1/2010	2/1/2010	2/1/2010	2/1/2010	2/1/2010	4/1/2010	5/15/2009				5/1/2009		ELB Adjacent to Haul Route. These buildings are in poor condition and, pending more construction information, may need stabilization. They may be of sufficient distance to avoid stabilization.
967 Film Vault	5/30/2009	5/30/2009	5/30/2009	5/30/2009	5/15/2009	7/1/2009	7/15/2009				5/1/2009		
<b>Deconstruction</b>													<b>General Comments</b>
	Write Task Order	Contact appropriate contractors for bids.	Review bids and contractor qualifications.	Recommend contractor to TOP	Award contract	Review deconstruction plan.	TOP approval of deconstruction plan.	Deconstruct					
<b>Building 201 Schedule</b>													
	5/1/2009	12/1/2009	1/1/2010	1/15/2010	2/1/2010	3/1/2010	3/15/2010	tbd					
<b>Comments/Risks</b>	A draft Task Order has been written, forwarded to R/W	A list has been requested from the Trust.	Per the BETP, contractor must have demonstrable experience deconstructing and salvaging historic buildings.		Contracting is the responsibility of R/W, with application of specifications defined in the PA and Built Environment Treatment Plan.			Scheduling will be the responsibility of R/W, with application of specifications defined in the PA and Built Environment Treatment Plan.					R/W contract. Deconstruction and moving cannot begin until the draft HABS and HSRs are approved. The contractor for the deconstruction of Building 201 will need to work in concert with the contractor hired to move the top half.

Doyle Drive  
Cultural Resources Mitigation Schedule

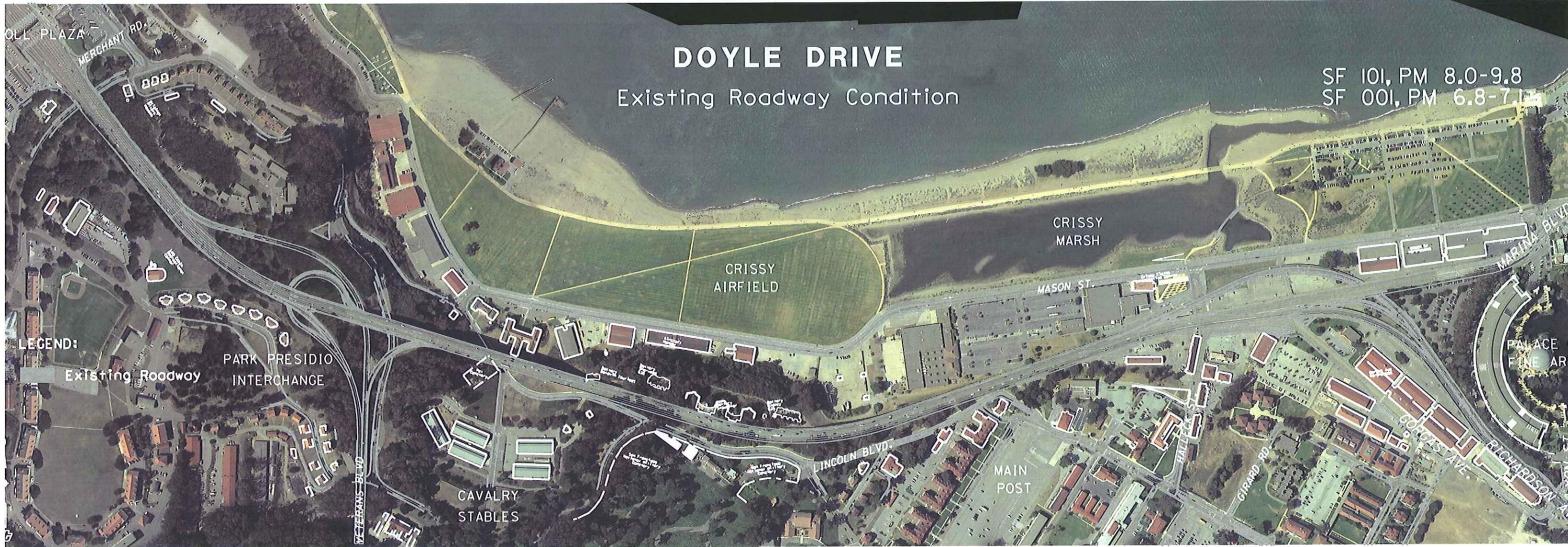
Historic American Landscape Survey (HALS)	Field Work	Photography	Methodology Outline	TOPS approval of format	NPS Regional approval of format/ fieldwork	Completion of existing-conditions plan sheets, views and vista plans, etc.	Completion of historical research and writing	TOPs approval of draft	NPS Regional approval of draft	SHPO approval of draft	Final report distributed			General Comments
<b>Building 204 Schedule</b>	5/1/2009	12/1/2009	1/1/2010	1/15/2010	2/1/2010	3/1/2010	3/15/2010	tbd						
<b>Comments/Risks</b>	see above	see above	see above		see above			see above						R/W contract. Deconstruction cannot begin until the draft HABS has been approved. No deconstruction plan will be provided. A copy of the draft HABS report will provide identification of historic material. The contractor will be expected to provide a salvage plan to the Trust for approval and work with the Trust salvage department, following the salvage and reuse guidelines.
<b>Building 230 Schedule</b>	5/1/2009	12/1/2009	1/1/2010	1/15/2010	2/1/2010	3/1/2010	3/15/2010	tbd						
<b>Comments/Risks</b>	see above	see above	see above		see above			see above						See building 204 Construction Issues.
<b>Moving Building 201</b>	Write Task Order	Location for temporary storage is determined.	Contact appropriate contractors for bids.	Review bids and contractor qualifications	Recommend contractor to TOP	Award contract	Review contractor's plan.	TOP approval of moving and storage plan.	Move	Protect while stored.				R/W contract.
<b>Schedule</b>	7/1/2009	9/1/2009	12/1/2009	1/1/2010	1/15/2010	2/1/2010	3/1/2010	3/15/2010	tbd					
<b>Comments/Risks</b>		Route may be an issue. Currently measuring feasibility.								Architectural monitor will monitor the adequacy of its storage.				
<b>Rehabilitating 201</b>	Write Task Order	Contact appropriate architects for bids.	Review bids and architect qualifications.	Recommend architect to TOP.	Award contract.	Review plans.	TOP review plans and recommend approval to the SHPO							R/W contract. The approval of the design will not be limited to the TOP. Other offices within the Trust will be involved.
<b>Schedule</b>	6/1/2011													
<b>Comments/Risks</b>						Will likely be a number of reviews and changes throughout the review process.								This will take place post-construction
<b>Mitigation Implementation Plan</b>	Write Draft	Approval by TOP	Approval by SHPO	Distribution to PA signatories										
<b>Schedule</b>	Done	Done	6/30/2009	7/31/2009										
<b>Semi-Annual Report</b>														
<b>Schedule</b>	6/30/2009	12/31/2009	6/30/2010	12/31/2010	6/30/2011	12/31/2011	6/30/2012	12/31/2012	6/30/2013	12/31/2013				
<b>Utility Relocation</b>	Amend APE	TOP approval of amended APE	SHPO Concur	Pre-Test Design	Pre-Test	Monitor								
<b>Schedule</b>	Done	Done	Done	Done	7/1/2009	7/1/09 - 8/1/10								Part of ELB
<b>Tree Removal</b>	Monitor	Final Archaeological Report												ELB. Archaeologist to follow ATP protocol.
<b>Schedule</b>	8/1/09 - 11/1/09	12/1/2009												

Doyle Drive  
Cultural Resources Mitigation Schedule

Historic American Landscape Survey (HALS)	Field Work	Photography	Methodology Outline	TOPS approval of format	NPS Regional approval of format/ fieldwork	Completion of existing-conditions plan sheets, views and vista plans, etc.	Completion of historical research and writing	TOPs approval of draft	NPS Regional approval of draft	SHPO approval of draft	Final report distributed			General Comments
<b>Crissy Field Relocation</b>	Amend APE	TOP approval of amended APE	SHPO Concur	Archaeological Testing	Archaeological Findings Memo/Report	Monitor	Distribution of APE, findings to PA signatories							
<b>Schedule</b>	Done	Done	Done	Done	Done	6/22/2009	6/30/2009							
<b>Bio-Mitigation Site: Dragonfly Creek</b>	Amend APE	TOP approval of amended APE	SHPO Concur	Survey	Effects Report	TOP Concurrence	SHPO Concurrence	Distribution of APE, findings to PA signatories						
<b>Schedule</b>	Done	Done	Done	10/1/2009	12/1/2009	12/15/2009	1/15/2010	1/31/2010						
<b>Bio-Mitigation Site: Quartermaster Reach</b>	Amend APE	TOP approval of amended APE	SHPO Concur	Survey	Effects Report	TOP Concurrence	SHPO Concurrence	Distribution of APE, findings to PA signatories						
<b>Schedule</b>	Done	Done	Done	10/1/2009	12/1/2009	12/15/2009	1/15/2010	1/31/2010						
<b>Construction Interpretation</b>														
<b>Schedule</b>														
<b>Construction Monitoring</b>	Contract #3	Contract #4	Contract #5	Contract #6	Contract #7									
<b>Schedule</b>														
<b>GGB NHL Update</b>														
<b>Schedule</b>														Post Construction
<b>Presidio NHL Update</b>														
<b>Schedule</b>														Post Construction
<b>Permanent Interpretation Program</b>														A schedule to commence with interpretive development is pending and will be contingent upon the Trust's interpretive program.
<b>Schedule</b>														

## **APPENDIX B. DOYLE DRIVE CONSTRUCTION PHASING**





# DOYLE DRIVE

Existing Roadway Condition

SF 101, PM 8.0-9.8  
SF 001, PM 6.8-7.1

LEGEND:  
Existing Roadway

OLL PLAZA  
MERCHANT RD.

PARK PRESIDIO  
INTERCHANGE

CAVALRY  
STABLES

CRISSY  
AIRFIELD

CRISSY  
MARSH

MASON ST.

LINCOLN BLVD.

MAIN  
POST

VETERANS BLVD.

GIRARD RD.

CONCIS AVE.

RICHARDSON AV.

MARTINA BLVD.

PALACE OF  
FINE ARTS

# CONTRACT #3: DOYLE DRIVE PROPOSED CONSTRUCTION

Permanent Roadway Section, Ruckman, Southern PPI, SB Presidio Viaduct

EA # 16373X  
SF 101, PM 8.0-9.8  
SF 001, PM 6.8-7.1



# CONTRACT #4: DOYLE DRIVE PROPOSED CONSTRUCTION

At Grade Detour, RW8  
SB Battery Tunnel, Permanent roadway section, Weekend closure

EA # 16374X  
SF 101, PM 8.0-9.8  
SF 001, PM 6.8-7.1

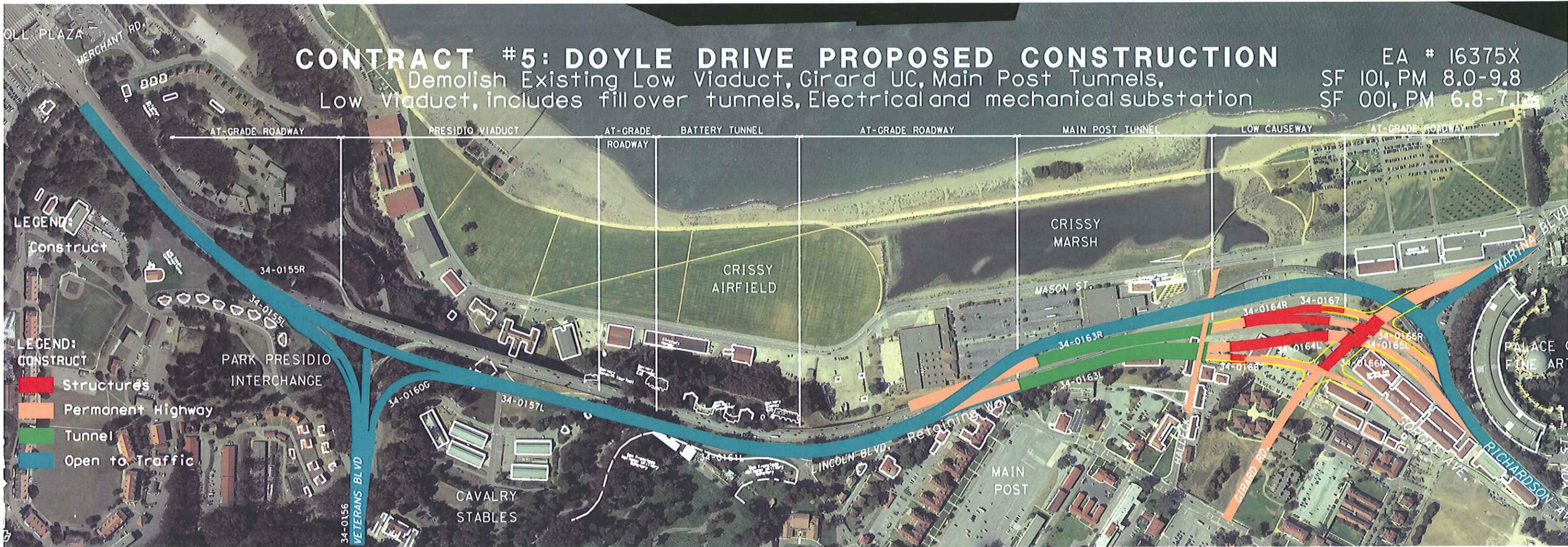


- LEGEND:  
CONSTRUCT
- Temporary Detour
  - Permanent Highway
  - Tunnel

# CONTRACT #5: DOYLE DRIVE PROPOSED CONSTRUCTION

Demolish Existing Low Viaduct, Girard UC, Main Post Tunnels,  
Low Viaduct, includes fill over tunnels, Electrical and mechanical substation

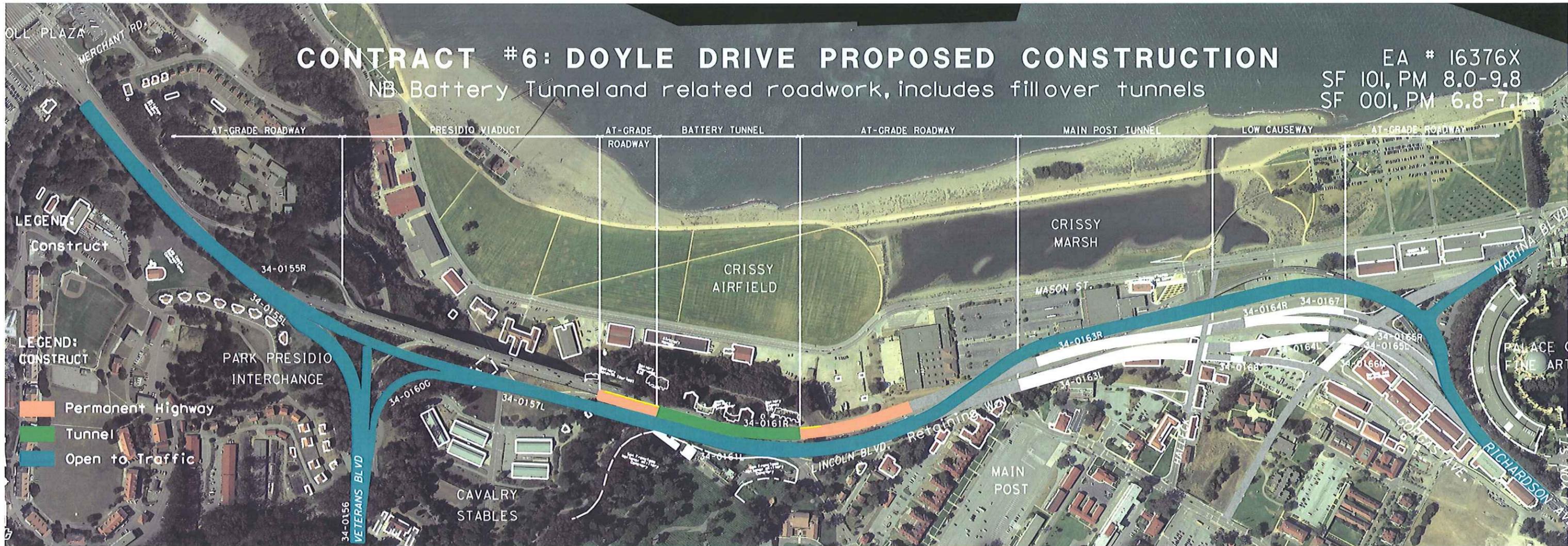
EA # 16375X  
SF 10I, PM 8.0-9.8  
SF 00I, PM 6.8-7.1



# CONTRACT #6: DOYLE DRIVE PROPOSED CONSTRUCTION

NB Battery Tunnel and related roadwork, includes fill over tunnels

EA # 16376X  
SF 101, PM 8.0-9.8  
SF 001, PM 6.8-7.1



- LEGEND:
- Construct
  - LEGEND: CONSTRUCT
  - Permanent Highway
  - Tunnel
  - Open to Traffic

# CONTRACT #7: DOYLE DRIVE PROPOSED CONSTRUCTION

NB Presidio Viaduct, Northern Park Presidio Interchange,  
NB Roadway to Merchant Rd

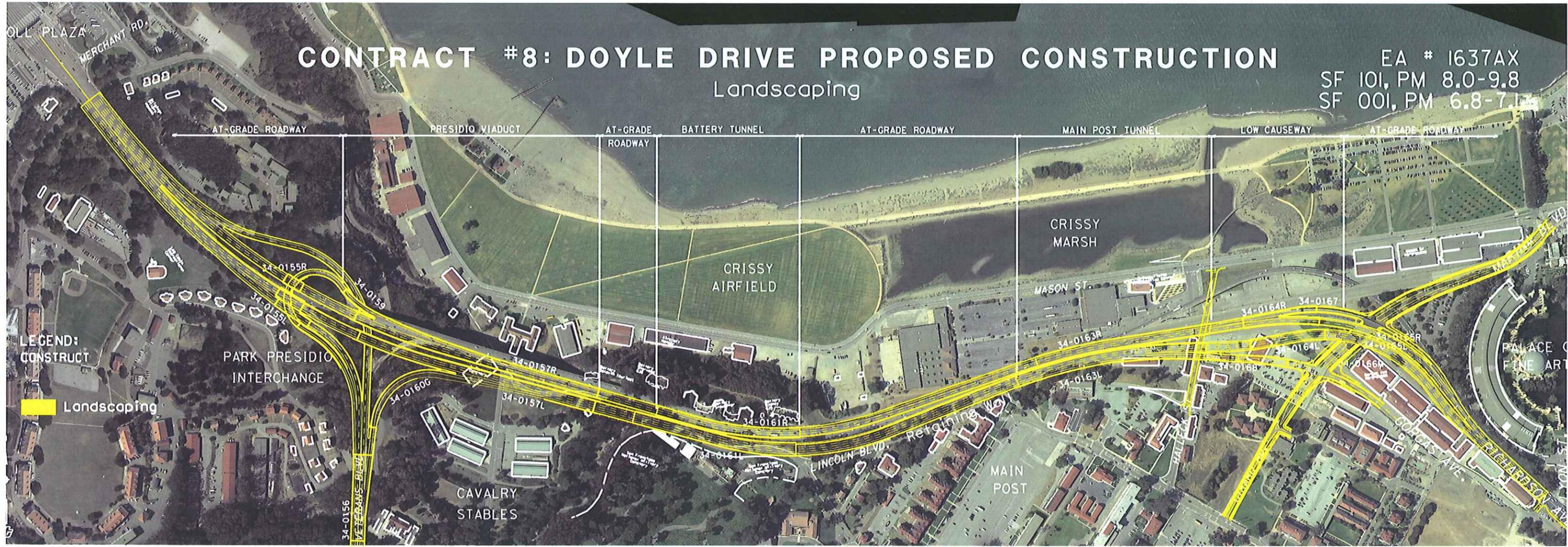
EA # 16377X  
SF 101, PM 8.0-9.8  
SF 001, PM 6.8-7.1



# CONTRACT #8: DOYLE DRIVE PROPOSED CONSTRUCTION

Landscaping

EA # 1637AX  
SF 101, PM 8.0-9.8  
SF 001, PM 6.8-7.1



LEGEND:  
CONSTRUCT  
Landscaping

# DOYLE DRIVE

Construction Complete

SF 101, PM 8.0-9.8  
SF 001, PM 6.8-7.1

