

Appendix A

CEQA Checklist

Supporting documentation of all CEQA checklist determinations is provided in Chapter 2 of this Environmental Impact Report/Environmental Assessment. Documentation of “No Impact” determinations is provided at the beginning of Chapter 2. Discussion of all impacts, avoidance, minimization, and/or compensation measures under the appropriate topic headings in Chapter 2.

Environmental Checklist Form

1. Project title: Golden Gate Bridge Physical Suicide Deterrent System

2. Lead agency name and address:

Golden Gate Bridge, Highway and Transportation District
Administration Building, Golden Gate Bridge Toll Plaza
P.O. Box 9000, Presidio Station
San Francisco, California 94129-0601

3. Contact person and phone number: Jeffrey Lee P.E. PM
415-923-2023

4. Project location: City and County of San Francisco and Marin County.

5. Project sponsor's name and address:

Jeffrey Lee P.E. Project Manager
Golden Gate Bridge, Highway and Transportation District
Administration Building, Golden Gate Bridge Toll Plaza
P.O. Box 9000, Presidio Station
San Francisco, California 94129-0601

6. General plan designation: Not Applicable

7. Zoning: Not Applicable

8. Description of project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)

See Chapter 1 of the EIR/EA

9. Surrounding land uses and setting: Briefly describe the project's surroundings:

See Chapter 2 of the EIR/EA

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)

See Chapter 1 of the EIR/EA

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

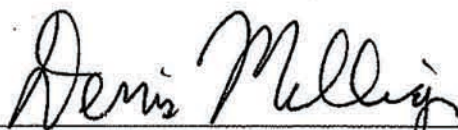
The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|--|---|---|
| <input checked="" type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture Resources | <input type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology /Soils |
| <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology / Water Quality | <input type="checkbox"/> Land Use / Planning |
| <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise | <input type="checkbox"/> Population / Housing |
| <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation/Traffic |
| <input type="checkbox"/> Utilities / Service Systems | <input type="checkbox"/> Mandatory Findings of Significance | |

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.


Denis J. Mulligan, P.E. District Engineer

June 19, 2008
Date

EVALUATION OF ENVIRONMENTAL IMPACTS:

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
 - a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significance

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
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I. AESTHETICS -- Would the project:

- | | | | | |
|--|-------------------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Have a substantial adverse effect on a scenic vista? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

II. AGRICULTURE RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

III. AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

- a) Conflict with or obstruct implementation of the

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
IV. BIOLOGICAL RESOURCES -- Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
V. CULTURAL RESOURCES -- Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
VI. GEOLOGY AND SOILS -- Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
VII. HAZARDS AND HAZARDOUS MATERIALS B Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
VIII. HYDROLOGY AND WATER QUALITY				
-- Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
IX. LAND USE AND PLANNING - Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
X. MINERAL RESOURCES -- Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XI. NOISE B Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

XII. POPULATION AND HOUSING -- Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

XIII. PUBLIC SERVICES

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

XIV. RECREATION --

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

XV. TRANSPORTATION/TRAFFIC -- Would the project:

a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

XVI. UTILITIES AND SERVICE SYSTEMS B
Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project=s projected demand in addition to the provider=s existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project=s solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

XVII. MANDATORY FINDINGS OF SIGNIFICANCE --

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
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animal or eliminate important examples of the major periods of California history or prehistory?

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

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

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Appendix B

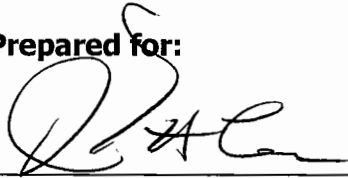
Draft Section 4(f) Evaluation

APPENDIX B
Draft
SECTION 4(F) EVALUATION

Golden Gate Bridge Physical Suicide Deterrent System Project
City and County of San Francisco and County of Marin, California

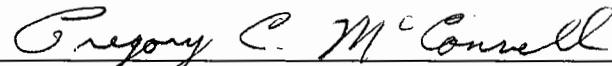
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The environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 U.S.C. 327.

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1.0 INTRODUCTION

1.1 SECTION 4(f)

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 U.S.C. 303, declares that "it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation land, wildlife and waterfowl refuges, and historic sites."

Section 4(f) specifies that the Secretary [of Transportation] may approve a transportation program or project . . . requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if:

- 1) there is no prudent and feasible avoidance alternative to the use of the land from the Section 4(f) property; and
- 2) the program or project includes all possible planning to minimize harm to the Section 4(f) property resulting from the use.

Section 4(f) further requires consultation with Department of the Interior and, as appropriate, the involved offices of the Departments of Agriculture (USDA) and Housing and Urban Development (HUD) in developing transportation projects and programs, which use lands protected by Section 4(f). If historic sites are involved, then coordination with the State Historic Preservation Officer is also needed.

Consultation with the USDA would occur whenever a project uses Section 4(f) land from the National Forest System. Consultation with HUD would occur whenever a project uses Section 4(f) land for/on which certain HUD funding had been utilized. Since neither of these conditions applies to the proposed project, consultation with USDA and HUD is not required.

In general, a Section 4(f) "use" occurs when: 1) Section 4(f) land is permanently incorporated into a transportation facility; 2) there is a temporary occupancy of Section 4(f) land that is adverse in terms of the Section 4(f) preservationist purposes as determined by specified criteria (23 CFR §774.13[d]; and 3) Section 4(f) land is not incorporated into the transportation project, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially impaired (constructive use) (23 CFR §774.15[a]).

1.2 SECTION 4(f) AND SECTION 106

One of the issues addressed in this evaluation concerns the application of Section 4(f) to historic resources. The consideration of historic resources under Section 4(f) differs from their consideration under Section 106 of the National Historic Preservation Act. Section 4(f) applies only to programs and projects undertaken by the U.S. Department of Transportation and only to publicly owned public parks, recreation areas, and wildlife refuges, and to historic sites on or eligible for the National Register for Historic Places (NRHP). For protected historic sites, Section 4(f) is triggered by the "use" or occupancy of an historic site by a proposed project. There is also the situation in which a project does

not actually permanently incorporate land from an historic site, but because of its proximity impacts to the historic site, is determined by the U.S. Department of Transportation to substantially impair the qualities that made the historic site eligible for the NRHP. This is referred to as a "constructive use." In addition, when a temporary occupancy of Section 4(f) land meets specified conditions (23 CFR §774.15[a]), the occupancy is considered so minimal that it does not constitute a "use" within the meaning of Section 4(f).

Section 106 is a different requirement that applies to any federal agency and addresses direct and indirect "effects" of an action on historic properties. Section 106 evaluates "effects" on an historic site, while Section 4(f) protects an historic site from "use" by a project. Therefore, even though there may be an "adverse effect" under Section 106 because of the effects upon the site, the provisions of Section 4(f) are not triggered if the project would not result in an "actual use" (permanent or certain temporary occupancy of land) or a "constructive use" (substantial impairment of the features or attributes which qualified the site for the NRHP).

2.0 DESCRIPTION OF THE PROPOSED PROJECT

The Golden Gate Bridge (Bridge) is owned and operated by the Golden Gate Bridge, Highway and Transportation District. It is located within the San Francisco Bay Area. The proposed project is located in the City and County of San Francisco and Marin County (see Figure 1). The project proposes to construct a physical suicide deterrent system along both sides of the Golden Gate Bridge (Bridge). As shown on Figure 1, the project limits are from the San Francisco Abutment to the Marin Abutment of the Bridge. The following section discusses the need for the project and provides a description of project alternatives.

2.1 PURPOSE AND NEED FOR PROJECT

The purpose of the proposed project is to consider a physical suicide deterrent system on the Bridge in order to reduce the number of injuries and deaths associated with jumping off the Bridge. The need for the project stems from the fact that the 4-foot height of the outside handrail does not sufficiently deter individuals who are not using the sidewalk for its intended purposes from climbing over the outside handrail, and there is no other physical barrier beyond the outside handrail preventing an individual from jumping once the outside handrail is scaled.

The existing non-physical measures to deter suicides on the Bridge still result in approximately two dozen deaths per year from individuals jumping off the Bridge. The non-physical measures have stopped approximately two-thirds of those individuals with the intent to commit suicide at the Bridge; despite these measures one-third are not prevented.

A complete discussion of the purpose and need for the project is provided in Chapter 1 of the Draft Environmental Impact Report/Environmental Assessment (DEIR/EA).

2.2 PROJECT DESCRIPTION

Several build alternatives have been developed that meet the purpose and need for the project and additional criteria established by the Golden Gate Bridge, Highway and Transportation District (District). The following describes alternatives under consideration.

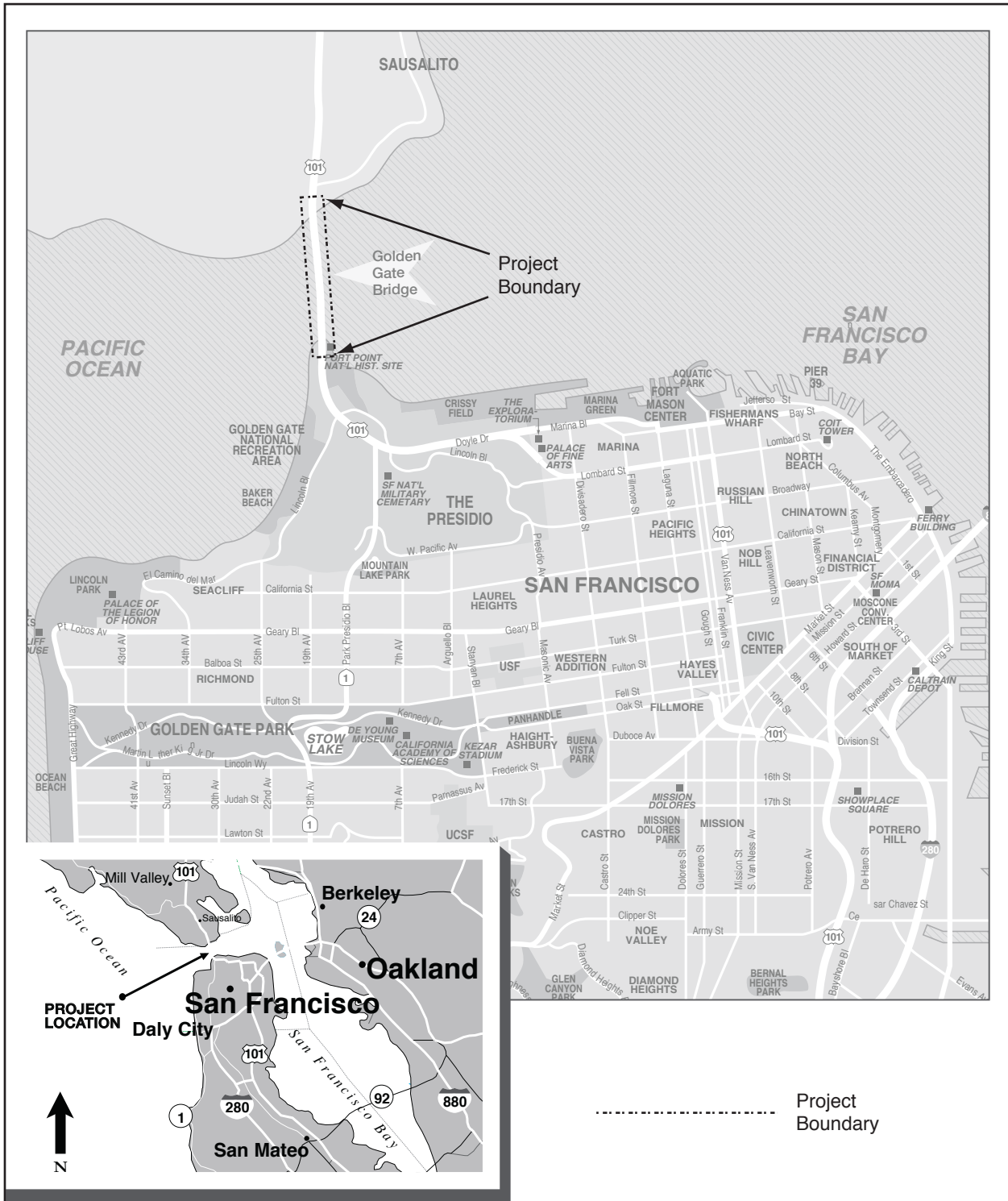


Figure 1 - Golden Gate Bridge Project Location

A more detailed discussion of the project alternatives, including exhibits, is provided in Chapter 1 of the Draft EIR/EA.

The alternatives were developed after the first phase of the project, wind tunnel testing, was completed. Wind tunnel testing on the generic concepts was performed first in order to determine the limiting characteristics of each concept with respect to wind. The wind tunnel testing and analysis determined that any physical addition to the Bridge would adversely affect the Bridge's aerodynamic stability. However, testing also determined that wind devices could be installed to mitigate the adverse effects associated with the additions.

All of the build alternatives developed and included in this document require the addition of one of two different types of wind devices. The first type of wind device is called a fairing and consists of a curved element placed at two locations below the sidewalk on the top chord of the west stiffening truss. The second type of wind device is called a winglet and consists of a curved element placed above the sidewalk at the top of the alternative posts.

Previous projects at the Bridge, such as the Public Safety Railing Project (2003) and the Seismic Retrofit Project (currently underway) were subject to Section 106 and Section 4(f) evaluations and CEQA environmental analysis. The fairing wind device and modifications to the outside handrail were previously evaluated as part of the District's seismic retrofit program. No adverse Section 106 effects or Section 4(f) uses were identified for either project. Therefore, this report will not discuss the fairing wind device. The winglet is a new feature that has not been evaluated and, as such, will be discussed in this report.

2.2.1 Build Alternatives

Alternative 1A-Add Vertical System to Outside Handrail

Alternative 1A would construct a new barrier on top of the outside handrail (and concrete rail at north anchorage housing and north pylon). The barrier would extend 8 feet vertically from the top of the 4-foot-high outside handrail for a total height of 12 feet. The barrier's vertical members would be comprised of ½-inch diameter vertical rods spaced at 6 ½ inches on center, leaving a 6-inch clear space between rods. The existing rail posts would be replaced with new 12-foot-high outside rail posts at the same locations and of the same cross-section, size, material, and color of the original posts. The top horizontal header would consist of a chevron-shaped member matching the top element of the outside handrail. The vertical rods would be attached to the horizontal header and outside handrail. The entire system would be constructed of steel that would be painted International Orange to match the material and color of the outside handrail. Transparent panels would be installed at the belvederes (widened areas located on both the east and west sidewalks) and towers on both sides of the Bridge. Transparency would be preserved through ongoing maintenance of the panels. This alternative assumes that the modification to the outside handrail on the west side of the Bridge between the two main towers and the installation of the wind fairings have been completed as part of the previously approved seismic retrofit project.

Because maintenance workers would no longer be able to climb over the outside handrail to reach the below-deck maintenance traveler, gates would be located at a spacing of 150 feet on center to generally match the locations of the existing light posts and gates on the

public safety railing. The gates would be 8 feet wide and 8 feet high (two 4-foot-wide by 8-foot-high panels), and match the appearance of the vertical system. The frame for each gate door would be constructed of 2-inch by 2-inch steel members. The gates would be located on top of the outside handrail. The outside handrail would remain in place.

Alternative 1B – Add Horizontal System to Outside Handrail

Alternative 1B would construct a new barrier on top of the outside handrail (and concrete rail at north anchorage housing and north pylon) consisting of $\frac{3}{8}$ -inch diameter horizontal steel cables at 6 inches on center leaving $5\frac{5}{8}$ inches clear space between cables. The cable diameter matches the cables on the public safety railing. The new barrier would extend 8 feet above the top of the 4-foot-high outside handrail for a total height of 12 feet. The existing rail posts would be replaced with new 12-foot-high outside rail posts at the same locations and of the same cross-section, size, material, and color of the original posts. The entire system would be constructed of steel that would be painted International Orange to match the material and color of the outside handrail. Transparent panels would be installed at the belvederes and towers on both sides of the Bridge. Transparency would be preserved through ongoing maintenance of the panels.

A transparent winglet would be placed on top of the outside rail posts to ensure aerodynamic stability and impede climbing over the barrier. The winglet would be a transparent 42-inch-wide panel with a slight concave curvature extending approximately 2 feet over the sidewalk. The transparent winglet would run the length of the suicide deterrent barrier, except at the north and south towers. The transparent winglet would be notched at the suspender ropes and light posts.

Because maintenance workers would no longer be able to climb over the outside handrail to reach the below-deck maintenance traveler, gates would be located at a spacing of 150 feet on center to generally match the locations of the existing light posts and gates on the public safety railing. The gates would be 8 feet wide and 8 feet high (two 4-foot-wide by 8-foot-high panels), and match the appearance of the horizontal system. The frame for each gate door would be constructed of 2-inch by 2-inch steel members. The gates would be located on top of the outside handrail. The outside handrail would remain in place.

Alternative 2A – Replace Outside Handrail with Vertical System

Alternative 2A would construct a new vertical 12-foot-high barrier consisting of $\frac{1}{2}$ -inch diameter vertical steel rods spaced at $4\frac{1}{2}$ inches on center, leaving a 4-inch clear space between rods. A rub rail would be installed at the same height as the public safety railing (4 feet 6 inches). The existing rail posts would be replaced with new 12-foot-high outside rail posts at the same locations and of the same cross-section, size, material, and color of the original posts. The top horizontal header would consist of a chevron-shaped member matching the top element of the outside handrail to be removed. The vertical rods would be attached to the header and bottom barrier element. The entire system would be constructed of steel that is painted International Orange to match the material and color of the outside handrail. Transparent panels would be installed along the upper 8 feet at the belvederes and towers on both sides of the Bridge. Transparency would be preserved through ongoing maintenance of the panels. This alternative assumes that the modification to the outside handrail on the west side of the Bridge between the two main towers and the installation of the wind fairings have been completed as part of the previously approved seismic retrofit project.

Because maintenance workers would no longer be able to climb over the outside handrail to reach the below-deck maintenance traveler, gates would be located at a spacing of 150 feet on center to generally match the locations of the existing light posts and gates on the public safety railing. The gates would be 8 feet wide (two 4-foot-wide panels) and 12 feet high, and match the appearance of the vertical system. The frame for each gate door would be constructed of 2-inch by 2-inch steel members. A rub rail would be located at a height of 4 feet 6 inches, matching the height of the public safety railing.

Alternative 2B – Replace Outside Handrail with Horizontal System

Alternative 2B would construct a new 10-foot-high barrier consisting of $\frac{3}{8}$ -inch diameter steel horizontal cables. The cables in the lower 3 $\frac{1}{2}$ foot section would be spaced at 4.4 inches on center, while the cables in the upper 6 $\frac{1}{2}$ foot section would be spaced 6 inches on center. A rub rail would be installed at the same height as the public safety railing (4 feet 6 inches). The existing rail posts would be replaced with new 10-foot-high outside rail posts at the same locations and of the same cross-section, size, material, and color of the original posts. The entire system would be constructed of steel that would be painted International Orange to match the material and color of the outside handrail. Transparent panels would be installed along the upper 6 $\frac{1}{2}$ -foot portion at the belvederes and towers on both sides of the Bridge. Transparency would be preserved through ongoing maintenance of the panels.

A transparent winglet would be placed on top of the rail posts to ensure aerodynamic stability and impede climbing over the barrier. The winglet would be a clear 42-inch-wide transparent panel with a slight concave curvature extending approximately 2 feet over the sidewalk. The transparent winglet would run the length of the suicide deterrent barrier, except at the north and south towers. The transparent winglet would be notched at the suspender ropes and light posts.

Because maintenance workers would no longer be able to climb over the outside handrail to reach the below-deck maintenance traveler, gates would be located at a spacing of 150 feet on center to generally match the locations of the existing light posts and gates on the public safety railing. The gates would be 8 feet wide (two 4-foot-wide panels) and 10 feet high, and match the appearance of the horizontal system. The frame for each gate door would be constructed of 2-inch by 2-inch steel members. A rub rail would be located at a height of 4 feet 6 inches, matching the height of the public safety railing.

Alternative 3 – Add Net System

Alternative 3 would construct a horizontal net approximately 20 feet below the sidewalk and approximately 5 feet above the bottom chord of the exterior main truss. Use of such net installations for suicide prevention on other facilities have resulted in greatly reduced fatalities and suicide attempts. Should individuals jump, they would be expected to survive the fall and could be rescued. The net would extend horizontally approximately 20 feet from the Bridge and be covered with stainless steel cable netting incorporating a grid between 4 and 10 inches. The horizontal support system would connect directly to the exterior truss and be supported by cables back to the top chord of the truss. The support system for the netting would include cables that would pre-stress the netting to help keep it taut and not allow the wind to whip the netting.

The horizontal net would consist of independent 25-foot sections that could be rotated vertically against the truss to allow the maintenance travelers to be moved. The net and the steel horizontal support system would be painted to match the International Orange Bridge color. With this alternative, there would be no modifications to the above-deck Bridge features. This alternative assumes that the modification to the outside handrail on the west side of the Bridge between the two main towers and the installation of the wind fairings have been completed as part of the previously approved seismic retrofit project.

2.2.2 No-Build Alternative

The No-Build Alternative represents an alternative and a baseline for future year conditions if no other actions are taken in the study area beyond what is already in place. Under this alternative, the Bridge's sidewalks would remain open to the public, with the existing outside railing remaining four (4) feet high. The No-Build Alternative would continue the existing non-physical suicide deterrent programs at the Bridge, which include emergency counseling telephones, public safety patrols, and employee training. These programs are more fully described in Chapter 1 of the EIR/EA.

Individuals of varying heights, weights, ages, and sexes, not using the Bridge sidewalks for their intended purpose, could climb over the existing railing and jump to their death. There would be no other physical barrier preventing an individual from jumping, if the railing were to be scaled. Suicide rates under this alternative would likely follow historical trends as indicated below.

- In 2005, there were 622 known suicides in the nine Bay Area counties, of which 23 were estimated to occur at the Bridge. Further, in that same year, 58 persons contemplating suicide were successfully stopped. In 2006, 31 suicides are known to have occurred at the Bridge, while 57 individuals were stopped. Similarly, in 2007, 39 suicides occurred and 90 were stopped. The individuals taken off of the Bridge are transported to a local hospital for a psychiatric evaluation pursuant to Section 5150 of the California Welfare and Institutions Code.
- A variety of non-physical measures to deter suicides on the Bridge have been in place for many years. However, there are still approximately two dozen deaths that occur each year as a result of individuals jumping off the Bridge. The non-physical measures have stopped approximately two-thirds of those individuals with the intent to commit suicide at the Bridge; despite these measures one-third are not prevented.
- Although official figures have not been maintained through the years, since 1937 it is estimated that approximately 1,300 individuals have committed suicide by jumping off of the Bridge.

2.2.3 Construction Activities

Construction of any of the physical suicide deterrent system build alternatives would be performed in sections, beginning on the west side of the Bridge and ending on the east side of the Bridge. It is anticipated that it would take 12 to 18 months per side to complete installation of any of the alternatives. Construction operations would be staged to minimize effects on pedestrians, cyclists and motor vehicles using the Bridge.

The work on the west sidewalk would be specified to be performed weekdays during the hours when the sidewalk is not open to the public, so as not to affect the commuter and recreational use on the west sidewalk. The work on the east sidewalk would be specified to be performed primarily at night. Should it be necessary to perform work during the day on the east sidewalk, a 6-foot wide minimum clear passageway would be maintained through the work area with appropriate traffic control and other protective measures in place. These provisions have been successfully used on the seismic retrofit project, the Public Safety Railing project and during the District's on-going maintenance and operations activities.

Anticipated equipment needed during construction of the alternatives would include a boom truck for delivery of material, a crane, welding equipment, a generator, lighting for night work, and general power hand tools.

3.0 DESCRIPTION OF SECTION 4(f) PROPERTIES

The Golden Gate Bridge Physical Suicide Deterrent System Project is located in proximity to several publicly owned parks and recreational facilities of national and international prominence and local value. Additionally, the Section 106 area of potential effects (APE) contains several historic properties, including the Golden Gate Bridge (Bridge) (project site). The following description of Section 4(f) properties includes properties within the General APE and parks and recreational facilities within approximately one-half mile of the project site.

The properties within the General APE include the Bridge, Doyle Drive and the Roundhouse Gift Center. Properties within one-half mile of the project include recreational facilities that are part of the Presidio of San Francisco, Golden Gate National Recreation Area and East Fort Baker. Figures 2 and 3 show the location of these resources relative to the project site. Exhibit 3-1 lists the Section 4(f) resources in proximity to the project.

3.1 GOLDEN GATE BRIDGE

3.1.1 The Golden Gate Bridge

The Bridge is a Section 4(f) resource because it is a publicly owned historic resource and a recreation resource with uses occurring on and around the Bridge. It is a multi-component historic structure that has been determined eligible for listing in the National Register of Historic Places (NRHP), is California State Historic Landmark No. 974, and is on the California Register of Historical Resources. It is also San Francisco City Landmark No. 222. Historic resources that are listed on the NRHP and resources that are eligible for it are viewed similarly under the provisions of Section 4(f) in that all such resources are protected by Section 4(f). Listing on the NRHP, while conferring a certain distinction, does not result in additional protections to historic resources under the provisions of Section 4(f).

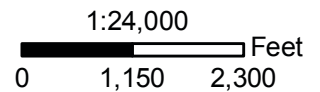
The Bridge provides recreational function through visitor serving facilities, lookout areas, and use of the Bridge sidewalks by bicyclists, joggers, and sightseers. It is one of the most well-known, frequently visited, and internationally recognized suspension bridges in the world, spanning the Golden Gate Strait at the mouth of the San Francisco Bay and connecting San Francisco and Marin Counties (see Figure 1), and receiving



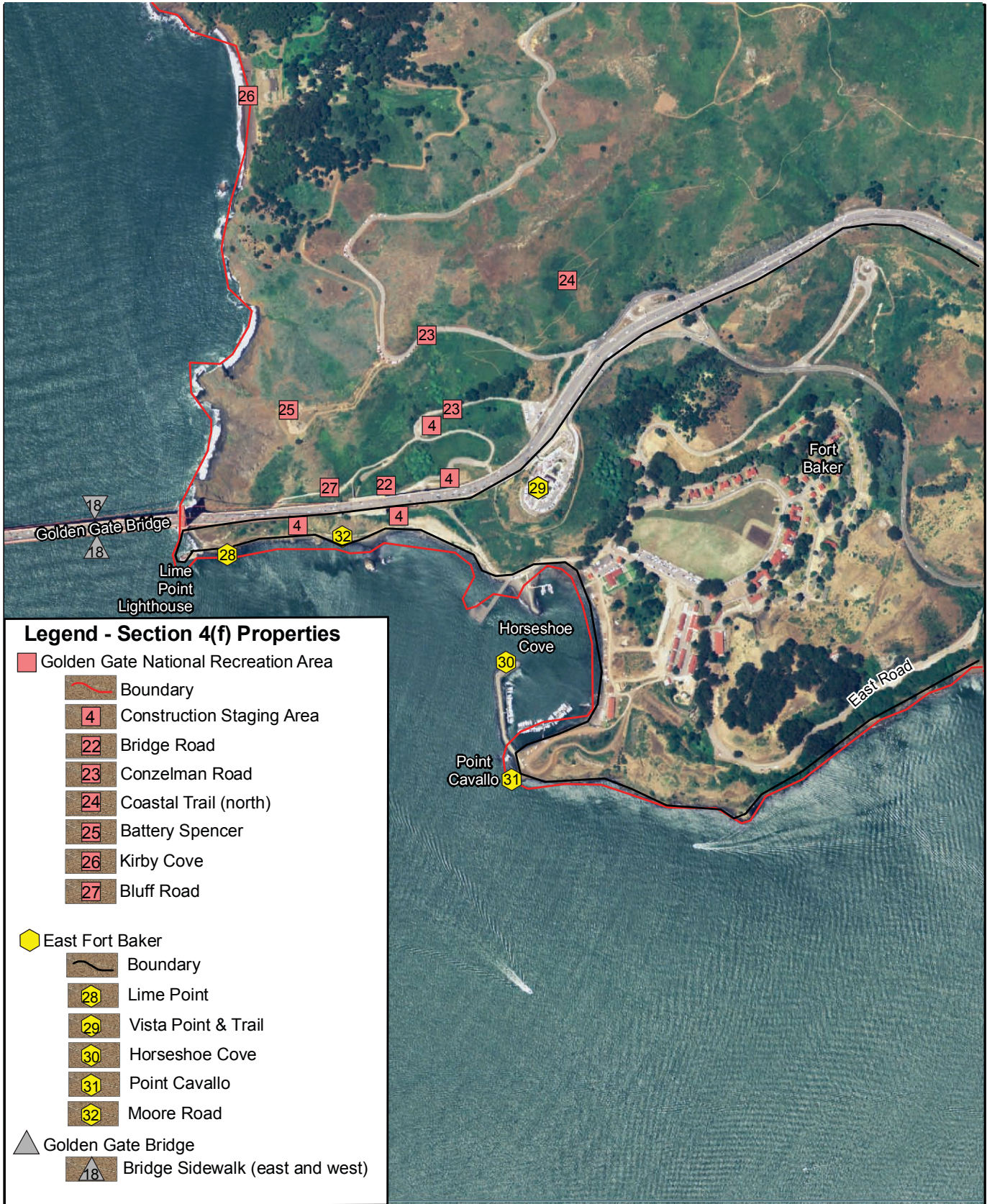
Legend

- Golden Gate National Recreation Area Boundary
- Presidio Boundary

Figure 2 - Section 4(f) Resources: San Francisco Approach



Source: Imagery - NAIP 2005/2006; NPS website; GGNRA website



Legend

- Golden Gate National Recreation Area Boundary
- East Fort Baker Boundary

Figure 3 - Section 4(f) Resources: Marin Approach

1:12,000
 0 625 1,250 Feet

NORTH

Source: Imagery - NAIP 2005/2006; NPS website; GGNRA website

Exhibit 3-1 - Section 4(f) Resources in Project Vicinity

PROPERTY	HISTORIC AND RECREATION RESOURCES IN PROXIMITY TO THE GOLDEN GATE BRIDGE PHYSICAL SUICIDE DETERRENT SYSTEM PROJECT
Golden Gate Bridge	Roundhouse Gift Center Toll Plaza Undercrossing
Presidio of San Francisco	Fort Point National Historic Site Battery East Road and Bike Turnouts (formerly Battery East Area) Marine Drive Doyle Drive Crissy Field Coastal Trail (south) Golden Gate Promenade / SF Bay Trail Overlook at Fort Scott (off Coastal Trail)
GGNRA	Bluff Road Bridge Road Conzelman Road Coastal Trail (north) Battery Spencer
East Fort Baker	Vista Point and Trail Lime Point Moore Road (Lime Point Trail) Horseshoe Cove Point Cavallo

approximately 10 million visitors yearly. The Bridge has been recognized by the American Society of Civil Engineers on at least three occasions: as one of the Seven [Engineering] Wonders of the World in 1955, as a National Civil Engineering Landmark in 1984, and as a Monument of the Millennium in 2001.

The Bridge is widely considered one of the most beautiful examples of bridge engineering, both as a structural design challenge and for its aesthetic appeal. It was the largest suspension bridge in the world when it was completed in 1937 and has become an internationally recognized symbol of San Francisco. The Bridge is distinctive because of its striking design reflected by its unique and distinguishing architectural qualities and characteristics. It represents the great period of suspension bridge engineering of the 1920s and 1930s, with never-before-seen suspension bridge aesthetics that emphasized light and simplicity, rather than solidity and complexity. The Bridge embodies new shapes and forms that transcend previous bridge designs and showcase its tremendous scale and beauty.

Combining Art Deco and Streamline Moderne design with advanced engineering technologies, and situated against a dramatic coastal backdrop, the Bridge has been described as an environmental sculpture and is widely noted for its harmonious blending of the natural and built environment. The extraordinary setting intensifies the visual power of the Bridge. From its north-south alignment, the Bridge provides panoramic views of the rugged beauty and urban diversity that surround it, encompassing the Marin hills, the Presidio of San Francisco Historic Landmark District, the skyline of San Francisco, Alcatraz and Angel Islands of San Francisco Bay, and the wide expanse of the Pacific Ocean and coastline. It is one of the most photographed places in the world, with views of the Bridge typically taken from Golden Gate National Recreation Area (GGNRA) beaches and trails southwest of the Bridge, San Francisco Bay, the Presidio, Fort Point, Fort Baker, the Marin Headlands, and from the air. The setting and the views contribute to the popularity of the sidewalks and to people's affection toward the structure.

Character-Defining Features of the Bridge

The primary character-defining elements and decorative features of the Bridge and its contributing elements are its major structural elements (the suspension Bridge anchorages, pylons, towers, main cables, suspender ropes, main span, and side spans), the plate girder bridge, arch bridge, and truss bridges of the approaches, the southern approach roadway, Round House, and Toll Crossing Underpass.

The Art Deco / Moderne design of these structures is a high-ranking character-defining feature of all of these structures and their use within the overall Bridge. The outside handrail from the original construction and outside handrail replicated to match original, as well as the layout of the sidewalks – width and construction around towers and pylons – that allow pedestrian use of Bridge, are essential character-defining features of the property (see Exhibit 3-2). The sidewalks have been extended and widened, and serve as important, human-scale features of the Bridge that make it readily accessible to the commuting and visiting public.



Pedestrians have access to the eastern pathway during daylight hours (from 5:00 a.m. to 6:00 p.m. or 9:00 p.m. depending on the season). Bicyclists have toll-free 24-hour access to either the eastern or the western pathways depending on the day, hour, and season.

Other character-defining features that are important in conveying the artistic value of the property are the electroliers (light posts), the International Orange paint color, and remaining concrete railings. The outside handrails are simplified modest, uniform elements placed far enough apart to allow motorists an unobstructed view. The electroliers (light posts) have a lean, angled form and the portal bracing of the main towers have decorative cladding.

Contributing Elements of the Bridge

The basic components of the main suspension span and side spans, the pylons, approach viaducts, and Fort Point Arch, are also interconnected with the other contributing elements: the Presidio Approach Road, the Roundhouse, and the Toll Plaza Undercrossing (Bridge Number 34 0069). The bridge number is the official structure number assigned by the California State Department of Transportation (Department) to track structure maintenance. The underpass is an original component of the Bridge that appears to be eligible as a contributing element of the Bridge, but was not individually evaluated in the 1993 or 1997 survey.



3.1.2 The Roundhouse Gift Center

The Roundhouse Gift Center (see Exhibit 3-3) is a Section 4(f) resource because it is a contributing element of the Golden Gate Bridge historic property (MacDonald, 1993) and was determined eligible for the NRHP (MacDonald, 1995). The Roundhouse Gift Center is part of a complex of buildings designed and built as part of the original Bridge project. It was designed and built in 1939. It was remodeled in 1955 and again in 1987. Although the interior was completely altered, the exterior of the building has changed very little.

3.1.3 Toll Plaza Undercrossing

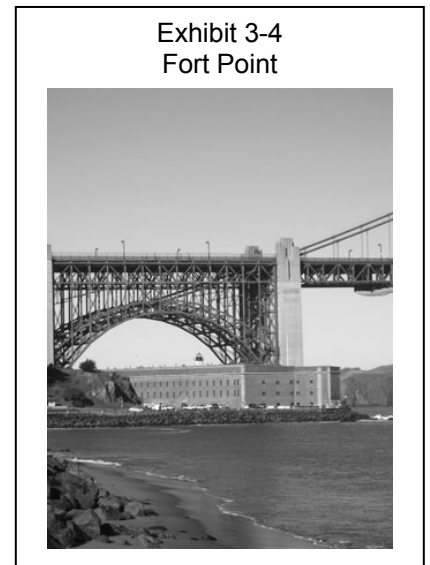
The Toll Crossing Underpass (Bridge Number 34 0069) is a Section 4(f) resource because it is a contributing element of the Golden Gate Bridge. It is an original component of the Bridge, completed in 1936. The tunnel-like undercrossing is a single span concrete tee beam structure designed to allow vehicular traffic and pedestrians to cross from one side of the roadway to the other underneath the Toll Plaza using surface streets. Department bridge logs indicate that the undercrossing is about 33 feet long and 291 feet wide, and that it has not undergone major widening or extension since it was completed.

3.2 PRESIDIO OF SAN FRANCISCO

The Presidio of San Francisco (the Presidio) is a Section 4(f) resource because it is a publicly owned recreation area and historic property and a unit of the GGNRA national park. It is also listed in the NRHP (register # 66000232) and is a National Historic Landmark District (NHL). It is located in the northwesternmost point of the San Francisco peninsula, bordered in the north and the west by the San Francisco Bay and the Pacific Ocean, respectively (see Figure 2). The property is approximately 600-hectares (1,491 acres) and includes several significant historic sites and recreation areas. In 1998, management of the Presidio was divided between two federal agencies: the Presidio Trust manages the inland 1,168 acres of the Presidio and the National Park Service retains management of the 323 waterfront acres. The Trust's mission is to preserve and enhance the natural, cultural, scenic, and recreation resources of the Presidio for public use in perpetuity, and to achieve long-term financial sustainability.

The Presidio's diverse points of interest include historic military forts and batteries, forests, beaches, and spectacular vistas. Along the approximately 37 miles of trails within the Presidio, recreational activities include walking, jogging, biking, camping, sightseeing, and bird watching. On the waterfront, visitors can surf and windsurf, sail, fish, and swim. The Presidio Trails and Bikeways Plan is the guide for directing a network of trails and bikeways that would enhance the public's exploration and experience of the Presidio, while also protecting its natural and cultural resources. The plan identifies three basic trail classifications: pedestrian trails, multi-use trails, and on-street bikeways. The Presidio also includes the following recreational facilities: a golf course; swimming pool; volleyball, basketball, and tennis courts; gymnasium; bowling center; several small playgrounds, athletic fields, and picnic areas; and a group camping area. More than five million visitors enjoy the Presidio annually.

Pedestrian, bicycle, and vehicular access to the Presidio is provided at the following locations: Lincoln Boulevard (at the southwest), Arguello Boulevard (at the south), Presidio Boulevard and Broadway (at the southeast), Lombard Street and Gorgas Avenue (at the east), and Marina Boulevard (at the northeast). Vehicular access to the Presidio is also available from Doyle Drive via the off-ramp to Merchant Road at the Golden Gate Bridge Toll Plaza. Highway 101 crosses through the northern part of the Presidio, from the Toll Plaza to the eastern boundary of the Presidio. Veterans Boulevard carries Highway 1 on a north-south alignment through the Presidio NHL and intersects with Doyle Drive just northwest of the Cavalry Stables buildings. In addition, the Presidio provides 11 miles of pedestrian trails and 14 miles of bicycle access including The Coastal Trail, the Golden Gate Promenade, and the Presidio trail system.



3.2.1 Fort Point National Historic Site

Fort Point (see Exhibit 3-4) is a publicly owned historic and recreation resource, is listed on the NRHP, is a part of the Presidio NHL and is, therefore, a Section 4(f) resource. It is also a National Historic Site (CA-SFr-48H). The fort is located under the Fort Point Arch of the Bridge on the eastern side. The fort is a Civil War-era structure built between 1853

and 1861 and is the only brick casemated coastal defense fort on the Pacific Coast of its kind. It is listed on the California Register of Historical Resources and is a Civil Engineering Landmark (Garaventa, 1993). The fort is an important educational resource and provides recreational opportunities including, fishing, surfing, and views of the Bay.

3.2.2 Battery East Road Bike and Pedestrian Turnouts

The Battery East Road Bike and Pedestrian Turnouts are used for recreational purposes, are a part of the GGNRA, and are thus considered a Section 4(f) resource (see Exhibit 3-5). The area includes a collection of Civil War-era batteries, which extend along the area parallel to Battery East Road. The area provides views of the Bridge, the Bay, and downtown San Francisco. It also includes picnic tables available for public use and interpretive signs describing the historic value of the batteries.

Exhibit 3-5
Battery East Road Turnout



3.2.3 Marine Drive

Marine Drive is a Section 4(f) resource because it is a publicly owned road within the GGNRA with significant recreational function. It runs concurrently with the Golden Gate Promenade/SF Bay Trail (see Figure 2) from the Bridge until just before Torpedo Wharf, offering visitors walking, jogging, biking, and sightseeing opportunities.

3.2.4 Doyle Drive

Doyle Drive is a publicly owned historic resource eligible for the NRHP and is considered a Section 4(f) property. It is the south approach to the Golden Gate Bridge carrying Route 101 through the general area of potential effects (APE). Doyle Drive is also a contributing element of the Golden Gate Bridge and of the Presidio NHL because it was originally constructed in conjunction with the Bridge.

3.2.5 Crissy Field

Crissy Field is a Section 4(f) resource because it is a publicly owned recreation area within the Presidio NHL. It is a beach and public walkway located east of the Bridge (see Number 14, Figure 2). During the Presidio's military use, Crissy Field was an important airfield. Today it consists of a 22-acre tidal marsh restoration area, a promenade, and a beach area. Recreational opportunities include walking, jogging, and biking along the promenade trail, waterfront and beach activities, picnicking, bird watching, and sightseeing, including views of the Bridge.

3.2.6 The Coastal Trail (South of Bridge)

The Coastal Trail is a Section 4(f) resource because it is a publicly owned trail within the GGNRA national park and the Presidio NHL. It runs through the Presidio west of Lincoln Boulevard, along the windswept Coastal Bluffs, past historic batteries, down to Baker Beach, and farther south to Ocean Beach.

3.2.7 The Golden Gate Promenade/SF Bay Trail

The Golden Gate Promenade/SF Bay Trail is a Section 4(f) resource because it is a publicly owned paved pedestrian walkway and a recreational resource within the Presidio NHL and the GGNRA national park (see Exhibit 3-6). It is located to the east of the Bridge, and runs east from Fort Point to Fort Mason and on to Aquatic Park, hugging the Bay's edge (see Number 17, Figure 2). This bicycle and pedestrian path also connects the Bay Bridge Bay Trail segment with the east and west sidewalks of the Golden Gate Bridge and provides views of the Bridge and the Bay.

Exhibit 3-6
G.G. Promenade / SF Bay Trail



3.2.8 Overlook at Fort Scott (off Coastal Trail)

The overlook at Fort Scott is a Section 4(f) resource because it is a publicly owned overlook located within the Presidio NHL. It is located west of Lincoln Boulevard off the Coastal Trail and offers recreational sightseeing opportunities including views of the Pacific Ocean and the Marin Headlands.

3.3 GOLDEN GATE NATIONAL RECREATION AREA

The Golden Gate National Recreation Area (GGNRA) is a Section 4(f) resource because it is a publicly owned national park. It is the world's largest urban national park and covers a total area of 75,500, acres of land and water, including approximately 28 miles of coastline. It is used extensively by the public for a variety of recreational uses and has numerous trails and vista points on the Marin and San Francisco portions bordering the Bay. The GGNRA receives 17 million recreational visitors annually. The area also includes several historically significant sites.

There is a broad range of recreational opportunities available on GGNRA lands, including camping, hiking, visiting historic structures, visiting natural area, sightseeing, bird watching, participating in public programs, beach activities, water sports, and fishing, among others. Recreational facilities include the Crissy Field Center, Alcatraz Island Visitor Center, Fort Point Bookstore, Marin Headlands Visitor Center, Muir Woods Visitor Center, Presidio Visitor Center, and many other smaller facilities.

Access to the GGNRA is provided by Highways 1, 101, and 280 from the north and south San Francisco Bay Area, and by Highway 880 from the East Bay. Pedestrian and bicycle access points are numerous, and include local streets and trail networks.

All land immediately surrounding the Bridge and its approaches (including the Presidio and East Fort Baker) is part of the GGNRA. The Golden Gate Bridge, Highway and Transportation District (District) was granted a right-of-way easement across the Presidio of San Francisco and Fort Baker Military Reservation in 1931 for construction, operation, and maintenance of the Bridge (Payne, 1931). This right still exists and is administered by the GGNRA. The proposed construction staging areas are located on GGNRA lands (refer to Number 4 in Figures 2 and 3).

3.3.1 Bluff Road

Bluff Road (see Exhibit 3-7) is a Section 4(f) resource because it is a publicly owned road within the GGNRA national park. It is located in the Marin Headlands, west of Hwy 101 (see Number 21, Figure 3). Currently this road is not open to the public due to security needs.

3.3.2 Bridge Road

Bridge Road (the lower road shown in Exhibit 3-7) is a Section 4(f) resource because it is a publicly owned road within the GGNRA national park. It is located in the Marin Headlands, west of Hwy 101 (see Number 22, Figure 3). Currently this road is not open to the public due to security needs.

3.3.3 Conzelman Road

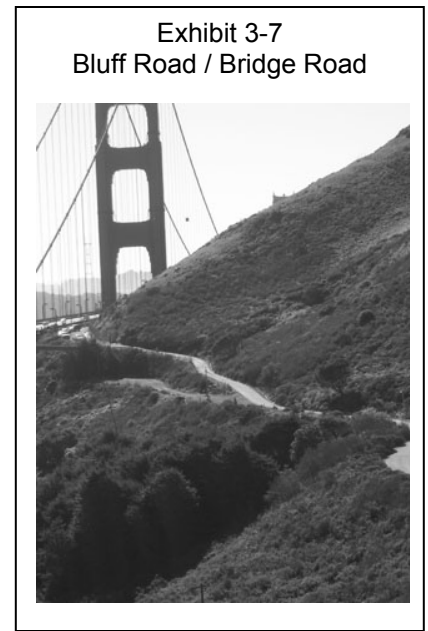
Conzelman Road is a Section 4(f) resource because it is a publicly owned road with recreational function within the GGNRA national park. It runs beneath Hwy 101 just south of Vista Point, connecting East Fort Baker and the Marin Headlands (see Number 23, Figure 3), and providing lookouts and views of the Bridge, the San Francisco Skyline, and the Pacific Ocean.

3.3.4 The Coastal Trail (North)

The Coastal Trail (Exhibit 3-8) is a Section 4(f) resource because it is a publicly owned trail with significant recreational function, located within the GGNRA national park. The trail, accessible from the Conzelman Road lookout parking lot on the west side of the Bridge, runs northwest through the Marin Headlands and connects with a system of other trails, including the Dipsea Trail (see Number 24, Figure 3). Following the Coastal Trail north, it leads to Muir Beach, Fort Cronkhite, and Stinson Beach (via the Dipsea Trail) and continues north. The Coastal Trail and connecting trail system provide hiking and sightseeing opportunities including visual access to the Bridge, the San Francisco Skyline, the surrounding coastal bluffs, and the Pacific Ocean. The Coastal Trail is part of a larger statewide system of trails designed to offer visual and physical access to the state's coastal resources.

3.3.5 Battery Spencer

Battery Spencer is a Section 4(f) resource because it is a publicly owned historic site and a part of the GGNRA national park. It is located in the Marin Headlands, west of the Bridge and is accessible by a trail off Conzelman Road (see Number 25, Figure 3). Completed in 1897, the battery provided important protection to the Golden Gate; it was disarmed by 1943. Today it remains a popular point of public and historic interest.



3.4 EAST FORT BAKER

East Fort Baker is a Section 4(f) resource because it is a publicly owned historic and recreation resource, is part of the GGNRA national park, and is listed on the NRHP. It is a 335-acre property at the center of the GGNRA system located in Marin County at the northeast foot of the Bridge (see Figure 3). It includes the Horseshoe Cove waterfront area with over a mile of rocky bay shoreline, Lime Point, Cavallo Point, many historic army buildings, and several historic batteries. The Army acquired Fort Baker in 1866. Forts Baker, Barry, and Cronkhite Military Reservations, dating back to the mid-1800s, functioned as important coastal defense elements. Between 1872 and 1876, barbette batteries were constructed at Point Cavallo (Battery Cavallo) on the ridge above Lime Point (Cliff and Ridge Batteries), and on Gravelly Beach to the west (Gravelly Beach Battery). The NRHP lists the forts together (USNPS 1992a:12/12/73, #73000255) due to their significant architecture, landscape architecture, and part in the history of the U.S. Army for the period 1850-1960. The forts are also included on the California Register of Historical Resources (CAL/OHP 1976:150,185).

Recreational activities at Fort Baker include active land-based activities such as bicycling, dog activities, and jogging/ running; water-based activities like fishing/crabbing, boating/kayaking, and wind surfing; and passive land-based activities such as hiking/walking, sightseeing, photography, and picnicking. Other activities include flying model planes and kites, beach play, roller-blading, and wading.

A comprehensive Fort Baker Reuse Plan is currently being implemented at the fort; its goal is to enhance the recreational opportunities available to the public and add additional visitor serving resources. The fort's projected reopen date is the summer of 2008.

3.4.1 Vista Point and Trail

As a publicly owned recreation area, Vista Point is considered a Section 4(f) resource. Vista Point is a scenic overlook area and visitor turnout from the highway on the northern approach to the Bridge, accessible from northbound US 101 only. It is located in Marin County at the northern end of the Bridge (see Number 28, Figure 3), also known as the Golden Gate Observation Area. The Department designed and built this facility adjacent to the North Abutment in 1961-1962. It was not part of the original Bridge design and construction project and is not a contributing element of the Bridge property.

It is, however, a popular visitor attraction because of its views of the Bridge and the San Francisco skyline. It also provides a parking area, free up to four hours, and restroom facilities for persons who walk on the Bridge or the nearby trails and sightseers.

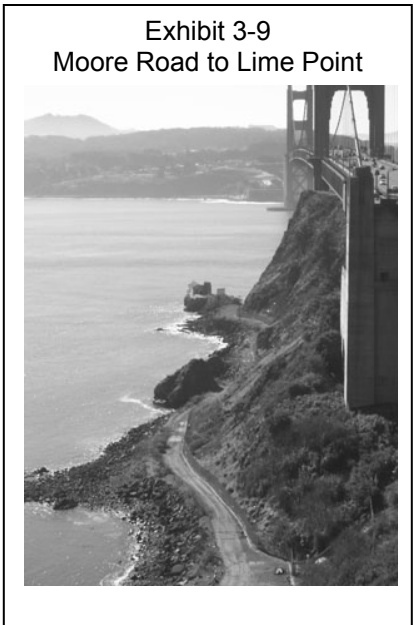
Vista Point is also the location of the Lone Sailor Naval Memorial, dedicated on April 14, 2002, to all of the Sea Services – Navy, Marine Corps, Coast Guard, and Merchant Marine. A memorial was constructed and dedicated on the scenic overlook with a replica of *The Lone Sailor*®. Improvement to Vista Point included statue placement, the creation of a memorial, and other site enhancements.

3.4.2 Lime Point

Lime Point is a Section 4(f) resource because it is a recreational resource that is part of the core area of East Fort Baker (see Exhibit 3-9; Number 27, Figure 3). Lime Point is one of the first peninsulas of land seen when traveling under the Bridge by water. It houses the U.S. Coast Guard Light Station, established in 1883. The trail along this peninsula is currently closed to the public due to security needs.

3.4.3 Moore Road (Lime Point Trail)

Moore Road is a Section 4(f) resource because it is a publicly owned road and trail within East Fort Baker and the GGNRA (see Exhibit 3-9). It is located east of Hwy 101 and runs along a small peninsula between Lime Point and the core area of East Fort Baker (see Number 31, Figure 3). Moore Road was constructed to connect Lime Point with Horseshoe Cove and the developed area of East Fort Baker. Today it provides a recreational trail from the Lime Point Lighthouse along the Bay's edge to Horseshoe Cove and into East Fort Baker, with views of the Bridge looking south. Currently this road is closed to the public due to security needs.

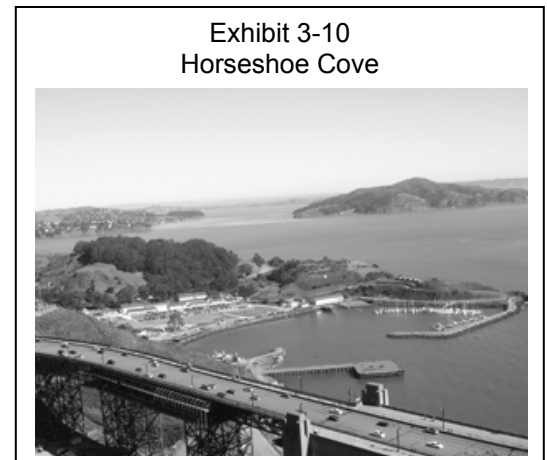


3.4.4 Horseshoe Cove

Horseshoe Cove is a Section 4(f) resource because it is a publicly owned recreation resource and a part of East Fort Baker and the GGNRA national park (see Exhibit 3-10). The cove and associated waterfront extend around the shoreline between Lime Point on the west and Point Cavallo on the east. It is a core area of the fort and offers recreational functions including, walking, biking, jogging, waterfront activities, and sightseeing, with views of the Bay and the Bridge.

3.4.5 Point Cavallo

Point Cavallo is a Section 4(f) resource because it is a publicly owned recreation resource within East Fort Baker and the GGNRA national park (see Exhibit 3-11). The point is the peninsula to the east of Horseshoe Cove (see Number 29, Figure 3). Its recreational functions include walking, hiking, and sightseeing opportunities, with views of the Bay and the Bridge.



4.0 IMPACTS TO SECTION 4(F) PROPERTIES

Potential Section 4(f) uses by the project are discussed below as they relate to the Golden Gate Bridge (Bridge), its contributing structures and properties within the general area of potential effects (APE), and within one-half mile of the Bridge.

4.1 GOLDEN GATE BRIDGE

4.1.1 The Golden Gate Bridge

No-Build Alternative

The No-Build Alternative would not use this Section 4(f) resource.

Alternative 1A: Add Vertical System to Handrail

This alternative would add an 8-foot-high vertical rod system to the outside handrail for a total height of 12 feet. The addition of an 8-foot-high barrier would affect the character of the Bridge because of introduced visual elements at the east and west sidewalks, the physical change of the outside handrail on the sidewalks, and changes to pedestrian, bicycle, and motorist views.

Evaluation of Section 4(f) Use by Alternative 1A

While Alternative 1A would not remove the outside handrail, it would alter the outside handrail. The placement of an 8-foot barrier on top of the outside handrail would substantially alter the pedestrian experience from the sidewalk and obscure views of the main suspension ropes, which are also character-defining features of the Bridge. Alternative 1A would result in a permanent Section 4(f) use of the Bridge because it would substantially alter character-defining elements of the Bridge, including its relationship to the setting (the views), which contribute to the integrity of the Bridge's significant historic features and its eligibility for NRHP listing.

The physical alteration of the Bridge through the installation of the 8-foot high barrier on top of the outside handrail would alter the recreational experience of pedestrians and cyclists on the sidewalks because structural changes created by the barrier would physically alter the views from the sidewalks. This would represent a permanent Section 4(f) use.

Alternative 1B: Add Horizontal System to Handrail

This alternative would add an 8-foot-high horizontal cable system and transparent winglet to the outside handrail for a total height of 12 feet. The addition of an 8-foot-high barrier on top of the outside handrail would affect the character of the Bridge because of introduced visual elements at the east and west sidewalks, the physical change of the outside handrail on the sidewalks, and changes to pedestrian, bicycle, and motorist views.

Evaluation of Section 4(f) Use by Alternative 1B

While Alternative 1B would not remove the outside handrail, it would alter the outside handrail. The placement of an 8-foot horizontal cable barrier on top of the outside

handrail supported by vertical posts would substantially alter the pedestrian experience from the sidewalk and obscure views of the main suspension ropes, which are also character-defining features of the Bridge. Alternative 1B would result in a permanent Section 4(f) use of the Bridge because it would substantially alter the character-defining elements of the Bridge, including its relationship to the setting, which contribute to the integrity of the Bridge's significant historic features and its eligibility for NRHP listing.

The physical alteration of the Bridge through the installation of the 8-foot high barrier on top of the outside handrail would alter the recreational experience of pedestrians and cyclists on the sidewalks because structural changes created by the barrier would physically alter the views from the sidewalks. This would represent a permanent Section 4(f) use.

Alternative 2A: Replace Outside Handrail with Vertical System

This alternative would replace the outside handrail with a 12-foot-high vertical barrier constructed of ½-inch diameter vertical steel rods. A rub rail would be installed at the same height as the public safety railing (4 feet 6 inches). The construction of a 12-foot-high barrier would affect the character of the Bridge because of introduced visual elements at the east and west sidewalks, the physical change of the outside handrail on the sidewalks, and changes to pedestrian, bicycle, and motorist views.

Evaluation of Section 4(f) Use by Alternative 2A

Alternative 2A would replace the outside handrail with a 12-foot-high vertical barrier. The removal of the outside handrail (a character-defining element of the Bridge), would significantly alter the pedestrian experience along the sidewalks (another character-defining element) and obscure views of the main suspension ropes, which are also character-defining features of the Bridge. Alternative 2A would result in a permanent Section 4(f) use of the Bridge because it would remove or substantially alter the character-defining elements of the Bridge, including its relationship to the setting, which contribute to the integrity of the Bridge's significant historic features and its eligibility for NRHP listing.

The physical alteration of the Bridge through the installation of a 12-foot high vertical barrier would alter the recreational experience of pedestrians and cyclists on the sidewalks because structural changes created by the barrier would physically alter the views from the sidewalks. This would represent a permanent Section 4(f) use.

Alternative 2B: Replace Outside Handrail with Horizontal System

This alternative would replace the outside handrail with a 10-foot-high horizontal cable system and transparent winglet. The construction of this barrier would affect the character of the Bridge because of introduced visual elements at the east and west sidewalks, the physical change of the outside handrail on the sidewalks, and changes to pedestrian, bicycle, and motorist views.

Evaluation of Section 4(f) Use by Alternative 2B

Alternative 2B would replace the outside handrail with a 10-foot-high horizontal barrier and transparent winglet. The removal of the outside handrail (a character-defining element of the Bridge), would significantly alter the pedestrian experience along the sidewalks (another character-defining element) and obscure views of the main suspension ropes, which are also character-defining features of the Bridge. Alternative 2B would result in a permanent Section 4(f) use of the Bridge because it would remove or substantially alter the character-defining elements of the Bridge, including its relationship to the setting, which contribute to the integrity of the Bridge's significant historic features and its eligibility for NRHP listing.

The physical alteration of the Bridge through the installation of the 10-foot high barrier would alter the recreational experience of pedestrians and cyclists on the sidewalks because structural changes created by the barrier would physically alter views from the sidewalks. This would represent a permanent Section 4(f) use.

Alternative 3: Add Net System

This alternative would construct a horizontal net approximately 5 feet above the bottom chord of the exterior main truss and approximately 20 feet below the sidewalk. The net would project approximately 20 feet from the Bridge and be covered with a stainless steel 4-inch to 10-inch grid cable netting. The horizontal support system would connect directly to the exterior truss and be supported by cables back to the top chord of the truss. The net would result in impacts to the character of the Bridge because of the introduced visual elements.

Evaluation of Section 4(f) Use by Alternative 3

Alternative 3 would not affect the character-defining elements of the Bridge seen from the Bridge sidewalk and roadway, or alter the pedestrian experience along the sidewalks. However, the net would be visible to pedestrians at the Bridge towers. From this viewpoint on the Bridge, the net would be visible across the lower portion of the pedestrian's viewshed but would not block views of the surrounding landscape. It would, however, substantially alter the exterior main truss (a character-defining feature of the Bridge), which contributes to the integrity of the Bridge's significant historic features, and its eligibility for NRHP listing. It would also introduce the use of non-historic materials – the cable netting – diminishing the Bridge's historic integrity. Alternative 3 would therefore result in a permanent Section 4(f) use of the Bridge because it would substantially alter character-defining elements of the Bridge, including its relationship to the setting, which contribute to the integrity of the Bridge's significant historic features and its eligibility for NRHP listing.

The physical alteration of the Bridge through the installation of the net system along the lower portion of the pedestrian viewshed would alter the recreational experience of pedestrians and cyclists at the Bridge towers. The extension of the net vertically from the Bridge creates a physical barrier to views from this location. This would represent a permanent Section 4(f) use.

4.1.2 The Roundhouse Gift Center

The proposed build alternatives would not result in a Section 4(f) use of the Roundhouse because they would not permanently incorporate land into the project, nor would they temporarily occupy any land within the resource. The proposed alternatives would not substantially impair the historic quality of this resource. The proposed project would not cause a constructive use of the Roundhouse Gift Center because the proximity impacts would not substantially impair the protected activities, features, or attributes of the historic resource.

4.1.3 Toll Plaza Undercrossing

The proposed build alternatives would not result in a Section 4(f) use of the Toll Plaza Undercrossing because they would not permanently incorporate land into the project, nor would they temporarily occupy any land within the resource. The proposed alternatives would not substantially impair the historic quality of this resource. The proposed project would not cause a constructive use of the Toll Plaza Undercrossing because the proximity impacts would not substantially impair the protected activities, features, or attributes of the historic resource.

4.2 THE PRESIDIO OF SAN FRANCISCO

4.2.1 Merchant Road Parking Lot

The construction staging area within the Presidio along Merchant Road at the south side of the Bridge may be used under all build alternatives for a portion of the construction period. This staging area is currently a District parking lot that includes 25 publicly available stalls. The closure of this parking lot during construction would eliminate public access to the parking spaces, which would represent a temporary occupancy of the Section 4(f) land.

During this period of time construction equipment may be stored at the parking lot. Storage of construction equipment would not physically change the land and would be temporary. All construction equipment would be removed prior to completion of construction.

Although the public parking stalls would not be available during construction of the project, there are several other areas near the Bridge that offer public parking, including the District's east parking lot below the Roundhouse Gift center and the NPS parking lot off Lincoln Boulevard and Battery East Road. On weekends and after 3:30 p.m. during the week, the District's west parking lot adjacent to the Toll Plaza is also available for public use. The available parking supply should be sufficient to compensate for the temporary loss of 25 stalls.

4.2.2 Fort Point National Historic Site

The proposed build alternatives would not result in a Section 4(f) use of Fort Point because they would not permanently incorporate land into the project, nor would they temporarily occupy any land within this historic site. The alternatives would not have severe impacts that substantially impair the historic quality of this resource, nor would they substantially alter views of the Bridge from Fort Point because of the distance and upward

viewing angle of the Bridge from Fort Point. The proposed project would not cause a constructive use of the Fort Point National Historic Site because the proximity impacts would not substantially impair the protected activities, features, or attributes of the historic resource.

4.2.3 Battery East Road Bike and Pedestrian Turnouts

The project build alternatives would not result in a Section 4(f) use of this property because no land would be permanently incorporated into the project, nor would any land be temporarily occupied by it. Views of the Bridge from the turnouts would not be substantially altered by the build alternatives and the alternatives would not result in severe impacts that would substantially impair the quality the recreational resource. The proposed project would not cause a constructive use of the Battery East Road Bike and Pedestrian Turnouts because the proximity impacts would not substantially impair the protected activities, features, or attributes of the recreational resource.

4.2.4 Marine Drive

The project build alternatives would not result in a Section 4(f) use of this resource. No land would be permanently incorporated into the project, nor would any land be temporarily occupied by it. Views of the Bridge enjoyed by people using the drive recreationally would not be substantially altered by the build alternatives, and the alternatives would not substantially impair the quality of this recreational resource. The proposed project would not cause a constructive use of Marine Drive because the proximity impacts would not substantially impair the protected activities, features, or attributes of the recreational resource.

4.2.5 Doyle Drive

The project build alternatives would not result in a Section 4(f) use of this resource. No land would be permanently incorporated into the project, nor would any land be temporarily occupied by it. The build alternatives would not have a severe impact that substantially impairs the historic quality of the Section 4(f) resource, nor would the views enjoyed by drivers on Doyle Drive be substantially altered. The proposed project would not cause a constructive use of Doyle Drive because the proximity impacts would not substantially impair the protected activities, features, or attributes of the historic resource.

4.2.6 Crissy Field

The project build alternatives would not result in a Section 4(f) use of this resource. No land would be permanently incorporated into the project, nor would any land be temporarily occupied by it. There are distant views of the Bridge from Crissy Field, which would not be substantially altered by any of the build alternatives, nor would the alternatives cause severe impacts that would substantially impair the quality of this resource in any other way. The proposed project would not cause a constructive use of Crissy Field because the proximity impacts would not substantially impair the protected activities, features, or attributes of the recreational resource.

4.2.7 Coastal Trail (South)

The project build alternatives would not result in a Section 4(f) use of this trail because no land would be permanently incorporated into the project nor would any be temporarily occupied by it. The build alternatives do not have the potential to substantially impair the quality of the trail: views of the Bridge from the trail would not change substantially. The proposed project would not cause a constructive use of the Coastal Trail because the proximity impacts would not substantially impair the protected activities, features, or attributes of the recreational resource.

4.2.8 The Golden Gate Promenade/SF Bay Trail

The project build alternatives would not result in a Section 4(f) use of this resource. No land would be permanently incorporated into the project, nor would any land be temporarily occupied by it. Views of the Bridge from this trail would not be substantially altered by the build alternatives, nor would the alternatives substantially impair the quality of this recreational resource. The proposed project would not cause a constructive use of the Golden Gate Promenade/SF Bay Trail because the proximity impacts would not substantially impair the protected activities, features, or attributes of this recreational resource.

4.2.9 Overlook at Fort Scott (off Coastal Trail)

The project build alternatives would not result in a Section 4(f) use of this property because no land would be permanently incorporated into the project, nor would any land be temporarily occupied by it. Views of the Bridge would not be substantially altered by the build alternatives nor would they result in severe impacts that would substantially impair the quality of this recreational resource. The proposed project would not cause a constructive use of the Overlook at Fort Scott because the proximity impacts would not substantially impair the protected activities, features, or attributes of the historic and recreational resource.

4.3 GOLDEN GATE NATIONAL RECREATION AREA

4.3.1 Bluff Road

The project build alternatives would not result in a Section 4(f) use of this resource. No land would be permanently incorporated into the project, nor would any land be temporarily occupied by it. Because the roadway is closed to the public, alteration of the views from this roadway would not affect recreation users at this time. Should the roadway be reopened to the public in the future, it can be anticipated that changes to views of the Bridge from the road would be noticeable to users of this resource. Changes to these views, however, would not be anticipated to severely impair the quality of this resource that would be used for a variety of recreational activities. The proposed project would not cause a constructive use of Bluff Road because the proximity impacts would not substantially impair the protected activities, features, or attributes of the recreational resource.

4.3.2 Bridge Road

The project build alternatives would not result in a Section 4(f) use of this resource. No land would be permanently incorporated into the project, nor would any land be temporarily occupied by it. Because the roadway is closed to the public, alteration of the views from this roadway would not affect recreation users at this time. Should the roadway be reopened to the public in the future, it can be anticipated that changes to views of the Bridge from the road would be noticeable to users of this resource. Changes to these views, however, would not be anticipated to severely impair the quality of this resource that would be used for a variety of recreational activities. The proposed project would not cause a constructive use of Bridge Road because the proximity impacts would not substantially impair the protected activities, features, or attributes of the recreational resource.

4.3.3 Conzelman Road

The project build alternatives would not result in a Section 4(f) use of this resource. No land would be permanently incorporated into the project, nor would any land be temporarily occupied by it. Views of the Bridge enjoyed by people using the road recreationally would not be substantially altered by the build alternatives. The alternatives would not result in severe impacts that substantially impair the quality of this resource. The proposed project would not cause a constructive use of Conzelman Road because the proximity impacts would not substantially impair the protected activities, features, or attributes of the recreational resource.

4.3.4 Coastal Trail (North)

None of the project build alternatives would result in a Section 4(f) use of this trail because no land would be permanently incorporated into the project nor would any be temporarily occupied by it. The build alternatives do not have the potential to substantially impair the quality of the trail: views of the Bridge from the trail would not change substantially. The proposed project would not cause a constructive use of the Coastal Trail because the proximity impacts would not substantially impair the protected activities, features, or attributes of the recreational resource.

4.3.5 Battery Spencer

The proposed build alternatives would not result in a Section 4(f) use of this resource. No land would be permanently incorporated into the project, nor would any be temporarily occupied by it. The build alternatives would not have any severe impacts that would substantially impair the historic quality of the post. The proposed project would not cause a constructive use of Battery Spencer because the proximity impacts would not substantially impair the protected activities, features, or attributes of the historic resource.

4.4 EAST FORT BAKER

4.4.1 Vista Point and Trail

No-Build Alternative

The No-Build Alternative would not use this Section 4(f) resource.

Alternative 1A: Add Vertical System to Handrail

This alternative would add an 8-foot-high vertical rod system to the outside handrail for a total height of 12 feet. The addition of an 8-foot-high barrier would alter the views toward the Bridge from Vista Point and Trail because of introduced visual elements at the east and west sidewalks. The barrier would not alter the views of the Bay and San Francisco from the viewpoint.

Evaluation of Section 4(f) Use by Alternative 1A

Alternative 1A would not result in a Section 4(f) constructive use of Vista Point and Trail: the proximity impacts of this alternative would not substantially impair the activities, features, and attributes for visitors to this scenic overlook.

Alternative 1B: Add Horizontal System to Handrail

This alternative would add an 8-foot-high horizontal cable system and transparent winglet to the outside handrail for a total height of 12 feet. The addition of an 8-foot-high barrier on top of the outside handrail would impact the views towards the Bridge from Vista Point and Trail because of introduced visual elements at the east and west sidewalks. The barrier would not alter the views of the Bay and San Francisco from the viewpoint.

Evaluation of Section 4(f) Use by Alternative 1B

Alternative 1B would not result in a Section 4(f) constructive use of Vista Point and Trail: the proximity impacts of this alternative would not substantially impair the activities, features, and attributes for visitors to this scenic overlook.

Alternative 2A: Replace Handrail with Vertical System

This alternative would replace the outside handrail with a 12-foot-high vertical barrier constructed of ½-inch diameter vertical steel rods. A rub rail would be installed at the same height as the public safety railing (4 feet 6 inches). The construction of a 12-foot-high barrier would affect the views of the Bridge from Vista Point and Trail because of introduced visual elements at the east and west sidewalks. The barrier would not alter the views of the Bay and San Francisco from the viewpoint.

Evaluation of Section 4(f) Use by Alternative 2A

Alternative 2A would not result in a Section 4(f) constructive use of Vista Point and Trail: the proximity impacts of this alternative will not substantially impair the activities, features, and attributes for visitors to this scenic overlook.

Alternative 2B: Replace Handrail with Horizontal System

This alternative would replace the outside handrail with a 10-foot-high horizontal cable system and transparent winglet. The construction of this barrier would affect the views of the Bridge from Vista Point and Trail because of introduced visual elements at the east and west sidewalks. The barrier would not alter the views of the Bay and San Francisco from the viewpoint.

Evaluation of Section 4(f) Use by Alternative 2B

Alternative 2B would not result in a Section 4(f) constructive use of Vista Point and Trail: the proximity impacts of this alternative would not substantially impair the activities, features, and attributes for visitors to this scenic overlook.

Alternative 3: Add Net System

This alternative would construct a horizontal net approximately 5 feet above the bottom chord of the exterior main truss. The net would project approximately 20 feet from the Bridge and be covered with a stainless steel 4-inch to 10-inch grid cable netting. The horizontal support system would connect directly to the exterior truss and be supported by cables back to the top chord of the truss. The introduced horizontal elements would change the view of the main truss of the Bridge from Vista Point and Trail. The barrier would not alter the views of the Bay and San Francisco from the viewpoint.

Evaluation of Section 4(f) Use by Alternative 3

Alternative 3 would affect the views of the Bridge because of the alteration to the main truss. The change to the views of the main truss would alter the views from Vista Point and Trail. The proposed project would not cause a constructive use of Vista Point and Trail because the proximity impacts would not substantially impair the activities, features, and attributes for visitors at this scenic overlook.

4.4.2 Lime Point

The proposed build alternatives for the project do not constitute a Section 4(f) use of this resource. No land would be permanently incorporated or temporarily occupied by these alternatives. Lime Point offers views of the Bridge, which, because of the angle of the view, would not be substantially altered by the build alternatives. The alternatives would not result in severe impacts that substantially impair the quality of this resource. The proposed project would not cause a constructive use of Lime Point because the proximity impacts would not substantially impair the protected activities, features, or attributes of the recreational resource.

4.4.3 Moore Road

The project build alternatives would not result in a Section 4(f) use of this resource. No land would be permanently incorporated into the project, nor would any land be temporarily occupied by it. Views of the Bridge enjoyed by people using the road recreationally would not be substantially altered by the build alternatives. The proposed project would not cause a constructive use of Moore Road because the proximity impacts would not substantially impair the protected activities, features, or attributes of the recreational resource.

4.4.4 Horseshoe Cove

Views of the Bridge are available from Horseshoe Cove, but are secondary to its other recreational functions. The build alternatives would not substantially impair any of the qualities, which qualify this resource for Section 4(f) protection. In addition, the alternatives would not result in the permanent incorporation or temporary occupancy of

this resource. The proposed project will not cause a constructive use of Horseshoe Cove because the proximity impacts will not substantially impair the protected activities, features, or attributes of the recreational resource.

4.4.5 Point Cavallo

Point Cavallo provides views of the Bay and the Bridge. The proposed build alternatives do not have the potential to result in the substantial impairment of Bridge views from this resource. No land would be permanently incorporated or temporarily occupied by the alternatives. The proposed project would not cause a constructive use of Point Cavallo because the proximity impacts would not substantially impair the protected activities, features, or attributes of the recreational resource.

4.5 SUMMARY OF PROJECT USES OF SECTION 4(F) RESOURCES, BY ALTERNATIVE

The No-Build Alternative would not use any Section 4(f) resources. All of the build alternatives modify the Bridge, which is an historic resource. All of the build alternatives modify existing Bridge components and introduce new elements. Specifically, build alternatives modify either the outside handrails or the main truss. All of the build alternatives would alter the recreational experience of Bridge users. Additionally, all of the build alternatives would require construction staging areas. The temporary closure of the Merchant Road parking lot staging area within the Presidio would remove 25 public parking spaces during a portion of the construction period, which would be a temporary occupancy of the area. The matrix below summarizes the Section 4(f) uses by resource and project alternative.

Table 4-1 Section 4(f) Uses by Alternative

		Alt 1A	Alt 1B	Alt 2A	Alt 2B	Alt 3	No Build
Golden Gate Bridge	Golden Gate Bridge	P	P	P	P	P	--
	- Handrail and Sidewalk	P	P	P	P	--	--
	- Main Truss	--	--	--	--	P	--
	- Recreational Use	P	P	P	P	P	--
	Roundhouse Gift Center	--	--	--	--	--	--
	Toll Plaza Undercrossing	--	--	--	--	--	--
Construction Staging Areas	Merchant Road Parking Lot	T	T	T	T	T	--

P = Permanent Section 4(f) Use
 T = Temporary occupancy
 -- = No Section 4(f) Use

5.0 AVOIDANCE ALTERNATIVES

The feasibility and safety constraints described in Section 6.0 regarding the development and evaluation of project alternatives limited the opportunity to develop alternatives that could completely avoid adverse effects to the Golden Gate Bridge (Bridge) as an historic property. Construction of a physical suicide barrier is an action that clearly would cause adverse direct effects to the Bridge historic property. Every build alternative results in a Section 4(f) use of the Bridge. The Golden Gate Bridge, Highway and Transportation

District (District) criteria did require that the project alternatives meet the requirements of state and federal historic preservation laws (Criterion 7). The District designed the alternatives in a manner that would minimize the effect the project may have on the historic property to the extent possible. As part of this effort, the District examined other bridges in California, throughout the United States, and elsewhere in the world to assess potential designs for the barrier on this bridge.

The only alternative that would avoid effects to the Bridge as an historic property and therefore not cause a Section 4(f) use of the property is the No-Build Alternative. Although this alternative would avoid any Section 4(f) use of the Bridge, it is not prudent and feasible because it does not satisfy the purpose and need of the proposed project. In accordance with 23 CFR 774.117, the following six factors were considered when evaluating whether the No-Build alternative would be prudent.

- Compromises the project so that it is unreasonable given the purpose and need;
- Results in unacceptable safety or operational problems;
- After reasonable mitigation, still causes; severe social, economic, or environmental impacts, severe disruption to established communities; severe environmental justice impacts or severe impacts to other federally protected resources
- Results in additional construction, maintenance, or operational costs of an extraordinary magnitude;
- Causes other unique problems or unusual factors; or
- Involves multiple factors listed above that while individually minor, cumulatively causes unique problems of extraordinary magnitude.

5.1 NO-BUILD ALTERNATIVE

The No-Build Alternative represents conditions if no other actions are taken. The No-Build Alternative would continue the existing non-physical suicide deterrent programs at the Bridge, which include emergency counseling telephones, public safety patrols, and employee training. While the continuance of these programs would avoid any effects to Section 4(f) resources, it would not address the approximately two dozen deaths that continue to occur every year at the Bridge. Therefore, it does not meet the purpose and need of the project, which includes impeding the ability of an individual to jump off the Bridge. As such, it compromises the project so that it is unreasonable given the purpose and need.

6.0 MEASURES TO MINIMIZE HARM

6.1 ALTERNATIVE DEVELOPMENT PROCESS

During the initial screening process, concepts were evaluated for their ability to ensure the continued aerodynamic stability of the Bridge and their responsiveness to the District performance criteria (See Section 1.2 of the EIR/EA for a list of these criteria). Wind tunnel testing was performed to ensure that any design would not cause the Bridge to be unstable in winds. During this phase of the project, conceptual designs were evaluated for their performance during high winds to determine which concepts would and would not affect the aerodynamic stability of the Bridge. It was found that very small changes in the

shape of the Bridge cross-sections (including the spacing and design of rail and fence elements) could have a significant impact on the Bridge's aerodynamic stability during high winds. Conceptual designs that significantly affected the aerodynamic stability of the Bridge under high winds were eliminated from further consideration.

Other concepts were eliminated for their inability to impede individuals from jumping from the Bridge or could create a hazard to sidewalk users. For example, Short Fence Systems below 6 feet in height were considered ineffective as a deterrent to climbing based on the ease with which an individual could jump over such a height. Similarly, systems that utilized barbed wire or electric shock transmission would create a hazard to sidewalk users and lead to injury to someone coming in contact with the system. Other groups of concepts eliminated during initial screening included enclosed walkways, chain link fence, electric fences, barbed wire, short systems, and lasers.

The three groups of concepts carried forward into the environmental document included 1) vertical rods 2) horizontal cables, and 3) horizontal net. Design criteria were established at a sufficient level to define the overall limits and basic forms of physical suicide deterrent system concepts. The design criteria included considerations to ensure the aerodynamic stability of the Bridge, a barrier height range depending on whether the existing outside handrail was retained (12-foot height) or removed (10-foot height), barrier top treatment to impede climbing, and spacing of barrier members (4 inches to 6 inches) in accordance with codes (buildings 4 inches and bridges 6 inches) for pedestrian outside handrails. Section 1.7 of the EIR/EA provides a detailed discussion of the alternative development process.

6.2 ALTERNATIVE FEATURES THAT MINIMIZE HARM

The constraints associated with the development of project alternatives in accordance with the intent of the purpose and need to impede the ability of individuals to jump from the Bridge, limited the opportunity to design alternatives that could completely avoid affecting the appearance of the Bridge. Construction of a physical suicide deterrent barrier is an action that would physically alter the visual appearance of the Bridge. There would be no visual impacts associated with the No Build Alternative.

The range of alternatives was developed to minimize the visual changes to the Bridge to the maximum extent possible, while providing feasible concepts that responded to the established criteria. Architectural considerations included developing a physical suicide deterrent system compatible with the existing structural and ornamental forms, as well as with the exterior and safety railings. Because the predominant forms of the Bridge are oriented either horizontally or vertically, the primary elements of the physical suicide barrier system were positioned in horizontal or vertical arrays. The other significant aesthetic concern was related to minimization of the various view perspectives of the Bridge. These perspectives include driver, pedestrian, and panoramic. It was determined that any new feature or element must be in visual harmony with the existing Bridge and must minimize impacts to Bridge user view perspectives.

The selection of the spacing, sizing and shape of elements maintained the existing architectural themes of the Bridge and maintained views through the designs, either through the vertical or horizontal elements, or through the transparent panels located at the belvederes. All of the build alternatives also utilize the existing material and International Orange color of the Bridge.

Measures incorporated into the design of Alternatives 1A and 2A are the use of ½ inch vertical rods which remain consistent with the strong vertical line form created by the Bridge towers, suspender ropes, and light posts. Measures incorporated into the design of Alternatives 1B and 2B are the use of 3/8-inch horizontal cables, which are consistent with the design of the public safety railing and the horizontal line form established by horizon of the blue-green waters of the San Francisco Bay. These alternatives also include transparent panels at the belvederes and around the Bridge towers so as to continue to provide unobstructed viewing opportunities from the sidewalks.

Alternative 3, the horizontal net system, represents the strongest contrast with the strong verticality of the Bridge but provides unobstructed views across the San Francisco Bay from the Bridge sidewalks. The net would disrupt a small portion of the views towards the San Francisco Bay looking down from the Bridge sidewalks.

Maintaining the public access to the Bridge during construction was also an important consideration, as well as maintaining emergency vehicle access. The measures to be implemented (see Sections 6.5 and 6.6) ensure continued access to the Bridge.

6.3 MEASURES TO MINIMIZE EFFECTS TO HISTORIC PROPERTY

In order to mitigate the adverse effect of the build alternatives on the historic property, a draft Memorandum of Agreement (MOA) will be developed and will be coordinated with the Department. The No-Build Alternative would have no adverse effects on the historic property.

The MOA will stipulate various activities that will be conducted to address adverse effects the build alternatives would have on the Bridge. These measures will provide a visual and historic record of the Bridge that will be available to researchers, the public, and users of the Bridge. The Department will be responsible for carrying out these measures, insuring that: a) the Bridge is properly recorded through photography, written documentation, and educational/interpretive material; b) this documentation and educational/interpretive material is appropriately distributed; and c) other portions of the historic property within the project study are protected and monitored. Prior to the start of any work that could adversely affect any characteristics that qualify the Bridge as a historic property, the Department shall ensure that the recordation measures specified are completed.

The Bridge has been the subject of partial recordation by the Historic American Engineering Record (HAER) Program and the recordation conducted for mitigation for this project will be designed to augment this previous work.

- Large-format (4- by 5-inch, or larger, negative size) black-and-white photographs will be taken showing the Bridge in context, as well as details of its historic engineering features, contributing elements, and character-defining features. The views specifically will include the existing east and west outside railings, concrete railing at the north pylon, and exterior trusses of the Bridge as these are the features that would be adversely affected by one or more of the proposed alternatives. The photographs will be processed for archival permanence in accordance with the Historic American Engineering Record (HAER) photographic specifications. If necessary, each view will be perspective-corrected and fully captioned.

The recordation will follow the National Park Service's HAER Guidelines, and the report format, views, and other documentation details will be coordinated with the Western Regional Office of the NPS, Oakland, California. Oblique aerial photography will be considered as a photographic recordation option in these coordination efforts. It is anticipated that the recordation of the Bridge will be completed to level I or level II HAER-written data standards, and will include archival and digital reproduction of historic images, plans, and drawings.

Copies of the documentation will be offered to the San Francisco Public Library, Marin Public Library, Environmental Design Archives (UC Berkeley), Golden Gate National Recreation Area, Presidio Trust, Caltrans District 4 Office of Cultural Resource Studies, and the Caltrans Transportation Library and History Center at Caltrans Headquarters in Sacramento. The documentation also will be offered in printed and electronic form to any repository or organization upon which the District, the Department, and SHPO, through consultation, may agree. The electronic copy of the report could be placed on an agency or organization's Web site.

- Preparation of a historical and educational brochure presenting the history of suicide prevention efforts at the Bridge. The brochure will be made available on-site at the Bridge, Presidio National Historic Landmark, select Golden Gate National Recreation Area locations, and online at the District Web site (<http://www.goldengate.org/>) during the construction period.
- Installation of interpretive signs or display panels at the Round House Gift Center and the Vista Point to describe the project for the duration of construction. Signs should incorporate content prepared for the brochure and summarize the history of suicide prevention efforts at the Bridge.

The District will ensure the protection of the remainder of the historic property within the project limits during construction of the suicide barrier, as well as the Fort Point National Historic Site, located below the Fort Point Arch component of the Bridge. The District will ensure against incidental damage to the remainder of the Bridge historic property and the Fort Point property by hiring an independent Environmental Compliance Monitor (ECM) who will periodically monitor the site during construction and will prepare monthly reports documenting compliance and protection. These reports will be submitted to the District and GGNRA.

6.4 ALTERNATIVES CONSIDERED AND REJECTED

Using the Golden Gate Bridge, Highway and Transportation District (District) criteria, the technically feasible alternatives were evaluated for their ability to meet the criteria. Based on the findings of this evaluation, the following alternatives were withdrawn from further study.

6.4.1 No Public Access to Sidewalks

This alternative would close the Bridge sidewalks to pedestrian and bicycle traffic. It was removed from further consideration because the sidewalks are currently used by approximately 10 million visitors a year and by up to 5,000 bicyclists a day (commuters and recreational users). Their closure to the public would remove this very popular tourist destination. The sidewalks are also an integral link in the California Coastal Trail, the

Ridge Trail and the Bay Trail. The closure would eliminate this important link to the state and regional trail systems and would prevent bicycle commuting in this corridor. Therefore, this alternative was removed from further consideration.

6.4.2 Vertical and Horizontal Wire Mesh Added to Railing

This alternative would construct a 10-foot-high barrier of vertical and horizontal wire mesh on top of the railing for a total height of 14 feet. It was removed from further consideration because it would not meet the following District criteria.

- Criterion 8. Must have minimal visual and aesthetic impact on the Bridge
- Criterion 3. Must be able to be maintained as a routine part of the District's ongoing Bridge maintenance program and without undue risk of injury to District employees

6.4.3 Curved Top Horizontal Cable Members Replacing Railing

This alternative would construct a 14-foot-high barrier using horizontal cable members and a curved top. It was removed from further consideration because of its excessive height and the visual intrusion from the curved top. It would also impair the ability of maintenance personnel to access the underside of the Bridge. It would not meet the following District criteria.

- Criterion 8. Must have minimal visual and aesthetic impact on the Bridge
- Criterion 5. Must continue to allow access to the underside of the Bridge for emergency response and maintenance activities

6.4.4 Curved Top Diagonal Wire Mesh Replacing Railing

This alternative would construct a 12-foot-high diagonal wire mesh barrier with a curved top. It was eliminated because the diagonal wire mesh conflicted with the horizontal and vertical elements of the Bridge. It would also impair the ability of maintenance personnel to access the underside of the Bridge and would not be maintained as a routine part of Bridge maintenance program. It would not meet the following District criteria.

- Criterion 3. Must be able to be maintained as a routine part of the District's ongoing Bridge maintenance program and without undue risk of injury to District employees
- Criterion 5. Must continue to allow access to the underside of the Bridge for emergency response and maintenance activities
- Criterion 8. Must have minimal visual and aesthetic impact on the Bridge

6.4.5 Vertical Glass Pickets Replacing Railing

This alternative would construct a 12-foot-high vertical glass barrier along the Bridge. It was eliminated from further consideration because it would introduce a new source of light and glare which could cause safety concerns, it could not be maintained as a routine part

of the Bridge maintenance program, it would be difficult to allow access to the underside of the Bridge, and it would not utilize the existing architectural vocabulary of the Bridge. Therefore, it would not meet the following District criteria.

- Criterion 2. Must not cause safety or nuisance hazards to sidewalk users, including pedestrians, bicyclists, District staff, and District contractors/security partners
- Criterion 3. Must be able to be maintained as a routine part of the District's ongoing Bridge maintenance program and without undue risk of injury to District employees
- Criterion 5. Must continue to allow access to the underside of the Bridge for emergency response and maintenance activities
- Criterion 9. Must be cost-effective to construct and maintain

6.5 CONSTRUCTION SEQUENCING

Construction of any of the new physical suicide deterrent system build alternatives would be performed in sections, beginning on the west side of the Bridge and ending on the east side of the Bridge. It is anticipated that it would take 12 to 18 months per side to complete construction of any of the barriers. Construction operations would be staged to minimize effects on pedestrians, cyclists and motor vehicles using the Bridge. The Bridge sidewalks would remain open to the public during daytime hours, consistent with current operations.

The work on the west sidewalk would be specified to be performed weekdays during the hours when the sidewalk is not open to the public, so as not to affect the commuter and recreational use on the west sidewalk. The work on the east sidewalk would be specified to be performed primarily at night. Should it be necessary to perform work during the day on the east sidewalk, a 6-foot wide minimum clear passageway would be maintained through the work area with appropriate traffic control and other protective measures in place.

These provisions have been successfully used on the seismic retrofit project, the Public Safety Railing project and during the District's on-going maintenance and operations activities.

6.6 TEMPORARY ROADWAY CLOSURES

Construction activities would not require the closure of the Bridge sidewalks. Construction would be limited to one side of the Bridge at a time. Emergency vehicle access would always be maintained during construction activities. Access would not be affected because project construction activities would not affect traffic volumes or traffic flow on the Bridge. Construction activities may require the periodic closure of vehicle travel lanes. If necessary, work requiring access from the Bridge deck would only be permitted during weekday non-peak Bridge traffic hours; therefore, lane closures would not contribute to any increase in traffic delays. The project work may also require temporary closures of parts of Conzelman Road.

Construction staging areas would be needed. Construction staging areas are located near the San Francisco and Marin Abutments of the Bridge. There are four proposed construction staging areas in the GGNRA. These proposed staging areas are located on the northern side of the Bridge in Marin County below the Marin Approach and Span 4 backspan. One is an existing gravel area located in a switchback of Conzelman Road and the other three are gravel areas located under the northern span of the Bridge, which are currently being used for similar staging, maintenance activities and other Bridge operations.

There is one proposed construction staging area to the south of the Bridge, located adjacent to the Bridge toll plaza within the Presidio. The proposed area is an existing paved employee parking lot with 25 public spaces, located just west of the toll plaza off Merchant Road.

Project-related construction equipment and materials would be stored within one or more of these construction staging areas. A containment plan and Best Management Practices (BMPs) for storage activities would be required in the construction contracts and project specifications and implemented by the construction contractor to ensure that there are no environmental effects related to the storage of these materials and equipment. No expansion of the construction staging areas would be permitted. From the staging areas, workers would access the activity areas on the Bridge with small customized equipment.

7.0 COORDINATION

7.1 PUBLIC INVOLVEMENT PROGRAM OVERVIEW

A public involvement program has been developed to guide the Golden Gate Bridge, Highway and Transportation District (District) through a comprehensive public information and outreach process for the Golden Gate Bridge Physical Suicide Deterrent System Study.

The public involvement program provides a variety of communication methods to educate the public on the current scope of the study, including its impacts and benefits. Thorough information will be provided to educate the public about the study, and at targeted project milestones the study team will solicit input and feedback from the public and agencies as to their specific needs, issues, concerns, and recommendations. By educating through a variety of informative communication tools, the community and agencies will be well-equipped to provide meaningful public input.

Key elements to the public involvement plan include:

- Educating the public and agencies through effective communication tools
- Providing multiple opportunities for input on study alternatives
- Managing and organizing comments received, and presenting input in a concise manner to decision makers

7.1.1 Public Web site and Public Comment System

On May 11, 2007, public outreach activities were initiated by launching the public Web site (<http://www.ggsuicidebarrier.com>). The Web site was developed with a fully integrated public comment system and provides a fair and factual presentation of the evaluation process and ongoing opportunities for public input.

The interactive public comment system is designed to provide stakeholders with a Web-based platform for submitting comments on the study and the environmental document. The public comment system is altered at key milestones to solicit input specific to key phases of the project.

7.1.2 Wind Study Report

On May 24, 2007, a Wind Study Report was released which detailed the effects of wind on long-span bridges, documented the wind testing, summarized the results and provided initial concepts for a physical suicide deterrent system. The report was presented to the Building and Operating Committee of the Board of Directors (Board) at their regularly scheduled meeting at 10:00 a.m. on Thursday, May 24, 2007. A media briefing packet was circulated and the report was posted on the public Web site. For approximately two months following the release of the report, the public comment system was structured to solicit specific feedback on the wind study report and the design concepts presented.

7.1.3 Agency Early Consultation

On June 14, 2007, the Notice of Preparation (NOP) was issued for the environmental document. The NOP was mailed to more than 70 agencies to solicit input on which alternatives and issues should be evaluated in the environmental document. On July 17, 2007, an agency consultation meeting was held to receive comments on the NOP.

7.1.4 Bridge District Board Meetings

As all Board meetings are open to the public, public comments received during formal public comment periods will be part of the public record and will be incorporated into the process and the environmental document. In addition, all comments received at District Board meetings will be reviewed by the project team for consideration as they may relate to the Golden Gate Bridge Physical Suicide Deterrent System Study.

7.1.5 Release of the Draft EIR/EA

The release of the Draft EIR/EA is a major opportunity for public involvement and education. With the release of the document, the generic concepts will be increasingly refined, and the environmental impacts, including visual, historic, and cultural resources, will be disclosed. Two public open houses will be held to provide information about the project alternatives and to allow the public, agencies, and organizations to provide comments. Informational materials, including a Citizens' Guide and a fact sheet, will be developed to help the public digest the complex technical data contained in the environmental document. These tools will aid the public in understanding the study and help solicit focused comments on the facts of the environmental document.

7.1.6 Media Relations

The District Public Information Officer will conduct all media communications, create media packets, and attend public meetings, as necessary.

7.2 HISTORIC RESOURCES

The District, in conjunction with the Department, is continuing consultation with SHPO following 36 CRF 800.6, to arrive at a resolution of the adverse effect. (The following assumes that consultation with SHPO under Stipulation XI of the Section 106 PA has occurred.) The Department, in accordance with Stipulation XI of the Section 106 PA, will prepare a draft Memorandum of Agreement (MOA) to memorialize measures that would mitigate the adverse effect this undertaking would have on the historic property. The MOA signatory parties will be the District, the Department, and SHPO. The District sent a letter to interested parties in April 2008 notifying interested individuals and organizations that the project is anticipated to have an adverse effect on the Golden Gate Bridge and to solicit their input. Any responses to this letter will be included in future drafts of this document and the environmental document.

8.0 LEAST HARM ANALYSIS AND CONCLUDING STATEMENT

Because there are no feasible and prudent avoidance alternatives to the project, during the evaluation of the build alternatives several factors will be considered so as to identify the alternative that causes the least overall harm in light of the Section 4(f) preservation purposes. The least overall harm is determined by balancing the following factors:

- The ability to mitigate adverse impacts to each Section 4(f) property
- The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection;
- The relative significance of each Section 4(f) property;
- The views of the officials with jurisdiction over each Section 4(f) property;
- The degree to which each alternative meets the purpose and need for the project;
- After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f); and
- Substantial differences in costs among the alternatives.

This analysis will incorporate input from the agencies and members of the public during circulation of the Draft EIR/EA, as well as from the outcome of the Section 106 consultation process and the resulting MOA. The conclusions of this analysis will be presented in the Final Section 4(f) Evaluation that will be circulated with the Final EIR/EA.

9.0 OTHER PARK, RECREATIONAL FACILITIES, AND HISTORIC PROPERTIES EVALUATED RELATIVE TO THE REQUIREMENTS OF SECTION 4(f)

This section of the document discusses parks, recreational facilities, and historic properties found within or adjacent to the project area that do not trigger Section 4(f) protection either because: 1) they are not publicly owned; 2) they are not open to the public; 3) they are not eligible historic properties; 4) the project does not permanently use the property and does not hinder the preservation of the property; or 5) the proximity impacts do not result in constructive use.

9.1 PUBLIC PARK AND RECREATION FACILITIES

9.1.1 The Presidio Golf Course

The Presidio Golf Course is a 4(f) resource because it is a publicly owned recreation area located within the Presidio National Historic Landmark District (NHL). It is located south of the Golden Gate Bridge (Bridge) between Park Presidio Boulevard and Arguello Avenue (see Number 13, Figure 2). Founded in 1885 as a course for military officers, today it provides recreational function as a public golf course and visitor serving area.

This resource's primary recreational function is as a golf course. The project build alternatives would not result in a Section 4(f) use of this property as the project would not result in the permanent incorporation or temporary occupancy of any land within this resource. Views of the Bridge would not be substantially altered by the build alternatives nor would the build alternatives result in severe impacts that would substantially impair the quality of the overlook. The proposed project would not cause a constructive use of Presidio Golf Course because the proximity impacts would not substantially impair the protected activities, features, or attributes of the historic and recreational resource.

9.1.2 Eagles Point Overlook

The Eagles Point Overlook is a Section 4(f) resource because it is a publicly owned overlook located within the GGNRA national park. It is located south of the Presidio along the Coastal Trail. Recreational opportunities include views of the Pacific Ocean and the Marin Headlands.

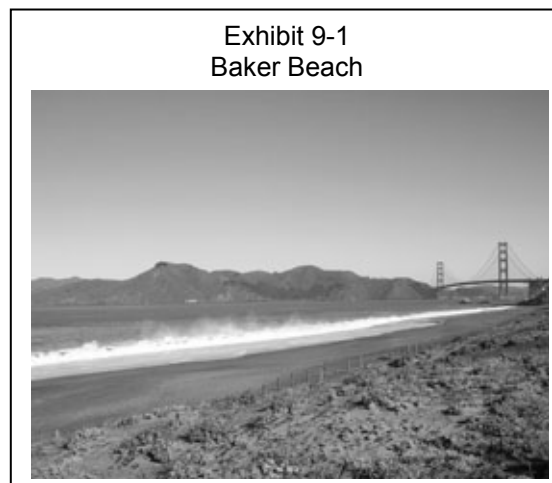
The project build alternatives would not result in a Section 4(f) use of this property because no land would be permanently incorporated into the project, nor would any land be temporarily used by it. Views of the Bridge would not be substantially altered by the build alternatives nor would they result in severe impacts that would substantially impair the quality of the overlook. The proposed project would not cause a constructive use of the Eagles Point Overlook because the proximity impacts would not substantially impair the protected activities, features, or attributes of the historic and recreational resource.

9.1.3 Baker Beach

Baker Beach is a Section 4(f) resource because it is a publicly owned recreation area and a part of the Presidio NHL. It is a mile-long beach located south of Fort Scott and west of Lincoln Boulevard (see Exhibit 9-1; Number 2, Figure 2). Recreational opportunities at

the beach include sunbathing, wading, fishing, picnicking, and sightseeing; the beach provides panoramic views of the Bridge and the Marin Headlands.

The project build alternatives would not result in a Section 4(f) use of this property because they would not permanently incorporate land into the project, nor would they temporarily occupy any land within the resource. Views of the Bridge from the beach would not be substantially altered by any of the build alternatives, nor would the alternatives produce severe impacts that would substantially impair the quality of this nearby resource. The proposed project would not cause a constructive use of the Baker Beach because the proximity impacts would not substantially impair the protected activities, features, or attributes of the recreational resource



9.1.4 China Beach

China Beach is a Section 4(f) resource because it is a publicly owned recreation area and an element of the GGNRA national park. This small wind-protected cove lies on the Pacific Ocean between Baker Beach and Lands End (see Number 21, Figure 2). During the late 19th century, Chinese fisherman utilized the cove's protection to anchor boats and camped on its shores. Today it provides recreational opportunities including picnicking, sunbathing, surf play, and views of the Marin Headlands and the Bridge.

The project build alternatives would not result in a Section 4(f) use of this property because they would not permanently incorporate land into the project, nor would they temporarily occupy any land within the resource. Views of the Bridge from the beach would not be substantially altered by any of the build alternatives, nor would the alternatives produce severe impacts that would substantially impair other qualities of this nearby resource. The proposed project would not cause a constructive use of China Beach because the proximity impacts would not substantially impair the protected activities, features, or attributes of the recreational resource.

9.1.5 Kirby Cove

Kirby Cove is a Section 4(f) resource because it is a publicly owned recreation area and a part of the GGNRA national park. It is located at the foot of the Marin Headlands just west of the Bridge (see Number 26, Figure 3). Recreational opportunities including secluded campsites, hiking trails, and waterfront activities.

None of the project build alternatives would result in the Section 4(f) use of this area because no land would be permanently incorporated into the project, nor would any be temporarily occupied by it. Among the many recreational functions of Kirby Cove, distant views of the Bridge are provided from this resource. No proposed build alternatives would substantially impair this or any other quality of the resource. The proposed project would not cause a constructive use of Kirby Cove because the proximity impacts would not substantially impair the protected activities, features, or attributes of the recreational resource.

9.2 HISTORIC RESOURCES

9.2.1 The Marina Viaduct

The Marina Viaduct is a Section 4(f) resource because it is a publicly owned historic resource. The viaduct was determined to be individually eligible for the NHRP in 1987 and is listed in the state Bridge maintenance system (Bridge 34 0014). This structure is a part of Doyle Drive and a contributing element of the Golden Gate Bridge and the Presidio NHLD (see Exhibit 9-2; Number 9, Figure 2).

Exhibit 9-2
Marina Viaduct



The project build alternatives would not result in a Section 4(f) use of this resource. No land would be permanently incorporated into the project, nor would any land be temporarily occupied by it. The build alternatives would not have a severe impact that substantially impairs the historic quality of resource. The proposed project would not cause a constructive use of the Marina Viaduct because the proximity impacts would not substantially impair the protected activities, features, or attributes of the historic resource.

9.2.2 The Presidio Viaduct

The Presidio Viaduct is a Section 4(f) resource because it is a publicly owned historic resource. The viaduct was determined to be individually eligible for the NHRP in 1987 and is listed in the state bridge maintenance system (Bridge 34 0019). This structure is a part of Doyle Drive and a contributing element of the Bridge and the Presidio NHLD (see Exhibit 9-3; Number 10, Figure 2).

Exhibit 9-3
Presidio Viaduct



The project build alternatives would not result in a Section 4(f) use of this resource. No land would be permanently incorporated into the project, nor would any land be temporarily occupied by it. The build alternatives would not have a severe impact that substantially impairs the historic quality resource. The proposed project would not cause a constructive use of the Presidio Viaduct because the proximity impacts would not substantially impair the protected activities, features, or attributes of the historic resource.

9.2.3 Fort Winfield Scott

Fort Winfield Scott is a Section 4(f) resource because it is an historic resource of the Presidio NHLD. It is located west of Hwy 101 off Lincoln Boulevard, near the gun batteries and the coastal bluffs in the western portion of the Presidio (see Number 1, Figure 2). It was established in 1912 to house the Coastal Artillery Corps of the San Francisco Bay Area. It became a sub-post of the Presidio in 1946 when World War II ended. Today it remains a point of public and historic interest. Its historic buildings and barracks built in the Mission Revival architectural style, contribute to the Presidio's status as a NHLD.

The proposed build alternatives would not result in a Section 4(f) use of this resource. No land would be permanently incorporated into the project, nor would any be temporarily occupied by it. The build alternatives would not have any severe impacts that substantially impair the historic quality of the fort. The proposed project would not cause a constructive use of Fort Winfield Scott because the proximity impacts would not substantially impair the protected activities, features, or attributes of the historic resource.

9.2.4 Main Post

The Main Post is a Section 4(f) resource because it is a publicly owned historic resource within the Presidio NHL. It is located in the center of the Presidio south of Crissy Field (see Number 15, Figure 2). It is the founding spot of the original Spanish garrison established there in 1776. The Post includes many historic building, and therefore contributes to the status of the Presidio as a NHL.

The proposed build alternatives would not result in a Section 4(f) use of this resource. No land would be permanently incorporated into the project, nor would any be temporarily occupied by it. The build alternatives would not have any severe impacts that substantially impair the historic quality of the post. The proposed project would not cause a constructive use of the Main Post because the proximity impacts would not substantially impair the protected activities, features, or attributes of the historic resource.

9.2.5 Fort Cronkhite

Fort Cronkhite is a Section 4(f) resource because it is a publicly owned historic and recreation resource and a part of the GGNRA national park. It is located in the Marin Headlands, west of the Bridge, on the northern edge of the Rodeo Lagoon. The Pacific Ocean and Rodeo Beach are just west of the fort. Built between 1939 and 1945 as a military mobilization post, it continues to provide visitors a well-preserved example of typical post architecture, and offer access to hiking trails and nearby waterfront activities.

The proposed build alternatives would not result in a Section 4(f) use of this resource. No land would be permanently incorporated into the project, nor would any be temporarily occupied by it. The build alternatives would not have any severe impacts that substantially impair the historic quality of the fort, nor would the alternative substantially impact the recreational function of the fort. The proposed project would not cause a constructive use of the Fort Cronkhite because the proximity impacts would not substantially impair the protected activities, features, or attributes of the historic and recreational resource.

9.2.6 West Fort Miley

West Fort Miley is a Section 4(f) resource because it is a publicly owned historic resource, listed on the NRHP and an element of the GGNRA national park. It is located along the Pacific Coast near the Cliff House. It offers views of the Pacific Ocean, Sutro Heights Park, and Ocean Beach.

The proposed build alternatives would not result in a Section 4(f) use of this resource. No land would be permanently incorporated into the project, nor would any be temporarily occupied by it. The build alternatives would not have any severe impacts that substantially impair the historic quality of the fort. The proposed project would not cause a

constructive use of the West Fort Miley because the proximity impacts would not substantially impair the protected activities, features, or attributes of the historic resource.

9.2.7 Palace of Fine Arts

The Palace of Fine Arts is a Section 4(f) resource because it is a publicly owned historic resource and recreation area; it is a designated San Francisco Historic Landmark and is eligible for the NHRP by the SHPO. Recreational opportunities include walking along the lagoon, viewing the Palace's unique architecture, and use of the surrounding lawns.

The proposed build alternatives would not result in a Section 4(f) use of the Palace of Fine Arts because they would not permanently incorporate land into the project, nor would they temporarily use any land within the resource. The alternatives would not have severe impacts that substantially impair the historic or recreational quality of this resource. The proposed project would not cause a constructive use of the Palace of Fine Arts because the proximity impacts would not substantially impair the protected activities, features, or attributes of the historic and recreational resource.

9.2.8 Battery Chamberlin

The Battery Chamberlin is a Section 4(f) resource because it is a publicly owned historic resource located within the Presidio NHL. It is located north of Baker Beach and is accessible from the Coastal Trail (see Number 11, Figure 2). Completed in 1904, today the battery still holds a gun and disappearing carriage similar to the ones originally used at the battery. Visitors can view a gun demonstration and visit the small underground cartridge room.

The proposed build alternatives would not result in a Section 4(f) use of this resource. No land would be permanently incorporated into the project, nor would any be temporarily occupied by it. The build alternatives would not have any severe impacts that substantially impair the historic quality of the battery. The proposed project would not cause a constructive use of Battery Chamberlin because the proximity impacts would not substantially impair the protected activities, features, or attributes of the historic resource.

9.3 CONSTRUCTION STAGING AREAS

All of the build alternatives would result in the temporary occupancy of one or more of the five construction staging areas discussed below. The No-Build Alternative would not use these Section 4(f) resources. Construction staging areas are located near the San Francisco and Marin Abutments of the Bridge, as shown on Figures 2 and 3 of this report.

9.3.1 Golden Gate National Recreation Area (Four Areas)

There are four proposed construction staging areas within GGNRA lands. One is an existing gravel area located in a switchback of Conzelman Road. The other three are gravel areas located under the northern span of the Bridge, which are currently being used for similar staging

Exhibit 9-4
Northern Bridge Span Staging Area



and maintenance activities (See Exhibit 9-4). These proposed areas, in their existing conditions, provide no inherent historic or recreational function. They would be occupied temporarily during the construction of the project. Such occupancy would have no adverse impact on the preservationist purpose of Section 4(f), nor would it produce severe impacts that would substantially impair the quality of surrounding Section 4(f) resources.

9.3.2 The Presidio and Golden Gate Bridge (One Area)

There is one proposed construction staging area within the Presidio and the Bridge located just west of the toll plaza off Merchant Road. The proposed area currently provides employee and public parking (25 parking stalls are available for public use). This proposed area provides no inherent historic function. It would be occupied temporarily during the construction of the project. The temporary occupancy would have no adverse impact on the preservationist purpose of Section 4(f), nor would it produce severe impacts that would substantially impair the quality of surrounding Section 4(f) resources.

10.0 LETTERS AND OTHER CORRESPONDENCE

Letter dated June 18, 2008 from Jeffrey Y. Lee, PE, to Greg McConnell regarding temporary occupancy of project staging areas (see Appendix E of the EIR/EA).

[Additional letters and correspondence to be provided in Final Section 4(f) Evaluation]

Appendix C

Title VI Policy Statement

DEPARTMENT OF TRANSPORTATION

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*Flex your power!
Be energy efficient!*

January 14, 2005

**TITLE VI
POLICY STATEMENT**

The California Department of Transportation under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, and age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

A handwritten signature in black ink that reads "Will Kempton".

WILL KEMPTON
Director

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Appendix D

Avoidance, Minimization and/or Mitigation Summary

Avoidance, Minimization and/or Mitigation Summary

The following is a list of potential avoidance/mitigation measures. Should a build alternative be selected the District and the Department will ensure that the appropriate avoidance/mitigation measures are included as a condition of project approval and responsibility assigned to the appropriate party.

Task and Brief Description	Reference	Responsible Party	Task Completed		Environmental Compliance	
			Initial	Date	Initial	Date
AVOIDANCE/MINIMIZATION MEASURES						
<u>VISUAL RESOURCES</u>						
<p>Construction of a physical suicide deterrent barrier is an action that would physically alter the visual appearance of the Bridge. The range of alternatives were developed to minimize the visual changes to the Bridge to the maximum extent possible, while providing feasible concepts that responded to the established criteria.</p> <p>Measures incorporated into the design of Alternatives 1A and 2A are the use of ½ inch vertical rods which remain consistent with the strong vertical line form created by the Bridge towers, suspender ropes, and light posts. Measures incorporated into the design of Alternatives 1B and 2B are the use of 3/8-inch horizontal cables, which are consistent with the design of the public safety railing and the horizontal line form established by horizon of the blue-green waters of the San Francisco Bay. These alternatives also include transparent panels at the belvederes and around the Bridge towers so as to continue to provide unobstructed viewing opportunities from the sidewalks.</p>	Section 2.2.4	District/ Department				

Task and Brief Description	Reference	Responsible Party	Task Completed		Environmental Compliance	
			Initial	Date	Initial	Date
<p>Alternative 3, the horizontal net system, represents the strongest contrast with the strong verticality of the Bridge but provides unobstructed views across the San Francisco Bay from the Bridge sidewalks. The net would disrupt a small portion of the views towards the San Francisco Bay looking down from the Bridge sidewalks.</p> <p>The Memorandum of Agreement (MOA) to be developed as part of the Section 106 consultation process will include photographic recordation of the existing features and views of and from the Bridge in order to partially mitigate visual impacts (see Section 2.3 Cultural Resources).</p>						
<u>CULTURAL RESOURCES</u>						
<p>In order to mitigate the adverse effect of the build alternatives on the historic property, a draft Memorandum of Agreement (MOA) will be developed for the project and will be coordinated with the Department.</p> <p>The MOA will stipulate various mitigation activities that will be conducted to address adverse effects this project would have on the Bridge. These measures will provide a visual and historic record of the Bridge that will be available to researchers, the public, and users of the Bridge. The Department will be responsible for carrying out these measures, insuring that: a) the Bridge is properly recorded through photography, written documentation, and educational/interpretive material; b) this documentation and educational/interpretive material is appropriately distributed; and c) other portions of the historic property within the project study are protected and monitored. Prior to the start of any work that could adversely affect any characteristics that qualify the Bridge as a historic property, the Department shall ensure that the recordation measures specified are completed. Mitigation measures proposed for the project include the following:</p>	Section 2.3.4	Department				
<p>Large-format (four- by five-inch, or larger, negative size) black-and-white photographs will be taken showing the Bridge in</p>	Section 2.3.4	Department				

Task and Brief Description	Reference	Responsible Party	Task Completed		Environmental Compliance	
			Initial	Date	Initial	Date
context, as well as details of its historic engineering features, contributing elements, and character-defining features. The views specifically will include the existing east and west outside railings, concrete railing at the north pylon, and exterior trusses of the Bridge as these are the features that would be adversely affected by one or more of the proposed alternatives.						
The photographs will be processed for archival permanence in accordance with Historic American Engineering Record (HAER) photographic specifications. If necessary, each view will be perspective-corrected and fully captioned. The recordation will follow the National Park Service's (NPS) HAER Guidelines, and the report format, views, and other documentation details will be coordinated with the Western Regional Office of the NPS, Oakland, California. Oblique aerial photography will be considered as a photographic recordation option in these coordination efforts. It is anticipated that the recordation of the Bridge will be completed to Level I or Level II HAER-written data standards, and will include archival and digital reproduction of historic images, plans, and drawings.	Section 2.3.4	Department				
Copies of the documentation will be offered to the San Francisco Public Library, Marin Public Library, Environmental Design Archives (UC Berkeley), Golden Gate National Recreation Area, Presidio Trust, Department District 4 Office of Cultural Resource Studies, and the Department's Transportation Library and History Center at Department Headquarters in Sacramento. The documentation also will be offered in printed and electronic form to any repository or organization upon which the District, the Department, and SHPO, through consultation, may agree. The electronic copy of the report could be placed on an agency or organization's Web site.	Section 2.3.4	Department				
Preparation of a historical and educational brochure presenting the history of suicide prevention efforts at the Bridge. The brochure will be made available on-site at the Bridge, Presidio National Historic Landmark, select Golden Gate National Recreation Area locations, and online at the District Web site (www.goldengate.org) during the construction period.	Section 2.3.4	Department				

Task and Brief Description	Reference	Responsible Party	Task Completed		Environmental Compliance	
			Initial	Date	Initial	Date
Installation of interpretive signs or display panels at the Round House Gift Center and the Vista Point to describe the project for the duration of construction. Signs will incorporate information from the contextual history prepared for the brochure.	Section 2.3.4	Department				
The District will ensure the protection of the remainder of the historic property within the project limits during construction of the suicide barrier, as well as the Fort Point National Historic Site, located below the Fort Point Arch component of the Bridge. The District will ensure against incidental damage to the remainder of the Bridge historic property and the Fort Point property by hiring an independent Environmental Compliance Monitor (ECM) who will periodically monitor the site during construction and will prepare monthly reports documenting compliance and protection. These reports will be submitted to the District and GGNRA.	Section 2.3.4	District				
<u>BIOLOGICAL RESOURCES</u>						
<p>Measure 1: A qualified biologist or biologists will be retained by the District prior to the start of construction to act as a biological Environmental Compliance Monitor (ECM) and implement and oversee the below activities/measures.</p> <ul style="list-style-type: none"> ▪ The biological ECM will flag and stake native vegetation near the staging areas within GGNRA lands as “Environmentally Sensitive Areas” and will oversee the contractor’s installation of protective fencing around the designated ESA(s). Signs will be installed indicating that the fenced area is “restricted” and that all construction activities, personnel, and operational disturbances are prohibited. ▪ The biological ECM will prepare and provide worker educational materials that describe the value and importance of the coastal scrub habitat bordering the staging areas and the importance of not disturbing the habitat. ▪ The biological ECM will conduct regular visits of the staging areas to inspect if any damage to adjacent habitats has occurred, to evaluate if dust control measures need to be implemented or increased, to ensure that erosion control 	Section 2.4.1; 2.4.2; 2.4.4; 2.4.5; 2.6.8	District				

Task and Brief Description	Reference	Responsible Party	Task Completed		Environmental Compliance	
			Initial	Date	Initial	Date
<p>devices located near native vegetation and Environmentally Sensitive Areas (ESAs) are functioning properly, and to evaluate if weed control measures need to be implemented.</p> <ul style="list-style-type: none"> Based on the findings of the site visits, the biological ECM will make recommendations to be implemented regarding weed control, re-vegetation of disturbed areas, the need for additional fencing, and other measures to protect biological resources. The biological ECM will prepare monthly monitoring reports for the District that will address the effectiveness of the avoidance measures being implemented and identify any other measures to be implemented. 						
<p>Measure 2: The District will provide specifications for erosion and dust control to the Contractor, which will be implemented.</p>	Section 2.4.1; 2.4.2; 2.4.4; 2.6.8	District				
<p>Measure 3: Contractor's vehicles traveling on access roads within GGNRA lands would be restricted to a maximum speed of 20 mph during the period of March 15 to July 4, which is the flight season for the Mission blue butterfly. The Contractor will post and enforce this speed limit.</p>	Section 2.4.4; 2.6.8	Contractor				
<p>Measure 4: To prevent the introduction of non-native vegetation or other deleterious materials to GGNRA lands, the Contractor will inspect all construction equipment prior to accessing the staging areas. If any vegetation or deleterious materials are present, the Contractor will decontaminate its equipment with a high-pressure washer and properly dispose of the wastewater and debris prior to entering GGNRA lands.</p>	Section 2.4.5; 2.6.8	Contractor				
<p>Measure 5: Prior to the implementation of construction activities the District will implement the following program to assess and avoid any impacts to peregrine falcon. This program will consist of the following activities.</p> <ul style="list-style-type: none"> Prior to implementation of construction activities occurring during the nesting season of peregrine falcon (typically February through July), the District will consult with the Golden Gate Raptor Observatory (GGRO) and the Santa 	Section 2.4.4; 2.6.8	District				

Task and Brief Description	Reference	Responsible Party	Task Completed		Environmental Compliance	
			Initial	Date	Initial	Date
<p>Cruz Predatory Bird Group to obtain any existing information on the locations of breeding pairs of peregrine falcon potentially using the Bridge.</p> <ul style="list-style-type: none"> ▪ Focused surveys for nesting peregrine falcons would then be conducted by a qualified biologist to determine if nesting falcons are present in areas potentially affected by project implementation. ▪ If nesting falcons are identified, then a construction exclusion zone would be established around the active eyrie. The size of the exclusion zone will be determined by the CDFG and will take into account existing noise levels at the nest location and the type of construction activities proposed near the eyrie. ▪ Construction activities may commence within the exclusion zone only upon determination by a qualified biologist that the eyrie is no longer active. Alternatively, construction activities potentially affecting peregrine falcons nesting on the Bridge may be conducted outside of the nesting season of the species. 						
<p>Measure 6: Prior to the commencement of construction activities occurring during the nesting season of native bird species (typically February through August), the biological ECM will conduct or oversee the following activities.</p> <ul style="list-style-type: none"> ▪ The biological ECM will conduct surveys for nesting birds protected by the Migratory Bird Treaty Act and/or California Fish and Game Code. The survey area will include potential nesting habitat within and bordering the staging and construction areas, as well as all areas that would be subject to elevated construction-related noise levels. ▪ If an active nest is found, a construction exclusion zone would be established around the active nest. The size of the exclusion zone will be determined by the CDFG and will take into account existing noise levels at the nest location and the sensitivity to noise of the bird species present. ▪ Construction activities may commence within the exclusion 	Section 2.4.3; 2.6.8	District				

Task and Brief Description	Reference	Responsible Party	Task Completed		Environmental Compliance	
			Initial	Date	Initial	Date
zone only upon determination by a qualified biologist that the nest is no longer active. The biological ECM will also survey for nesting birds during their regular site visits of the staging areas.						
<p>Measure 7: Prior to the commencement of construction activities, the District will retain the services of a qualified avian biologist to conduct or oversee the following activities.</p> <ul style="list-style-type: none"> ▪ The avian biologist will further evaluate the potential of birds to collide with the transparent panels potentially used as part of the physical suicide deterrent system, and for the use of netting to harm bird species. ▪ At a minimum, the expected flight patterns of migratory and resident birds relative to the installation locations of the transparent panels or netting will be evaluated, as well as the potential of the transparent panels and associated reflections to alter regular flight patterns and encourage collisions. ▪ Should it be found that the use of the transparent panels or netting pose a substantial risk to birds, appropriate design modifications would be implemented. These measures may include, but are not limited to visual deterrents such as patterning the transparent material with a UV coating that birds can see but humans cannot; utilizing etching, fritting, and opaque patterned glass to reduce transparency; utilizing bird-legible patterns on the transparent material; limiting the amount of transparent panels or amount of panels without a visual deterrent; modifying the horizontal netting; or other effective means of deterring bird collisions or entrapment. 	Section 2.4.3	District				

Task and Brief Description	Reference	Responsible Party	Task Completed Initial Date		Environmental Compliance Initial Date	
<u>MITIGATION MEASURES (CEQA)</u>						
VISUAL RESOURCES						
<p>The range of alternatives was developed to minimize the visual changes to the Bridge to the maximum extent possible, while providing feasible concepts that responded to the established criteria. All of the build alternatives would be constructed primarily of steel that would be painted International Orange to match the material and color of the Bridge.</p> <p>There would be no visual impacts associated with the No Build Alternative.</p> <p>Measures incorporated into the design of Alternatives 1A and 2A are the use of ½ inch vertical rods which remain consistent with the strong vertical line form created by the Bridge towers, suspender ropes, and light posts. Measures incorporated into the design of Alternatives 1B and 2B are the use of 3/8-inch horizontal cables, which are consistent with the design of the public safety railing and the horizontal line form established by horizon of the blue-green waters of the San Francisco Bay. These alternatives also include transparent panels at the belvederes and around the Bridge towers so as to continue to provide unobstructed viewing opportunities from the sidewalks.</p> <p>Alternative 3, the horizontal net system, represents the strongest contrast with the strong verticality of the Bridge but provides unobstructed views across the San Francisco Bay from the Bridge sidewalks. The net would disrupt a small portion of the views towards the San Francisco Bay looking down from the Bridge sidewalks.</p> <p>The Memorandum of Agreement (MOA) to be developed as part of the Section 106 consultation process will include photographic</p>	Section 3.3.1	District/ Department				

Task and Brief Description	Reference	Responsible Party	Task Completed		Environmental Compliance	
			Initial	Date	Initial	Date
recording of the existing features and views of and from the Bridge in order to partially mitigate visual impacts.						
CULTURAL RESOURCES						
To mitigate the adverse effect of the project on the historic property a draft Memorandum of Agreement (MOA) will be developed for the project and will be coordinated with the Department. The MOA will stipulate various mitigation activities that will be conducted to address adverse effects this project would have on the Bridge. The MOA will be approved by the State Office of Historic Preservation (SHPO). The Department will be responsible for carrying out these measures, insuring that (1) the Bridge is properly recorded through photography, written documentation, and educational/interpretive material; (2) this documentation and educational/interpretive material is appropriately distributed; and (3) other portions of the historic property within the project study are protected and monitored. Prior to the start of any work that could adversely affect any characteristics that qualify the Bridge as a historic property, the Department shall ensure that the recordation measures specified are completed. Mitigation measures proposed for the project include the following:	Section 3.3.2	Department				
<ul style="list-style-type: none"> ▪ Large-format (four- by five-inch, or larger, negative size) black-and-white photographs will be taken showing the Bridge in context, as well as details of its historic engineering features, contributing elements, and character-defining features. The views specifically will include the existing east and west outside railings, concrete railing at the north pylon, and exterior trusses of the Bridge, as these are the features that would be adversely affected by one or more of the proposed alternatives. ▪ The photographs will be processed for archival permanence in accordance with Historic American Engineering Record (HAER) photographic specifications. If necessary, each view 	Section 3.3.2	Department				

Task and Brief Description	Reference	Responsible Party	Task Completed		Environmental Compliance	
			Initial	Date	Initial	Date
<p>will be perspective-corrected and fully captioned.</p> <ul style="list-style-type: none"> ▪ The recordation will follow the National Park Service's (NPS) HAER Guidelines, and the report format, views, and other documentation details will be coordinated with the Western Regional Office of the NPS, Oakland, California. Oblique aerial photography will be considered as a photographic recordation option in these coordination efforts. It is anticipated that the recordation of the Bridge will be completed to Level I or Level II HAER-written data standards, and will include archival and digital reproduction of historic images, plans, and drawings. ▪ Copies of the documentation will be offered to the San Francisco Public Library, Marin Public Library, Environmental Design Archives (UC Berkeley), Golden Gate National Recreation Area, Presidio Trust, Department District 4 Office of Cultural Resource Studies, and the Department's Transportation Library and History Center at Department Headquarters in Sacramento. The documentation also will be offered in printed and electronic form to any repository or organization upon which the District, the Department, and State Historic Preservation Office (SHPO), through consultation, may agree. The electronic copy of the report could be placed on an agency or organization's Web site. ▪ Preparation of a historical and educational brochure presenting the history of suicide prevention efforts at the Bridge. The brochure will be made available on-site at the Bridge, Presidio National Historic Landmark, select Golden Gate National Recreation Area locations, and online at the District Web site (www.goldengate.org) during the construction period. ▪ Installation of interpretive signs or display panels at the Round House Gift Center and the Vista Point to describe the project for the duration of construction. Signs will incorporate information from the contextual history prepared for the 						

Task and Brief Description	Reference	Responsible Party	Task Completed		Environmental Compliance	
			Initial	Date	Initial	Date
brochure.						
<p>The District will ensure the protection of the remainder of the historic property within the project limits during construction of the physical suicide barrier, as well as the Fort Point National Historic Site, located below the Fort Point Arch component of the Bridge. The District will ensure against incidental damage to the remainder of the Bridge historic property and the Fort Point property by hiring an independent Environmental Compliance Monitor (ECM) who will periodically monitor the site during construction and will prepare monthly reports documenting compliance and protection. These reports will be submitted to the District and GGNRA.</p> <p>The impact to the Bridge historic property following implementation of these measures therefore remains significant.</p>	Section 3.3.2	District				
LESS THAN SIGNIFICANT WITH MITIGATION						
BIOLOGICAL RESOURCES						
SENSITIVE SPECIES						
<p>The following avoidance measures, which have successfully been implemented as part of the Golden Gate Bridge Seismic and Wind Retrofit Project, would continue to be implemented as part of the proposed project in order to prevent adverse affects to Mission blue butterfly, special-status plant species, and coastal scrub habitat. Avoidance measures will also be implemented for the peregrine falcon.</p> <p>Mission Blue Butterfly</p> <ul style="list-style-type: none"> ▪ The District will provide specifications for erosion and dust control to the contractor, which will be implemented. ▪ Contractor's vehicles traveling on access roads within GGNRA lands would be restricted to a maximum speed of 	Section 3.3.3	District				

Task and Brief Description	Reference	Responsible Party	Task Completed		Environmental Compliance	
			Initial	Date	Initial	Date
<p>20 mph during the period of March 15 to July 4, which is the flight season for the Mission blue butterfly. The contractor will post and enforce this speed limit.</p> <ul style="list-style-type: none"> To prevent the introduction of non-native vegetation or other deleterious materials to GGNRA lands, the District and contractor will inspect all construction equipment prior to accessing the staging areas. If any vegetation or deleterious materials are present, the contractor will decontaminate its equipment with a high-pressure washer and properly dispose of the wastewater and debris prior to entering GGNRA lands. 						
<p>Plant Species</p> <ul style="list-style-type: none"> A qualified biologist or biologists will be retained by the District prior to the start of construction to act as a biological Environmental Compliance Monitor (ECM) and implement and oversee the below activities/measures. The biological ECM will flag and stake native vegetation near the staging areas within GGNRA lands as "Environmentally Sensitive Areas" and will oversee the contractor's installation of protective fencing around the designated ESA(s). Signs will be installed indicating that the fenced area is "restricted" and that all construction activities, personnel, and operational disturbances are prohibited. The biological ECM will prepare and provide worker educational materials that describe the value and importance of the coastal scrub habitat bordering the staging areas and the importance of not disturbing the habitat. The biological ECM will conduct regular visits of the staging areas to inspect if any damage to adjacent habitats has occurred, to evaluate if dust control measures need to be implemented or increased, to ensure that erosion control devices located near native vegetation and ESA(s) are functioning properly, and to evaluate if weed control measures need to be implemented. 	Section 3.3.3	District				

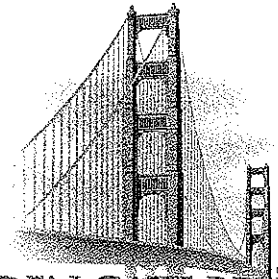
Task and Brief Description	Reference	Responsible Party	Task Completed		Environmental Compliance	
			Initial	Date	Initial	Date
<ul style="list-style-type: none"> Based on the findings of the site visits, the biological ECM will make recommendations to be implemented regarding weed control, re-vegetation of disturbed areas, and other measures to protect biological resources. The biological ECM will prepare monthly monitoring reports for the District that will address the effectiveness of the avoidance measures being implemented and identify any other measures to be implemented. 						
<p>NATIVE OR WILDLIFE SPECIES</p> <p>Potential impacts could occur to nesting peregrine falcon, other nesting birds, and various bird species from bird collisions. The below avoidance measures would be implemented to address these potential impacts.</p>	Section 3.3.3	District				
<ul style="list-style-type: none"> The District will retain the services of a qualified avian biologist to further evaluate the potential of birds to collide with the transparent panels potentially used as part of the suicide deterrent system. At a minimum, the expected flight patterns of migratory and resident birds relative to the installation locations of the transparent panels will be evaluated, as well as the potential of the transparent panels and associated reflections to alter regular flight patterns and encourage collisions. Should it be found that the use of the transparent panels or netting pose a substantial risk to birds, appropriate design measures would be implemented. These measures may include, but are not limited to visual deterrents such as patterning the transparent material with a UV coating that birds can see but humans cannot; utilizing etching, fritting, and opaque patterned glass to reduce transparency; utilizing bird-legible patterns on the transparent material; limiting the amount of transparent panels or amount of panels without a visual deterrent; modifying the horizontal netting; or other effective means of deterring bird collisions or entrapment. 	Section 3.3.3	District				

Task and Brief Description	Reference	Responsible Party	Task Completed		Environmental Compliance	
			Initial	Date	Initial	Date
<ul style="list-style-type: none"> Prior to the implementation of construction activities occurring during the nesting season of peregrine falcon (typically February through July), the District will consult with the Golden Gate Raptor Observatory (GGRO) to determine if breeding pairs of peregrine falcon are currently nesting in the vicinity of the Bridge and may be disturbed by the proposed project. This consultation will also serve to determine if surveys for nesting peregrine falcon should be conducted prior to project implementation. If nesting pairs are identified by the GGRO or by site surveys, then a construction exclusion zone would be established around the active nest. The size of the exclusion zone will be determined by the CDFG and will take into account existing noise levels at the nest location. Construction activities may commence within the exclusion zone only upon determination by a qualified biologist that the nest is no longer active. 	Section 3.3.3	District				
<ul style="list-style-type: none"> Prior to the implementation of construction activities occurring during the nesting season of native bird species, the biological ECM will conduct surveys for nesting birds. The survey area will include potential nesting habitat within and bordering the staging and construction areas, as well as all areas that would be subject to elevated construction-related noise levels. If active nests are found, then a construction exclusion zone would be established around the active nest. The size of the exclusion zone will be determined by the CDFG and will take into account existing noise levels at the nest location. Construction activities may commence within the exclusion zone only upon determination by a qualified biologist that the nest is no longer active. The biological ECM will also survey for nesting birds during their regular site visits of the staging areas. <p>Implementing these measures would reduce impacts to biological resources to a less than significant level.</p>	Section 3.3.3	District				

Appendix E

Letters and Correspondence

May 9, 2008



GOLDEN GATE BRIDGE
HIGHWAY & TRANSPORTATION DISTRICT

Mr. Greg McConnell, District Branch Chief,
Environmental Analysis
CALTRANS, Office of Environmental Analysis
Mail Station 8-B
P.O. Box 23660
Oakland, CA 94623-0660

Environmental Studies and
Preliminary Design for a Physical
Suicide Deterrent System on the
Golden Gate Bridge
Contract No. 2006-B-17

Re: **Project PES Form – Environmental Checklist Exhibit items #6A13 and #6C
Hazardous Material Study**

Mr. McConnell:

This letter is to confirm that there is no potential for hazardous materials (including underground tanks) or hazardous material remains within or immediately adjacent to the construction area and that a hazardous material technical study is not required for the Golden Gate Bridge, Highway and Transportation District's (District) Physical Suicide Deterrent System Project (Project).

The proposed build alternatives for the Project will either add onto the Golden Gate Bridge (Bridge) outside handrail, replace the outside handrail or add a net system to the outside of the Bridge below the outside handrail. There will be no excavation or construction activities on the lands below or around the Bridge. The proposed staging areas are all located on lands that have been previously disturbed and are covered with either asphalt concrete or gravel. Excavation will not occur in the staging areas and the surfaces of the staging areas do not contain hazardous materials.

The build alternatives will all require attachments to the Bridge. The existing steel on the Bridge is painted with paint systems consisting of red iron oxides, lead and zinc compounds, and/or barium sulfates. Any work that disturbs the existing paint system could potentially expose workers to health hazards and will produce surface preparation debris containing heavy metal in amounts that exceed the hazardous thresholds established in the California Code of Regulations. This information will be included in the Project specifications and the construction contractor will be required to contain, collect, handle and dispose at an appropriately licensed disposal facility all removed material painted with the existing paint system and all debris produced as a result of the work, in accordance with all applicable federal, state and local hazardous waste laws. All of the District's contract specifications for projects which disturb the existing paint system include provisions informing the contractor of the existing paint systems and require that the contractor follow all applicable laws to ensure that the health of all employees and the public as well as the environment are protected during the work.

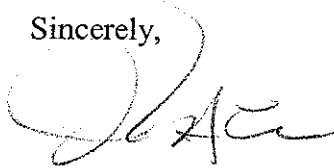
Mr. McConnell, Caltrans
May 9, 2008
Page 2 of 2

The District takes the protection of the public and environment very seriously. In addition to the construction contract requirements, the District monitors its contractor's work and performs quality assurance testing of its contractor's quality control tests to ensure that the work is performed in compliance with all applicable safety and environmental laws.

Attached for your reference is a section from a recent District project which includes provisions for the handling and disposal of hazardous materials. A project specific specification will be developed and included in the construction contract should this project move forward with any of the build alternatives. We trust that this information resolves your question regarding hazardous materials on this Project.

Should you have further questions, I can be reached at (415) 923-2023.

Sincerely,



Jeffrey Y. Lee, P.E.
Project Manager

Attachment

JYL/crh

c: Ms. Sylvia Fong, Caltrans
Steve Morton, DMJM Harris
Phyllis Potter, Circle Point
DJMulligan/EZBauer/JREberle/2.18

H:\ENGINE\RESOURCE\SuicideDeterrentSystem\Agencies\CALTRANS\McConnellHazMat.doc

SP7-1.04 PERMITS, LICENSES AND OTHER REGULATORY REQUIREMENTS. The following is added to Section 7-1.04, "Permits and Licenses," of the Standard Specifications after the last paragraph of said section:

The following agencies have oversight responsibilities with respect to this project, and the District has obtained permits and other authorizations from the following agencies:

- a. California Department of Transportation (Encroachment Permit Number: 0499-NTK-2175);
- b. Golden Gate National Recreation Area (Special Use Permit Number: PWFO-GOGA-5300-96-PSF-7043, Modification 1);
- c. The San Francisco Bay Conservation and Development Commission (Consistency Determination) as amended;
- d. State Water Resources Control Board (General Permit Number: CAS000002; and Conditional Water Quality Certification and Waiver of Waste Discharge;
- e. Presidio Trust Lease; and
- f. U.S. Fish and Wildlife Service, Biological Opinion, dated August 8, 1995 and amended April 2, 1996 and December 19, 2001.

The requirements contained in the agencies' permits and other authorizations are hereby incorporated by reference as though set forth in full. Copies of the permits and other authorizations are included within Volume 2 of these Special Provisions. Specific documents referenced in said permits and authorizations are available for the Contractor's inspection at the District's offices.

Throughout the term of this Contract, and until the date of the District's acceptance of the Contract, Contractor shall comply with the provisions of the above permits and other authorizations as they pertain to Contractor's work. Certain of the permits and authorizations included in Volume 2 indicate a specific date for expiration. It is the District's intent to obtain an extension of said permits and authorizations to allow for the full and final completion of Contractor's work in accordance with the duration of time set forth in this Contract for completion. Accordingly, Contractor shall assume and plan for the extension of said permits / authorizations such that they will apply with similar terms for the entire duration of Contractor's work, and it is expressly understood and agreed that Contractor shall have no claim against the District for additional compensation and/or time based on the expiration dates indicated in said permits / authorizations.

Contractor's attention is directed to the Presidio Trust Lease. With regard to the staging area made available at the south end of the bridge structure, Contractor's use of this area is conditioned upon Contractor understanding and agreeing that the use of this area may be terminated by the Presidio Trust during the course of the Project. The use of this area may be terminated upon 60 days notice by the Presidio Trust during the course of the Project. Should the use of this area be terminated during the course of the Project, Contractor agrees to promptly vacate the south staging area at its own cost and expense. In such event, the District will not be arranging for any substitute staging area for Contractor's use. Contractor's use of the south staging area is at Contractor's risk.

Prior to the start of any work within the State of California's right-of-way, or any work that affects the State's facilities, the Contractor will be required to obtain an Encroachment Permit from the following office:

CALTRANS DISTRICT 4
 PERMIT ENGINEER
 111 GRAND AVENUE
 OAKLAND, CALIFORNIA
 P.O. BOX 23660, OAKLAND, CA 94623-0660

Application fees and site inspection costs that are due at the time of obtaining the permit shall be paid by the Contractor. The State has issued an exemplar copy of the Encroachment Permit to the District. This copy is included in Volume 2 of these Special Provisions.

With respect to the Golden Gate National Recreation Area ("GGNRA"), the National Park Service ("NPS") has issued a Special Use Permit No. PWFO-GOGA-5300-96-PSF-7043, Modification 1 to the District that authorizes certain construction activities within lands owned and managed by the NPS. IN COMPLIANCE WITH THIS PERMIT, AND AS LISTED IN SECTION IV (2), "SITE DISTURBANCE PREREQUISITES," OF THE PERMIT, THE CONTRACTOR SHALL SUBMIT FOR THE ENGINEER'S REVIEW AND APPROVAL THE FOLLOWING SUBMITTALS WITHIN THIRTY (30) DAYS OF THE EFFECTIVE DATE OF THE NOTICE TO PROCEED:

1. Water Pollution Control Program including a Storm Water Pollution Prevention Plan;
2. Site Specific Health and Safety Plan (injury and illness prevention program);
3. Traffic Management Plan (including local haul roads, transit and parking plan, and pedestrian and bicycle trails); and,
4. Noise Mitigation Plan.

In addition, within thirty (30) days of the effective date of the Notice to Proceed, the Contractor shall submit for the Engineer's review and approval a Site Operations and Materials Handling Plan ("SOMHP").

All of the above Plans must address and fully respond to the requirements of the existing NPS Special Use Permit with respect to all work to be performed within this geographic area.

The Engineer's approval of the above five submittals is contingent upon the NPS' approval of the same submittals. The Engineer will supply the Contractor's submittals to the NPS upon receipt by the Engineer. For the above listed five submittals, Contractor shall allow at least forty five (45) days for the Engineer's review of each listed submittal. In the event of any re-submittal, Engineer shall have the same amount of time to review the re-submittal as the Engineer had for the original submittal. It is expressly understood and agreed that any delay to the construction schedule due to any re-submittals shall be Contractor's responsibility and shall be at its own cost and expense.

CONTRACTOR SHALL NOT DISTURB THE SITE UNTIL ENGINEER APPROVES EACH OF THE ABOVE LISTED SUBMITTALS. As provided in Section II, "General Conditions," of

the Special Use Permit, the term "site disturbance" means any activity that involves or results in the placement of any structure or equipment on the Permitted Premises or Approved Transportation Routes (which are defined in the permit) including without limitation, fences or trailers, for more than 24 consecutive hours, and any activity, including but not limited to construction, that involves or results in any disturbance or alteration of the ground or any building or landscape feature within the Permitted Premises or Approved Transportation Routes.

Until the submittals specified in this Section SP7-1.04 are approved by the Engineer, the Contractor shall not begin any activities at the project site, except for taking field measurements and verification and horizontal and vertical topographic and control surveying as specified in "Plans and Working Drawings (Submittals)," "Horizontal and Vertical Control Surveying" and "Field Measurements" of these Special Provisions.

Attention is directed to "Order of Work," "Earthwork" and "Non-Soil Surface Abatement" of these Special Provisions. The Contractor shall, as a first order of work once site disturbance is allowed, remove contaminated soil materials and abate contamination on non-soil surfaces within the areas indicated on the Contract Plans and specified in these Special Provisions prior to commencement of any other site disturbance.

The Contractor must conduct all work activities on or off the site (including, for example, the transport of any wastes or materials) in full compliance with, at a minimum, applicable Environmental Laws (as defined below) and applicable additional health and safety rules and regulations pertaining to hazardous substances and hazardous materials (collectively referred to as "Applicable Environmental Requirements"). Contractor must insure that all temporary hazardous waste storage facilities comply with these Special Provisions and requirements of the U.S. Environmental Protection Agency ("EPA") and the State of California hazardous waste regulations.

As used in these Special Provisions, all references to "hazardous substances" or "hazardous materials" are to be treated as synonymous, and shall mean any chemical, compound, waste, substance, mixture, pollutant or other material (i) that has been defined as, or deemed to be, hazardous or toxic to human health or reproduction, or hazardous to the environment; or (ii) that is regulated due to its status as a compound or substance that is toxic, ignitable, reactive, carcinogenic, corrosive or otherwise potentially injurious to human health or the environment; or (iii) that is regulated, defined, or otherwise classified as hazardous or toxic by any federal, state, or local law, regulation, ordinance, judicial or administrative orders or decrees enforceable as a matter of law, as these may be amended from time to time (collectively "Environmental Laws"). Environmental Laws include, without limitation, the following: the Comprehensive Environmental Response, Compensation and Liability Act, 42 United States Code (U.S.C.) Section 9601, et seq. ("CERCLA"); the Hazardous Materials Transportation Act, 49 U.S.C. Section 1801, et seq.; the Resource Conservation and Recovery Act, 42 U.S.C. Section 6901 et seq. ("RCRA"); the Toxic Substances Control Act, 15 U.S.C. Sections 2601 et seq.; the Clean Water Act, 33 U.S.C. Sections 1251 et seq.; the California Hazardous Waste Control Act, Health and Safety Code Sections 25100 et seq.; the California Hazardous Substance Account Act, Health and Safety Code Sections 25330 et seq.; the California Safe Drinking Water and Toxic Enforcement Act; Health and Safety Code Sections 25249.5 et seq.; Health and Safety Code Sections 25280 et seq. (Underground Storage of Hazardous Substances); the California Hazardous Waste Management Act, Health and Safety Code Sections 25170.1 et seq.; California Health and Safety Code Sections 25501 et seq. (Hazardous Materials Response Plans and Inventory); and the California Porter-Cologne Water Quality Control Act, Water Code Sections 13000 et seq.

References to "contaminated" or "contamination" in any of these Special Provisions means anything that contains hazardous substances at levels imposing regulatory controls under Environmental Laws. All references to "waste" means any "waste" as defined or regulated as such under Environmental Laws. Any reference to "waste" includes any waste that is a hazardous substance or hazardous waste under Environmental Laws.

Attention is directed to "Removal of Lead and Other Hazardous Substances" elsewhere in these Special Provisions. Contractor shall comply with all Applicable Environmental Requirements and soils management or similar plans in effect for the site. Without limiting the foregoing, and in accordance with the Hazard Communication Standard (Title 8, General Industry Safety Orders of the California Code of Regulations, Section 5194), the Contractor shall inform the Engineer of all hazardous materials brought onto the site in connection with the performance of the work, including all hazardous materials from vendors, suppliers and subcontractors. Contractor shall provide the Material Safety Data Sheets ("MSDS") for all such hazardous materials on or before the date they are first brought to the site. MSDS forms may be supplemented with product sheets where available. The Contractor shall also specify the estimated quantities, storage and use locations of these hazardous materials, the location of the MSDS forms, as well as information regarding the means for District employees to have immediate access to the MSDS forms during times when they might be exposed to such materials.

Contractor shall immediately notify the Engineer at any time an authorized representative from a regulatory agency contacts the Contractor regarding the Project or visits the site. The Engineer may monitor or participate in such visits. Copies of any and all correspondence with such representatives, including letters, orders and citations, shall be provided to the Engineer within twenty-four hours of Contractor's receipt of said documents, and at least concurrently with Contractor's communication with the Engineer. Contractor shall promptly provide the Engineer with a complete description of any corrective actions required and/or undertaken in response to a visit or inspection by an authorized representative of a regulatory agency.

The Contractor shall be responsible for originating copies of the waste shipment records/manifests required by the Federal Resource Conservation and Recovery Act (PL 94-580), the State of California, and any other state where Contractor plans to dispose waste materials from the site. These records/manifests shall be maintained for all hazardous and non-hazardous materials that are shipped off the site. Attention is directed to "Removal of Lead and Other Hazardous Substances," elsewhere in these Special Provisions, concerning the party that is responsible for signing the manifests. All notices that the Contractor receives for any such shipments under these manifests, whether during or after the completion of the scope of work, must be forwarded to Engineer within two (2) business days of receipt.

The Contractor shall ensure that all operations for loading and hauling all wastes (i.e., placarding, labeling and packaging of contaminated wastes) are in compliance with the appropriate local, state, and Federal DOT regulations.

The Contractor shall be responsible for ensuring that all transporters, storage facilities, and treatment or disposal facilities that handle any wastes or hazardous substances generated at this site are appropriately permitted, licensed, and approved by applicable regulatory agencies to accept such wastes prior to the shipment of such materials to such sites.

SITE OPERATIONS AND MATERIALS HANDLING PLAN. Within 30 days of the effective date of the Notice to Proceed, the Contractor shall prepare and submit to the Engineer for approval in accordance with "Plans and Working Drawings (Submittals)" elsewhere in these

Special Provisions, a Site Operations and Materials Handling Plan (SOMHP) that covers all work activities involving the disturbance and handling of hazardous materials, including excavation of contaminated soil material and fractured rock, abatement of contamination on non-soil surfaces and all operations disturbing existing paint systems. The SOMHP shall include:

- Descriptions of the methods and sequences of such work activities and specifications of equipment to be used.
- Containment System(s) and Collection Plan(s).
- Work Area Monitoring Plan(s).
- Contaminated Materials Handling, Storage and Management Plan(s) (CMHSMP).
- Characterization Sampling and Analysis Plan(s) (CSAP).
- Waste Transportation and Disposal Plan(s) (WTDP).

The SOMHP shall be prepared under the direction and signed by the Contractor's industrial hygienist who is certified by the American Board of Industrial Hygiene. Attention is directed to "Industrial Hygiene Requirements" contained within "Safety and Health Provisions" elsewhere in these Special Provisions.

CONTAINMENT SYSTEM AND COLLECTION PLAN. The Contractor's SOMPH shall include a Containment System and Collection Plan (CSCP). The CSCP shall describe the Contractor's proposed containment systems, ventilation systems associated with the containment systems, and material collection methods proposed for use inside the containment systems. The collection methods proposed shall prevent the disbursement of material and airborne emissions outside the containment system.

At all locations where abrasive blasting or mechanical methods are used to remove lead-based paint from steel and other surfaces, and at locations where abrasive blasting or mechanical methods are used to abate non-soil surfaces, a closed containment system with a negative air ventilation system shall be utilized. The closed system shall be designed and installed to contain the air borne materials and prevent the disbursement of the airborne emissions outside the containment systems.

At all other locations where the work activities will produce air borne emissions containing lead or other hazardous materials, or cause the disbursement of dust and other materials that may be contaminated, the Contractor's CSCP shall include provisions for containment systems and collection plans that will prevent the disbursement of contaminated materials and airborne emissions outside the work areas.

The closed containment systems shall utilize both equipment and barriers, such as vacuums, vacuum shrouded surface preparation equipment, drapes, tarps, fans and filters, and other materials and equipment that will contain within the closed containment system all contaminated material and any other material generated during the Contractor's Work. In developing the closed containment systems and collection plan for such material, the Contractor shall provide closed containments conforming to Class 1A as specified in Section 4.2.2.1 Guide of the Steel Structures Painting Council (SSPC) Steel Structures Painting Manual. The containment methods chosen by the Contractor shall be suitable for containing all airborne emission, paint debris and any other contaminated material, and shall meet all Applicable Environmental Requirements, including portions of 29 CFR 1910, 29 CFR 1926 and Title 8 of California Code of Regulations.

At work locations where closed containment systems and negative air are not required, the Contractor shall develop and implement containment systems that will prevent the material and any airborne emission from migrating outside the work area. The systems may consist of closed

systems, systems using drapes tarps and other barriers, vacuum shrouded equipment or combinations of equipment, material and methods such that all contaminated material and any other materials disturbed or generated during the work activities are contained inside the work area. Barriers, washing areas, and other such devices shall be installed to prevent contaminated material from leaving the containment areas in violation of the Applicable Environmental Requirements.

The Containment System and Collection Plan, for each work area, shall include (i) working drawings and design and independent check design calculations prepared under the direction and signed by an engineer who is registered as a Civil Engineer in the State of California for all connections of the containment systems to the existing structure; and (ii) working drawings and design and independent check design calculations prepared under the direction and signed by an engineer who is registered as a Mechanical Engineer in the State of California for an enclosed containment ventilation system. Each proposed system shall be stable and able to withstand all loads imposed upon it and shall not in any way damage or impair the structural integrity of the existing structure. The ventilation systems for the closed containment system shall provide for the movement of air across the work area, produce a negative air pressure inside the containment and provide a dust collector system that is adequate to sufficiently clean the discharged air.

Contractor must demonstrate to the Engineer that the containment systems are performing systems are performing satisfactorily, based, at a minimum, on the following monitoring tests:

- Contractor's worker protection (personal sampling) monitoring tests, as required by Section 1532.1, "Lead," and Section 1532, "Cadmium," of Construction Safety Orders Title 8, of the California Code of Regulations and as specified in subsection "Safety and Health Provisions" elsewhere in these Special Provisions.
- Contractor's work area monitoring test, as described below in subsection "Work Area Monitoring" of this Section.
- Soil sampling, visible emissions and ambient air quality assurance monitoring tests, which will be conducted by the Engineer, as described below in subsection "Environmental Monitoring" of this Section.

If the measures being taken by the Contractor are found by the Engineer to be inadequate to provide for the containment and collection of debris that may contain existing paint contamination or any other hazardous materials present at the site, the Engineer has the right to direct the Contractor to revise his operations and the containment system and collection plan at no additional cost to the District. The Engineer may determine the operations for which the Contractor's containment and collection program are inadequate. The Contractor shall not perform further work on these operations until the containment system and collection plan are found adequate by the Engineer and, if required, a revised program for the containment system and collection plan for material containing existing paint system has been approved by the Engineer. A revised Containment System and Collection Plan shall be submitted for approval as an amendment to the SOMHP to the Engineer by the Contractor in accordance with "Plans and Working Drawing (Submittals)" elsewhere in these Special Provisions and in accordance with this Section.

The District will not be liable to the Contractor for failure to approve all or any portion of an originally submitted or revised plan for the containment system and collection plan of material containing contamination, nor for any delays to the work due to the Contractor's failure to submit acceptable plans for the containment and collection of such material.

WORK AREA MONITORING. The Contractor's SOMPH shall include the Contractor's plan for performing work area monitoring. The Contractor's Work Area Monitoring Plan shall include, at a minimum, performing work area monitoring by collecting air samples and taking air quality measurements for lead and other hazardous compounds. The monitoring shall be performed adjacent to the outside of containment areas and all other areas or at equipment locations that may potentially emit lead compounds and other contaminants, consistent with Applicable Environmental Requirements. Contractor must use personal monitors in accordance with SSPC GUIDE 6, Section 5.5.3 Method C, or equivalent method approved by the Engineer. Action level lead limits in air are 30 ug/m³ per 29 CFR 1910.1025 and 29 CFR 1926.62. Work area monitoring shall be performed daily during all earthwork, non-soil surface abatement work activities, all abrasive blasting activities and all other activities that may disturb the existing paint systems. Contractor shall furnish the monitoring results to the Engineer within 72 hours of collection.

The Contractor shall prepare chain-of-custody record forms for all air samples to be tested. Contractor shall submit copies of completed chain-of-custody record forms to the Engineer on the same day the samples are dispatched for testing.

Air sample analysis results for work area monitoring shall be submitted in triplicate to the Engineer. The sample analyses reports shall be prepared by a certified industrial hygienist and include the following information:

- A. For air sample analysis results, the date and location of sample collection, sample number, Contract number, full name of the structure as shown on the Contract Plans, and the name of the Technician and Certified Industrial Hygienist.
- B. Start time, end time and duration of sample collection.
- C. Start time and end times of surface preparation operations on the day of sample collection.
- D. Equipment serial numbers of the sampling equipment.
- E. Concentrations of PM-10 and PM-2.5 expressed as micrograms per standard cubic meter of air.
- F. Concentrations of lead, zinc, cadmium, chromium and silicates expressed as micrograms per standard cubic meter of air.

Should the results of the air monitoring indicate that lead or other hazardous compounds are being release into the environment in violation of the Applicable Environmental Requirements, the Contractor shall stop at the non-compliant area and determine the cause of the release. The Contractor shall submit a revised Containment System and Collection Plan to the Engineer for review and approval detailing how the containment will be revised to prevent future releases.

CONTAMINATED MATERIALS HANDLING, STORAGE AND MANAGEMENT PLAN. The Contractor's Contaminated Debris Handling, Storage and Management Plan (CMHSMP) shall describe all methods proposed to handle, store and manage all materials on the site contaminated with lead and all other materials found on the site or produced as a part of the work and deemed to be contaminated or hazardous. The plan shall include the proposed

procedures for handling such materials, the identification of all proposed storage and staging areas of such materials, the proposed access routes to and from the work areas to the storage and staging areas, the methods of on site material storage such as temporary containers or stockpiles, the management of the materials stored on site and all required record keeping of the material, including tracking material by date, location, characterization, weight and volume from the site to the off-site disposal facilities.

Where containers, such as drums and bins, are proposed for use, the CMHSMP shall detail Contractor's proposed methods for coordinating container delivery to the site, methods of filling containers with different materials and location of containers when being filled, methods for delineating temporary staging area for storage of containers while the material is being analyzed for characterization, methods for maintaining temporary storage areas for containers filled with contaminated material, for managing the partially filled and filled containers including appropriate on site labeling, tracking and record keeping, and for tracking, monitoring and reporting the characterized material transported in the containers off-site for disposal.

Where temporary stockpiles are proposed, the CMHSMP shall detail Contractor's proposed methods for moving the material from the work areas to the temporary stockpile areas, for providing dust control and storm water pollution prevention measures at the work areas, stockpile areas and along the routes between the work areas and temporary stockpile areas, for tracking the amount of material removed from each work area and tracking where the material is deposited at the temporary stockpile area, for isolating the stockpiled materials from the existing ground and surrounding work areas and project site, for managing the material while characterization analysis is being performed, for removing these materials for off-site disposal and for all record keeping including weight and volume of the characterized material disposed off-site and the location of the off-site disposal sites.

Attention is directed to Work Area Monitoring in this Section SP7-1.04 regarding the requirement for the Contractor to monitor the work area and provide appropriate measures to prevent the unauthorized release of airborne lead or other hazardous compounds into the environment due to any of the Contractor's operations.

The CMHSMP shall include Contractor's methods for maintaining containers or stockpiles and staging areas in accordance with "Project Appearance" elsewhere in these Special Provisions.

The methods proposed in the CMHSMP for the handling, storage and management of all contaminated and hazardous materials shall be in accordance with all Applicable Environmental Requirements and all applicable worker health and safety provisions.

To the extent allowed by Applicable Environmental Requirements, contaminated and hazardous materials may be temporarily stored on site as noted above pending the testing, analysis and characterization of such materials. Contractor shall maintain on a daily basis accurate records of the number of drums, containers and bins on site at any time, the location of these containers, the characterization of the material inside these containers, the dates and times of delivery and removal of these containers, and an accounting of the weights and volumes of the materials in the containers and the off-site disposal location of the materials. On site storage of material in containers or stockpiles shall be limited to the time allowed by Applicable Environmental Requirements.

Where temporary stockpiles are proposed, the CMHSMP shall include provisions for covering the stockpiles at all times except when work adding material to or removing material from the

stockpiling is in progress. The stockpiles must be covered at the end of each day. The CMHSMP shall provide for dust control in the stockpile areas and shall provide for the installation and maintenance of other measures as necessary to prevent storm water pollution by the stockpiled contaminated materials. The CMHSMP shall include the installation of temporary barriers (Type K), the construction and maintenance of temporary containment berms or other applicable controls as required by Applicable Environmental Requirements and these Specifications to positively delineate the temporary stockpile areas and to control the spillage and/or migration of contaminated materials.

The CMHSMP shall provide for verification testing by the Contractor of the surface of the storage and staging areas to ensure that the Contractor's operations do not contaminate the areas above their pre-construction conditions. The CMHSMP shall provide for testing both prior to the Contractor's use and after final cleanup of the staging areas. If the results of the post-construction testing indicate an increase in the level of lead or other contaminate concentrations compared to the pre-construction baseline testing of the same area, and the Engineer determines that the increase is a result of the Contractor's operations, the Contractor will be required to remove the contaminated material and re-test the area until the pre-construction conditions are met. The Contract will not be accepted until the post-construction testing indicates that the staging areas are at or below their pre-construction conditions.

CHARACTERIZATION SAMPLING AND ANALYSIS PLAN. The Contractor's Characterization Sampling and Analysis Plan (CSAP) shall describe the methods of sampling and analysis for characterization of contaminated materials prior to off-site disposal as required by the disposal facility and Applicable Environmental Requirements. The CSAP shall describe the proposed methodology for obtaining representative samples of contaminated material for testing. Sampling and analysis shall be in accordance with the latest edition of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846" published by the United States Environmental Protection Agency. The CSAP shall include the name(s) and qualifications of the State of California certified analytical laboratory(ies) that the Contractor proposes to use, and shall include a procedure for interpretation of the analytical data. The Contractor shall provide evidence of the laboratory's current certification to the Engineer in the submitted CSAP.

The Contractor shall perform all required sampling and analysis for characterization of the collected contaminated materials prior to the material's disposal. The Contractor shall submit the results of the material characterization to the Engineer for review a minimum of 48-hours in advance of the scheduled date for off-site transport of the material to any disposal facility or to any storage area on the site.

All tests required for materials characterization shall be performed at the Contractor's expense.

For purposes of disposal of lead-contaminated materials, the Contractor shall characterize the wastes into the following classifications:

- (1) Resource Conservation and Recovery Act (RCRA) Hazardous Waste: (>5 ppm Toxicity Characteristic Leaching Potential (TCLP)).
- (2) Class I Non-RCRA Waste: (<5 ppm TCLP, and >5 ppm Waste Extraction Test (WET) Soluble Threshold Limit Concentration (STLC), and /or >1000 ppm Total Threshold Limit Concentration (TTLC).
- (3) Class II Waste: (<5 ppm TCLP, and <5 ppm (WET)STLC, and >350 but <1000 ppm TTLC), provided the landfill is permitted to accept such waste.

WASTE TRANSPORTATION AND DISPOSAL PLAN. The Contractor's SOMHP shall include a Waste Transportation and Disposal Plan (WTDP).

WTDP shall include a Traffic Management Plan (TMP). The TMP shall describe the Contractor's methods for maintaining an efficient movement of haul trucks on and off the project site area. The TMP shall describe the proposed routes for off-site transport of contaminated materials to the various disposal facilities. The WTDP shall also describe waste profiling requirements of selected disposal facilities, and the pre-acceptance authorization arrangements between the Contractor and the selected disposal facilities/landfills. The Contractor shall include evidence of all permits and licenses required for transport of hazardous waste in the WTDP.

The Contractor shall dispose of all collected contaminated materials at landfills that are permitted to accept the various classifications of wastes as characterized in subsection "Characterization Sampling and Analysis Plan" of this Section. All waste materials containing the existing paint systems shall be disposed of by the Contractor at a facility approved to receive the specific type of waste, in compliance with Applicable Environmental Requirements, and in accordance with the requirements of the disposal facility operator. Prior to use of the disposal facility, the Contractor shall provide the Engineer with documentation verifying that said disposal facility is currently permitted to receive these waste materials. The waste materials containing the existing paint systems shall be hauled by a transporter currently registered with the California Department of Toxic Substances Control using correct manifesting procedures and vehicles displaying current certification of compliance with all Applicable Environmental Requirements for public road transport of such wastes. The Contractor shall make appropriate arrangements with the operator of the disposal facility and perform any testing of such debris required by the operator.

The WTDP shall include the methods to be used to monitor and record the shipment and disposal of all materials from the project site. The Contractor shall be responsible for originating copies of the waste shipment records and manifests required by the Federal government, the State of California, the state where the treatment/disposal facility is located, and the disposal facility. Wastes that are classified as hazardous shall be shipped under manifest. Wastes that are classified as non-hazardous shall be shipped under a Bill of Lading or other tracking document as determined between the landfill and the Contractor. These records/manifests shall be maintained by Contractor during the project and duplicate copies will be provided to District on a contemporaneous basis for all hazardous and non-hazardous materials that are shipped off the site. Attention is directed to "Removal of Lead and Other Hazardous Substances," elsewhere in these Special Provisions, concerning the party that is responsible for signing the manifests.

ENVIRONMENTAL MONITORING. The NPS and the District's Environmental Compliance Monitor will be monitoring various aspects of the construction site environmental compliance.

Attention is directed to the Mission Blue Butterfly Habitat Protection Plan and the Native Vegetation Habitat Protection Plan, a copy of which is incorporated in the Contract Documents and is included within Volume 2 of these Special Provisions, and to "Environmentally Sensitive Areas" elsewhere in these Special Provisions. Contractor shall comply with all requirements of these Habitat Protection Plans and all related provisions of these Special Provisions.

The Engineer's Environmental Compliance Monitor (ECM) will monitor the Contractor's operations to evaluate whether the Contractor is in compliance with all environmental, permit and authorization requirements. The ECM will perform visible emissions monitoring, air monitoring and soil monitoring and testing to evaluate the effectiveness of the Contractor's containment

systems and dust control measures and to enforce compliance with local, state and federal regulations.

The ECM and the Engineer will perform verification soil and surface sampling and testing after completion of the earthwork activities for removal of contaminated overlying and fractured rock material and for non-soil surface abatement inside the North Anchorage Housing; after completion of the structure excavation at the North Pylon; and after completion of the excavations for relocation of the utility duck bank. The results of these samplings and testings will be used by the Engineer as the baseline soil condition for determining whether Contractor's operations subsequent to the above noted work resulted in an increase of concentrations of contaminants at the previously cleaned areas.

The Contractor shall be solely responsible and must remediate or remove any increase in the concentrations of heavy metals or other contaminants in the site's soils or groundwater due to Contractor's activities or those activities of its subcontractors or agents.

Prior to the beginning of any work that may disturb existing paint systems, the ECM will perform baseline monitoring to obtain background levels. Subsequent monitoring will be performed during the Contractor's activities that disturb the existing paint system at times determined by the Engineer and without notice to the Contractor.

After completion of the work that disturbs the existing paint system, if soil sampling shows an increase in the concentrations of heavy metals or other contaminants above any baseline conditions, the area affected shall be cleaned and re-sampled by the Contractor at the Contractor's expense until soil sampling and testing shows concentrations of heavy metal statistically less than or equal to the concentrations collected prior to the beginning of the work that disturbed the existing paint system.

Where an increase in soil pollutant concentrations occur, in addition to removing and disposing of the contaminated soil, a revised Containment System and Collection Plan shall be submitted to the Engineer as an amendment to the SOMHP in accordance with "Plans and Working Drawing (Submittals)" elsewhere in these Special Provisions and in accordance with this Section.

Attention is directed to "Sound Control Requirements" elsewhere in these Special Provisions. The ECM will monitor the construction activities for compliance with these Special Provisions.

PAYMENT. Full compensation for conforming to the requirements in these permits, including preparing, submitting, implementing and maintaining all required work plans, the Applicable Environmental Requirements, and any other regulatory requirements imposed by the scope of work shall be considered as included in the Contract prices paid for the various Contract Items and no additional compensation will be allowed therefor.

SP7-1.06 SAFETY AND HEALTH PROVISIONS. The following is added to Section 7-1.06, "Safety and Health Provisions," of the Standard Specifications after the last paragraph of said section:

The Contractor's Safety and Security Representative shall be present at the jobsite at all times work is being performed. Attention is directed to "Contractor's Project Management Team" elsewhere in these Special Provisions regarding required minimum qualifications of the Contractor's Safety and Security Representative. The Contractor shall submit to the Engineer a copy of a letter of authority from the Contractor to the Safety and Security Representative that designates the representative by name and describes the authorities and responsibilities of the Safety and Security Representative, which shall include, but not be limited to, the following:

- 1) Responsibility for the preparation and maintenance, of the Contractor's Health and Safety Plans, and insuring that subcontractors and consultants likewise prepare and maintain their Health and Safety Plans;
- 2) Responsibility for field implementation, oversight, review and enforcement of Health and Safety Plans for the Contractor, subcontractors and consultants;
- 3) Responsibility for conducting jobsite toolbox safety meetings;
- 4) Maintaining records of any incidents requiring medical treatment beyond first aid and submittal of said records for each incident to the District;
- 5) Inspection and monitoring of the Contractor's and subcontractors' jobsite activities, including all temporary construction activities and traffic control operations, and managing the correction of any unsafe conditions;
- 6) Compliance with state, federal, and local worker health and safety regulations;
- 7) Submitting weekly reports to the Engineer, which record all material issues and events (e.g. all accidents, risk exposures, etc.) related to jobsite health and safety;
- 8) Authority to establish new health and safety controls as needed;
- 9) Conducting investigations of all accidents and reporting all accidents;
- 10) Responsibility for preparation and maintenance of project site security plan and procedures; and
- 11) Responsibility for implementation, oversight, review, enforcement of project site security plan and procedures.

The Contractor may assign additional personnel to assist the Contractor's Safety and Security Representative. The qualifications and experience of personnel that will assist the Contractor's Safety and Security Representative shall be subject to the review and approval by the Engineer. If the Engineer determines that the assigned personnel are not providing adequate health and safety controls, the Contractor shall secure the services of other safety and health personnel at its cost.

The Contractor shall abide by Applicable Environmental Requirements, as defined in "Permits, Licenses and Other Regulatory Requirements" elsewhere in these Special Provisions and shall take such other measures as may be necessary toward ensuring that the work will be done in a safe manner and that the safety and health of the employees and the people of local communities are safeguarded. Upon the failure of the Contractor to comply with any of the requirements of these Special Provisions, without limiting any other remedy of the District, the Engineer shall have the authority to stop any operations of the Contractor affected by such failure until the failure is remedied, and Contractor shall not be entitled to assert any claim for any of the time lost or for any increased costs or damages due to such stop orders.

It is understood and agreed that Contractor is solely responsible for job-site safety and all

supervision related to it. The District's review and approval of the Contractor's submittals relating to job-site safety will not at any time relieve Contractor from retaining sole and full responsibility for all aspects of its health and safety plans. Contractor agrees that it will not depend on the Engineer for direction as to maintaining a safe jobsite. Contractor shall immediately suspend operations and make immediate corrections when, in the opinion of the Engineer, Contractor's operations are being conducted in an unsafe manner and/or when the jobsite is in an unsafe condition. No additional compensation or Contract time will be granted to the Contractor for the correction of any aspect of Contractor's work that is unsafe.

The Contractor must immediately provide verbal notification to the Engineer of any incident at the jobsite that requires medical attention beyond first aid for any injured worker. Contractor shall provide a written report of the incident within 24 hours of the incident.

HEALTH AND SAFETY PLANS. The Contractor's Health and Safety Plan (HASP) shall describe in detail the procedures and contingency actions necessary to complete the work in a safe manner without endangering on-site personnel, the community, or the environment. The HASP shall cover all aspects of worker protection and construction site health and safety for all phases of the scope of work, including, but not limited to, the following:

- Code of Safe Practices
- Injury and Illness Prevention Program
- Hazard Communication Program
- Fall Protection Plan
- Crane Safety Plan
- Confined Space Plan
- Emergency Plan and Procedures
- Welding Safety Plan
- Scaffolding and Work Platform Safety Plan
- Employee Training Plan
- Personnel Protection Program
- Personal Protective Equipment Plan
- Respiratory Protection Plan
- Hazardous Waste Operations Plan

The Contractor shall submit to the Engineer in accordance with "Plans and Working Drawings (Submittals)" elsewhere in these Special Provisions its HASP, which must contain the Contractor, its subcontractors and consultants' programs, plans and procedures that are listed above and any other programs, plans and procedures required for the work. The HASP shall explain in detail the Contractor, its subcontractors and consultants' proposed practices and procedures for all aspects of construction site health and safety, and it shall also conform to the requirements of the Department of Industrial Relations, California Code of Regulations, Title 8, published by the California Occupational Safety and Health Administration ("Title 8") and other Applicable Environmental Requirements.

WORKER PROTECTION. The Contractor, its subcontractors and consultants shall develop, implement, and maintain a complete worker protection program for all personnel working at the site as an integral part of the HASP.

Attention is directed to "Clean & Paint Structural Steel" elsewhere in these Special Provisions, which requires the Contractor to perform activities that will disturb the existing paint systems,

and to "Earthwork", and "Non-Soil Surface Abatement" elsewhere in these Special Provisions, which require the Contractor to perform work activities involving removal of hazardous waste, contaminated debris, overlaying soil and fractured rock materials.

The worker protection plan shall include all additional provisions required under Title 8 for protecting all personnel that will perform site work activities associated with "Clean and Paint Structural Steel," "Earthwork," "Non-Soil Surface Abatement" and all other operations, which disturb the existing painted surfaces or paint systems, including but not limited to those activities involved in the removal, replacement and installation of existing and new fasteners and the relocation and modification of the existing steel, and those activities, which disturb debris contaminated with lead, zinc, cadmium or other metals.

The worker protection plan shall include a site specific worker protection compliance program.

The site-specific worker protection compliance program shall include the following elements as a minimum:

- Respiratory protection program.
- Eye protection.
- Dermal protection.
- Environmental and personnel monitoring.
- Personnel and equipment decontamination.
- Industrial hygiene.
- Medical monitoring.
- Employee training, inclusive of all specialized hazardous materials handling and abatement training and hazardous materials contingency plan.
- Delineation of work zones.
- Record keeping.
- Emergency procedures.

The implementation of the worker protection compliance programs shall be monitored by an industrial hygienist certified by the American Board of Industrial Hygiene or other competent person capable of taking corrective action. Copies of all inspection reports made in accordance with Title 8 shall be furnished to the Engineer within three (3) working days of inspection covered by the report.

The Contractor must obtain Engineer's approval of such site specific worker protection compliance monitoring programs before starting any of the operations associated with "Clean and Paint Structural Steel," "Earthwork," "Non-Soil Surface Abatement" and all other operations, which disturb the existing painted surfaces or paint systems and at such times when revisions to the program are required under Title 8. The site-specific compliance programs shall be prepared by an industrial hygienist certified by the American Board of Industrial Hygiene.

The Contractor shall provide the services of an industrial hygienist certified by the American Board of Industrial Hygiene (IH) or Safety Professional with at least five years experience in the chemical industry and/or the chemical waste disposal industry to prepare, direct and approve the development, implementation, and enforcement of the Personnel Protection Program, Respiratory Protection Plan, Air Monitoring Program and all other worker protection provisions required under Title 8 for the work activities noted above. The name and qualifications of the Contractor's IH shall be submitted as part of the HASP and shall be subject to the approval of the Engineer.

PERSONNEL AND EQUIPMENT DECONTAMINATION REQUIREMENTS. The Contractor shall prepare and implement personnel and equipment decontamination procedures and facilities to minimize or eliminate contamination by hazards at the site. The Contractor's Safety and Security Representative shall supervise all decontamination activities. All personnel shall be instructed as to the proper decontamination procedures consistent with all Applicable Environmental Requirements. Minimum decontamination procedures shall be as set forth in Title 8.

The Contractor shall set up personnel decontamination facilities with decontamination features, including wash stations, tubs, rinse equipment, boot racks, changing facilities and equipment storage and disposal facilities. The Contractor shall submit the personnel decontamination facilities plan as part of the HASP.

The Contractor shall provide and maintain the personnel decontamination facilities for all personnel involved with "Clean and Paint Structural Steel," "Earthwork," "Non-Soil Surface Abatement" and any other work activities that disturb existing paint or contaminated soils or debris at the site. Personnel shall use the decontamination facilities as specified in the approved HASP.

The Contractor's Safety and Security Representative shall be responsible for initiating heat stress monitoring of personnel working in protective clothing or respiratory protection when ambient temperature exceeds 70 degree F. Work-rest regimens shall be established. Contractor personnel shall be trained in the types, symptoms, and first aid for heat stress.

MEDICAL MONITORING. The Contractor shall perform medical monitoring of employees that perform site work activities associated with "Clean and Paint Structural Steel," "Earthwork," "Non-Soil Surface Abatement" in accordance with Title 8. The Contractor shall submit a summary of the blood lead test results of the Contractor's employees, not including employee names, to the Engineer within seven (7) days of receiving the results.

The Contractor shall utilize the services of a State of California licensed occupational health physician to provide the medical examinations and surveillance specified herein. The name of this physician shall be provided to the Engineer prior to commencement of the work at the site. Minimum medical surveillance shall be performed in accordance with Title 8. Records shall be maintained and retained in accordance with Title 8.

All personnel involved in the work associated with "Earthwork," "Non-Soil Surface Abatement" and "Clean and Paint Structural Steel" or work with or near potentially contaminated soil material shall undergo medical examinations prior to participation in on-site operations, at the conclusion of the work, and at 12-month intervals during the work, and as required by Title 8.

The Contractor's physician shall provide a medical certification that each employee is suitable for employment on the job, including being able to use the necessary respiratory protection.

All truck drivers must have successfully completed a medical examination as required by the U.S. Department of Transportation before being permitted to access the site.

The Contractor shall prearrange for emergency medical care services at a nearby medical facility and shall define emergency routes. The services of a local trauma center, if available, shall also be prearranged. The staff at the facilities shall be advised of the potential medical emergencies

that might result and that the patient's clothing and skin might be contaminated with hazardous wastes. The Contractor shall establish emergency communications with health and emergency services. The name of these facilities, name of contact, definition of emergency routes, and emergency communications arrangements shall be provided in the HASP.

At least one first aid station supplied with at least one industrial-size first-aid kit, including blood borne pathogen personnel protective equipment in accordance with Title 8, and a stretcher shall be provided and maintained fully stocked by the Contractor at a central location at the work site. Should active work areas be so isolated or separated as to make one central first-aid station location impractical, then multiple first-aid stations shall be established close to the work.

The first-aid station(s) shall be clearly marked.

The Contractor shall have at least one person certified in first aid on the site at all times and additional personnel at each isolated or separated work area at all times. These personnel may perform other duties, but must be immediately available to render first aid when needed. Certification shall be by the American Red Cross or other approved agencies. Upon request of the Engineer, these personnel must show proof of a current first aid card.

If any Contractor's employee has a time-loss illness exceeding one working day, or injury during the period of work, the Contractor must present a written statement indicating the employee's fitness, signed by a qualified physician, prior to the employee re-entering the work site. A copy of the written statement shall be submitted to the Engineer.

EMPLOYEE TRAINING REQUIREMENTS. With respect to any personnel proposed for work on this site, the Contractor's Safety and Security Representative or IH shall be responsible for providing all required on-site occupational hazard and any other employee training before such personnel may start work on the site as required under Title 8.

Follow-up training shall be provided by the Safety and Security Representative at daily tailgate safety meetings and prior to each change in operation. The Safety and Security Representative shall also provide initial training for replacement personnel using the training outlines developed by the Contractor.

All work include in "Earthwork" and "Non-Soil Surface Abatement" that involves disturbing or handling contaminated material and all other work that disturbs lead contaminated soil and material shall be performed by workers who are certified to have completed "40-hour HazMat training" under the Cal-OSHA HAZWOPER program and any required refresher training, as well as lead-awareness and related training under Title 8.

The Contractor's personnel entering any excavation, staging, or decontamination areas shall be trained in the appropriate safety procedures as set forth in Title 8. These rules shall apply to the general construction activities to be undertaken at this site.

All personnel entering the decontamination areas or beyond shall be informed of the possible dangers and long-term hazards present at this site, in compliance with the "right-to-know" regulations.

Workers who handle hazardous materials destined for off-site shipment shall be trained in accordance with U.S. Department of Transportation regulations 49 CFR172.

The Contractor shall compile and maintain a written log of all training and follow-up training sessions as required by Title 8.

LOGS AND REPORTS.--The Contractor shall prepare logs, reports, and records in accordance with all applicable health and safety rules and regulations and these Special Provisions and maintain all of these documents in discrete, chronological project files.

A separate sign-in / sign-out sheet shall be used for each day of operations to provide a written log of each employee and item of equipment that is located in each specific work area. The proposed format of the sign-in / sign-out sheets shall be submitted as part of the HASP. Completed sign-in / sign-out sheets shall be maintained in a chronological project file.

The Contractor shall submit a detailed written report to the Engineer regarding any injury, illness, accident, or exposure within 24 hours of the incident. As required by law, the local OSHA office and the Engineer shall be notified within eight hours of any fatalities or hospitalizations. All incident reports or notifications shall include at least the following information:

Employee's name.

Date, time and nature of the incident.

First aid, medical care, or other actions taken.

The procedures set in place to prevent a recurrence of the incident.

EMERGENCY PROCEDURES. --The Contractor shall abide by the written emergency procedures, as prescribed in the HASP, to be implemented in the event of an accident or uncontrolled release(s) of hazardous substances by the Contractor. A summary of important data, contact numbers, routes, etc. shall be posted for employees and readily available for office and security personnel.

The Contractor's personnel shall be responsible for the execution of emergency procedures, and for coordination of emergency response activities, caused by an accident or uncontrolled release(s) of hazardous substances by the Contractor. These emergency procedures shall include provisions for notification of local authorities for evacuation of the community in the event of an imminent threat to the community's health and safety.

The Contractor and the transportation vehicle operators that will be transporting hazardous waste from the site shall be responsible for initiating emergency response and allocating the resources to conduct spill containment and cleanup for transportation-related spills or emergencies, at no additional cost to the District.

The Contractor shall be responsible for notifying all applicable regulatory agencies respecting any emergency on the site related to Contractor's scope of work. Each agency and the emergency contact must be specified in the emergency procedures. The Contractor shall immediately notify the Engineer whether a regulatory agency or emergency contact is notified. The Contractor shall provide a written report of any such notification within 8 hours of the event. The report shall include, as a minimum, the name of the agency or emergency contact, the person who was contacted, the person for the contact and the agency or contact response. The Contractor shall inform the Engineer of any follow-up contacts or correspondence.

All Contractor personnel shall read and agree in writing to be bound and abide by the emergency procedures. The emergency procedures shall be included as a topic in the initial training specified in "Employee Training Requirements", elsewhere in these Special Provisions.

PAYMENT. Full compensation for conforming to the provisions in this Section "Health and Safety Provisions" of these Special Provisions shall be considered as included in the Contract prices paid for the various Contract Items and no additional compensation shall be allowed therefor.

SP7-1.23 REMOVAL OF LEAD AND OTHER HAZARDOUS SUBSTANCES. As specified elsewhere in these Special Provisions, the Contractor is to perform certain work in connection with materials that are known to include hazardous substances. These materials include soil, surfaces and other media contaminated with lead, zinc and cadmium, and lead-based paints on existing steel and concrete structures and located throughout the site.

The following paragraphs describe known lead contamination or hazardous substances that are likely to be encountered by the Contractor. Full compensation for the containment, monitoring, handling, sampling, testing, analysis, storage, transport, disposal and all other actions required to complete the scope of work involving such hazardous materials shall be included in the contract prices bid for the various Contract Items, and no additional compensation will be allowed therefor:

1. The work site for this Contract includes areas and surfaces that are impacted by lead contaminated soils and other media. The Contractor shall comply with all Applicable Environmental Requirements, as defined in "Permits, Licenses and Other Regulatory Requirements," elsewhere in these Special Provisions relating to the work contemplated by this Contract, including but not limited to clearing and grubbing, trenching, excavation, non-soil surface abatement or other disturbances of the lead contaminated areas. Attention is directed to the laws and regulations relating to the containment, monitoring, handling, sampling, testing, analysis, storage, transportation and disposal requirements for lead contaminated soils and other media, and particularly to those laws and regulations relating to the protection of workers involved with the handling of soils or other media that is contaminated by hazardous substances and relating to the excavation or removal of such hazardous materials.
2. Contractor's work under the Contract includes the containment, monitoring, handling, sampling, testing, analysis, storage, transport and disposal of (i) media affected by hazardous substances, including lead, zinc and cadmium, and (ii) any hazardous substances related to any paint medium previously used on the site. The work site for this Contract includes areas that were previously remediated for lead-based paint. Attention is directed to Section SP7-1.04, "Permits, Licenses and Other Regulatory Requirements" of the Special Provisions regarding Contractor's obligations with respect to the handling and removal of lead, cadmium and zinc affected media and the avoidance of contamination of any media or areas from the Contractor's operations under this Contract.
3. The work for this Contract includes areas (such as the north and west entrance areas to the North Anchorage Housing, the unpaved access road (Bluff Road) that accesses the underside of the suspension bridge and the exterior of the North Pylon, Moore Road and the ravine from the east leg of the North Pylon to Moore Road where the existing utility bank is located) that were previously remediated to address soil contaminated by lead, zinc, cadmium and other metals. The remediation was performed to DTSC's approved threshold level of 1396mg/kg lead. Subsequent to the remediation lower elevation within these areas may have been impacted by contaminated runoff from the adjacent upslope hillsides and these areas shall be considered contaminated. Any excavation or disturbance of soil in these areas will require the Contractor to utilize special procedures for remediation of soils contaminated by hazardous substances in accordance with the Applicable Environmental Requirements for such materials.
4. The work for this Contract may include access across non-project areas that are known to contain contaminated soil and vegetation. These adjacent non-project areas include lands immediately adjacent to portions of the west and east walls of the North Anchorage Housing. These areas have not been designated for the Contractor's use. Should the

Contractor elect to use the areas to access the work, any clearing, excavation or disturbance of soil in these areas will require the Contractor to use special procedures for remediation of contaminated soils and vegetation containing hazardous substances, i.e. lead, zinc and cadmium-based paint media, in accordance with the Applicable Environmental Requirements for such hazardous materials. The Contractor shall perform such work at his own cost.

The project scope of work includes all of the above-specified work. The Contractor is not entitled to any additional compensation and/or time for work described in the above paragraphs due to hazardous materials.

The District is considered and designated the generator under this Contract of all materials and wastes which originate from the land and structures on the site (hereinafter "Site Materials"), other than Contractor's Waste, as defined in "Hazardous Waste and Other Waste Due to Contractor's Operations," elsewhere in these Special Provisions. The District will obtain any necessary generator identification numbers required for completing the manifest documents for the Site Materials, and the Contractor will be responsible for originating and properly completing copies of the waste shipment/manifests for the Site Materials. The Engineer will sign the manifest forms on behalf of the District as the generator of the Site Materials, and will retain the original of the signed forms.

The Contractor shall be solely responsible for any Contractor's Waste. The Contractor will be solely responsible for obtaining and using its own generator number for any Contractor's Waste. Contractor will be solely responsible for originating, properly completing and signing any manifest forms and supplying its generator number for any Contractor Waste.

The Contractor shall be solely responsible for ensuring that : (i) Site Materials and Contractor's Waste are sampled, analyzed, handled, transported and disposed of in compliance with Applicable Environmental Requirements; and (ii) all transporters, storage facilities, and treatment or disposal facilities that are selected to handle and receive Site Materials or Contractor's Waste are permitted, licensed, and approved by all applicable regulatory agencies and are in full compliance with Applicable Environmental Requirements.

In accordance with Section 25914.2 of the California Health and Safety Code, any hazardous substance removal or remediation work in areas of the site where hazardous substances are not expected or identified in the bid documents, including any exploratory work to identify and determine the extent of such unanticipated and undisclosed hazardous substances, will be performed by separate contract or by executed Contract Change Order.

Should the Contractor encounter materials that the Contractor reasonably claims to include unanticipated and undisclosed hazardous substances and the hazardous substance has not been rendered harmless, the Contractor shall immediately cease work in the affected area and report the condition to the Engineer in writing. If the Engineer concludes that the materials are hazardous substances that were undisclosed in the bid documents, then the Contractor will cease further work on such area and the same will be addressed by separate bid and contracting. If the Contractor believes the situation is life threatening, the Contractor shall immediately evacuate the affected area and contact the Engineer and the local Fire Department.

Notwithstanding the foregoing, Contractor shall continue to work in those areas unaffected by the suspected unanticipated and undisclosed hazardous substance.

June 18, 2008



GOLDEN GATE BRIDGE
HIGHWAY & TRANSPORTATION DISTRICT

Environmental Studies and
Preliminary Design for a Physical
Suicide Deterrent System on the
Golden Gate Bridge
Contract No. 2006-B-17

Mr. Greg McConnell, District Branch Chief,
Environmental Analysis
CALTRANS, Office of Environmental Analysis
Mail Station 8-B
P.O. Box 23660
Oakland, CA 94623-0660

Re: Project Staging Areas – Temporary Occupancy

Mr. McConnell:

The Golden Gate Bridge, Highway and Transportation District's (District) Physical Suicide Deterrent System Project proposes five build alternatives and one no-build alternative. Should one of the build alternatives be chosen as the preferred alternative and should the project go forward to construction, staging areas will be required.

The District has identified five potential staging areas for the project: four on the north side and one on the south side of the Golden Gate Bridge (Bridge). The four potential north side staging areas are not open to the public. The one potential staging area on the south side of the Bridge is a District parking lot that was recently constructed and has 24 parking stalls available for public use. If this parking lot were to be used for staging, the 24 parking stalls would not be available for public use. Since the parking area is relatively new (two years) and there are other parking areas available closer to the Bridge, the public parking stalls have never been fully utilized.

The public will be able to park in other areas that are closer to the Bridge that will not be impacted by the project. These include the District's east parking lot below the Roundhouse gift center and the National Park Service (NPS) parking lot off Lincoln Boulevard and Battery East Road. In addition, on weekends and holidays, the District's west parking lot adjacent to the Toll Plaza is available for public parking.

All of the proposed build alternatives have estimated project durations of 24 to 36 months during which time the staging areas may be occupied.

Should you have further questions, I can be reached at (415) 923-2023.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Lee".

Jeffrey Y. Lee, P.E.
Project Manager

JYL/crh

c: Ms. Sylvia Fung, Caltrans
Steve Morton, DMJM Harris
Phyllis Potter, Circle Point
DJMulligan/EZBauer/JREberle/2.18.4.1

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