



STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**SPECIAL PROVISIONS**

FOR CONSTRUCTION ON STATE HIGHWAY IN THE CITY AND COUNTY  
OF SAN FRANCISCO FROM THE YERBA BUENA TUNNEL TO 1.3 KM EAST  
OF YERBA BUENA TUNNEL  
In District 04 On Route 80  
Under

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Standard Specifications dated 1999

Standard Plans dated 2004

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**DRAFT**  
**NOT A BIDDING DOCUMENT**

Identified by  
Contract No. 04-0120T4  
04-SF-80-12.6/13.9

# SPECIAL NOTICES

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- The bidder's attention is directed to Section 2-1.\_\_, "Pre-Award Information/Questionnaire," and Section 3-1.01A, "Pre-Award Meeting," of these special provisions.

Responses to the "Pre-Award Information/Questionnaire" included in the Proposal must be submitted with the bid.

Establishing to the satisfaction of the Department, the bidder's qualifications and ability to complete the bridge construction work in a safe and timely manner is a condition for being eligible for award of the contract.

EA 04-0120T1  
(SFOBB - YBI #2)

SPECIAL PROVISIONS

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# SPECIAL PROVISIONS

## 2-1. PRE-AWARD INFORMATION/QUESTIONNAIRE

The Department has established that the bidder shall submit information regarding the bidder's qualifications for performing demolition of the Cantilever Truss. Bidders shall submit, with the bid, responses to the "Pre-Award Information/Questionnaire" (PAIQ), included in the Bid Book. In signing the signature page of the Bid, the bidder certifies that the information and answers in response to the PAIQ are complete and accurate.

The bidder's attention is directed to "Pre-Award Qualifications Meeting," of these special provisions regarding requirements of acceptance of the bid. The Department's acceptance of the responses to the PAIQ does not relieve bidders of the responsibility for work of the quality specified in these special provisions and shown on the plans.

### 3-1.01 PRE-AWARD QUALIFICATIONS REVIEW MEETING

If the Engineer determines it necessary, a pre-award qualification review meeting will be conducted. Notification of whether a meeting will be conducted will be provided on or before the first Tuesday after bid opening. The meeting, if held, will be on the second Tuesday after bid opening at 1:00 p.m. **in the third floor conference room 1727 - 30th Street, Sacramento, CA 95816.** The apparent low bidder shall participate in the pre-award qualifications review meeting, which will be conducted by one or more agents of the Director and the Engineer. Non-attendance to the qualifications review meeting by the apparent low bidder shall be just cause for rejection of the bid and forfeiture of the bidder's security.

At the qualifications review meeting, the low bidder shall provide an authorized representative prepared to discuss and answer questions relative to the responses to the "Pre-Award Information/Questionnaire," (PAIQ). If the bidder is not qualified to perform the demolition work with its own forces, appropriate representatives from the proposed qualified subcontractors shall also attend the meeting. Based on the bidder's experience and safety history, conceptual approach to the removal work, and logistics as presented in the PAIQ, and on any information provided at the pre-award qualifications review meeting, the Department will make a determination on the bidder's qualifications for performing the work in a manner that is safe for the workers and the public.

Experience in bridge removal is highly desirable and will be an important factor in determining the bidder's qualifications to perform the project. The experience and qualifications of the bidder's authorized representatives, whether originally designated or as replaced by subsequent designees during performance of the contract, will be subject to review by the Department in conformance with the provisions in "Pre-Award Information/Questionnaire," of these special provisions. Upon request by the Engineer, the Contractor shall provide the same information regarding any subsequent authorized representatives as is required to be provided for the original authorized representatives as set forth in the PAIQ in the Bid Book.

The second and third apparent low bidders shall participate in pre-award qualifications review meetings if requested to do so by the Department. Notification by the Department will be within 15 days after the bid opening, and will be provided at least

48 hours prior to the qualifications review meeting. Non-attendance by the second or third apparent low bidder at any such requested meeting shall be just cause for rejection of bid and forfeiture of the proposal guaranty.

Prior to award, the Director's agent will prepare written findings and recommendations to the Engineer regarding award of the contract to the apparent low bidder based on the bridge demolition information and responses submitted with the bid, and on the information provided at the pre-award qualifications review meeting.

Successful completion of the pre-award qualifications process does not relieve the Contractor of the responsibility for completing the work as described in the project plans and the specifications.

**PRE-AWARD INFORMATION/QUESTIONNAIRE (PAIQ)**

**CANTILEVER TRUSS DEMOLITION  
(BRIDGE NO. 33-0025)**

**BIDDERS SHALL SUBMIT INFORMATION WITH THE PROPOSAL  
REGARDING THE FOLLOWING AS A CONDITION FOR AWARD OF THE  
PROJECT.**

**(See Section 2-1.0\_ and Section 3 of the special provisions)**

Note: Whenever the word "bidder" is used, the response shall include the prime contractor and all proposed subcontractors involved in the demolition of the Cantilever Truss, including but not limited to joint ventures, subsidiaries, and subcontractors.

1. Provide a summary of the bidder's experience in demolition of major steel truss bridges in a marine environment, specific to the following factors. Include any citations for violations on these projects and how they were resolved. Provide a list of specific projects including names and telephone numbers of the project owner for each project cited.
  - a. in navigable waterways with oceangoing traffic lanes
  - b. under the jurisdiction of the United States Coast Guard, or similar units in other countries
  - c. subject to tides and strong currents, high winds, and fog similar to or more extreme than those found in the project limits
  - d. subject to environmental restrictions, permits, and utilities
  - e. immediate proximity to adjacent structures and other construction projects
  - f. debris collection and containment, and handling of hazardous materials on the bridge
2. Describe any citations by any government entity for safety violations by the bidder or personnel who will be assigned to the project, and the ultimate dispositions of those citations.
3. Provide anticipated functional and staff personnel organizational chart for the demolition work. Provide names of individuals and describe roles and responsibilities, including with respect to compliance with safety and environmental requirements.

4. Provide resumes for management staff, superintendents, design and construction engineers, and administrators. Describe roles and responsibilities on projects of similar scope.
5. Describe, in concept, the planned structure demolition procedure, including the sequence and staging, demolition methods, equipment and loading on the structure, support systems and structures, safety procedures, and monitoring systems to be used, and to ensure the structural integrity of the partially demolished structure. Include factors such as proximity to adjacent structures, coordination with other contractors, maintenance of the navigation channel, tides and currents, weather conditions such as high winds and fog, environmental restrictions and permit requirements, debris collection and containment, and handling of hazardous materials on the bridge.
6. Provide the bidder's anticipated construction schedule for the complete project in bar chart format. The schedule shall clearly illustrate the sequence and duration of major items of work in sufficient detail to demonstrate the bidder's knowledge of the work, and completion of the bike path within the time specified.

## 5-1. WORKING DRAWINGS

Working drawings shall conform to the requirements in Section 5-1.02 "Plans and Working Drawings," of the Standard Specifications and these special provisions. Working drawings shall include supplements and calculations that are in addition to drawings.

Working drawings shall be submitted to the following location:

California Department of Transportation  
Office of the Resident Engineer, Contract 04-0120T4  
333 Burma Rd  
Oakland, CA 94607.

Working drawings shall conform to the following:

- A. For initial review, 6 sets of the working drawings shall be submitted. After the Engineer has determined that a submittal is complete, 12 additional sets shall be submitted.
- B. Drawings shall be 559 mm x 864 mm or 279 mm x 432 mm in size. Supplements and calculations shall be 216 mm x 280 mm in size.
- C. For drawings, text size shall be nominally 2.8 mm high, minimum. For supplement and calculations, font size shall be 12, minimum.
- D. Each working drawing sheet and each page of supplement or calculation, shall include the jobsite name of the structure as shown on the contract plans, District-County-Route-Kilometer Post, bridge number and contract number.
- E. Text and details shall be legible and suitable for photocopying and reduction.
- F. In addition to the paper copies of the working drawings, electronic files shall be submitted. Electronic files shall be portable document format (PDF) and shall be submitted on compact disk (CD) media. Each plan sheet shall be a separate PDF file on the CD. The electronic copy of the calculations and supplement shall be made into separate PDF files so that no more than 50 pages are included in a single file on the CD. The CD shall contain an index consisting of the file names and a description of the corresponding file contents. The files shall be listed in the sequence of: 1) index, 2) drawings, 3) supplement, and 4) calculations. If more than one CD is used for a given working drawing submittal, the index shall be included on each CD.
- G. After review and approval of the working drawings, between 6 and 12 sets, as requested by the Engineer, shall be submitted to the Engineer for final approval. These sets will be the only sets stamped "Approved" and will be distributed for use during construction.
- H. At the completion of the contract, one set of reduced prints on 75-g/m<sup>2</sup> (minimum) bond paper, 279 mm x 432 mm in size, of the corrected original tracings of all approved working drawings, including all corrections and revisions shall be furnished to the Engineer. Reduced prints that are common to more than one structure shall be submitted for each structure. An index prepared specifically for the drawings for each structure containing sheet numbers and

titles shall be included on the first reduced print in the set for each structure. Reduced prints for each structure shall be arranged in the order of drawing numbers shown in the index. In addition to the paper copies electronic files in PDF format on CD media shall be submitted to the Engineer.

When design calculations are required by the Standard Specifications or these special provisions, they shall be prepared and sealed by an engineer who is registered as a Civil Engineer in the State of California. Working drawings developed from these calculations should be similarly sealed by the same engineer. When independently checked calculations are required, these calculations shall be sealed and signed by an engineer who is registered as a Civil Engineer in the State of California and who did not seal and sign the drawings.

Working drawings shall be submitted sufficiently in advance of the start of the affected work to allow time for review by the Engineer and correction by the Contractor of the drawings without delaying the work. The time shall be proportional to the complexity of the work, but in no case shall the time be less than the review time as specified for the type of working drawings as required elsewhere in these special provisions.

The Engineer will review a working drawing submittal for completeness. Within 7 days of the receipt of the submittal by the Engineer, the Engineer will notify the Contractor in writing if the submittal is determined to be incomplete and the submittal will be returned. If the submittal is determined to be complete, 30 working days from the day of receipt shall be allowed for approval or return for correction, unless specified otherwise in these special provisions. The review time for a set of working drawings will be considered as starting when the Engineer has received a complete set of working drawings and all supporting data.

The review time on a set of returned drawings will be suspended on the date the drawings are date stamped by the Engineer for return. After a revised set of drawings have been received by the Engineer, the new review time for that set of revised drawings will be the original review time, less the time already spent under review before rejection. The revised set shall cover the same work as was originally submitted. In no case shall the review time allotted the Engineer upon receipt of a resubmittal be less than 14 days.

In the event the Engineer fails to complete the review within the time allowed, and if, in the opinion of the Engineer, the Contractor's controlling operation on the critical path is delayed by reason of the Engineer's delay in completing the review, the Contractor will be compensated for any resulting loss, and an extension of time will be granted in the same manner as provided for in the provisions in Section 8-1.07, "Liquidated Damages," of the Standard Specifications and in "Progress Schedule (Critical Path Method)," of these special provisions. Such a delay will be considered a right of way delay and compensation will be granted in the same manner as provided for in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

## 10-1.15 ESTABLISH MARINE ACCESS

### GENERAL

This work shall consist of furnishing, erecting, maintaining and removing barges, trestles and other facilities to establish marine access to the job site. This work shall be separate from and in addition to the work specified in Section 11, "Mobilization," of the Standard Specifications.

Marine access may be established to provide access to the jobsite. It must be within the limits as shown on the plans, and must comply with the permits, licenses, agreements, and certifications as specified in "Permits, Licenses, Agreements, and Certifications," and "Order of Work," of these special provisions.

### SUBMITTALS

The Contractor shall submit to the Engineer working drawings and design calculations of any access trestle and other temporary facilities, in accordance with the provisions in "Working Drawings," of these special provisions. All design calculations shall be independently checked by a registered Civil Engineer in conformance with the provisions in "Working Drawings" of these special provisions. The Contractor shall allow 60 days for the Engineer's review and comment. The Engineer's approval will not be required for working drawings of temporary access facilities.

The Contractor shall submit, for approval by the Engineer, a schedule of values detailing the cost breakdown of the contract lump sum price for establish marine access. The schedule of values shall reflect the items, work, quantities and costs required to establish marine access to the job site, including as a minimum: the initial mobilization of marine access facilities, monthly facility and equipment rental, monthly maintenance, and demobilization. The Contractor shall be responsible for the accuracy of the quantities and costs used in the schedule of values submitted for approval.

The sum of the amounts for the items and work listed in the schedule of values shall be equal to the contract lump sum price for establish marine access.

When approved in writing by the Engineer, the schedule of values will be used to determine progress payments for establish marine access during the progress of the work. No partial payment for establish marine access will be made until the schedule of values is approved in writing by the Engineer.

### CONSTRUCTION

Attention is directed to "Marine Pile Driving Energy Attenuator" and "Species Protection" of these special provisions.

The Contractor shall use H-piles or hollow steel shell piles less than or equal to 914 mm diameter.

Vibratory hammer shall be used to install all steel shell piles the majority of the total pile length (greater than 50% of the pile length).

Should steel shell piles be entirely installed with a vibratory hammer (100% of the pile length), the piles may be proof tested with an impact hammer. A maximum of 10% of the piles installed completely with a vibratory hammer may be proof tested with an impact hammer, without the use of a marine pile driving energy attenuator. No more than two piles per day can be proof tested with an impact hammer. Proof testing will be limited to less than 1 minute per pile, administering a maximum of twenty blows per pile.

All impact pile driving will be restricted to the period between June 1<sup>st</sup> and November 30<sup>th</sup>, with the exception of pile proofing.

A sound attenuation system shall be used during all impact driving of steel shell piles, with the exception of pile proofing.

The sound attenuation system shall ensure that underwater sound levels do not exceed 206 dB<sub>peak</sub> re: 1 microPa, at a distance greater than 10 meters from the pile being impact driven or proof tested, 187 dB cumulative sound exposure level (SEL) re: 1 microPa, at a distance greater than 34 meters from the pile being impact driven or 19 meters from the pile being proof tested, or 190 dB root-mean-square (RMS) re: 1 microPa at distances greater than 10 meters from the pile being impact driven or proof tested.

The Contractor shall coordinate with the Department to allow for all biological monitoring to be performed by the Department as required by regulatory agencies. The Contractor shall provide sufficient notice prior to pile installation activities as requested by the Engineer. Sufficient notice shall include a least 7 days notice prior to the commencement of pile installation episodes, and 1 day notice of the estimated time for the following day's pile installation activity. The Contractor shall provide biological monitors safe access to all required work areas.

The Contractor shall stop or delay pile installation activities when directed by the Engineer as determined by the Department's biological monitors. The determination will be based on regulatory agency requirements to protect fish and marine mammals, or if the Department's monitors determine that the sound attenuation system is not effectively reducing sound levels to within the permit parameters, defined above. Marine mammals shall be allowed to leave by their own volition prior to commencing or resuming pile installation activities as directed by the Engineer, as determined by the biological monitors.

Pile driving will occur only during daylight hours from one hour after sunrise to one hour before sunset during the peak seasonal salmonid migration period (December 1st to May 31st). Pile driving operations occurring outside the peak seasonal salmonid migration period (June 1st to November 30th) shall direct illumination away from the water.

If turbidity levels approach or exceed the maximum levels allowed as specified in "Turbidity Control," of these special provisions, the Contractor shall cease pile installation or removal activities until the turbidity returns to permissible levels.

### REMOVAL

When no longer required, marine access facilities must be completely removed. Removed materials shall become the property of the Contractor and shall be disposed of in conformance with the provisions in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

### PAYMENT

The contract lump sum price paid for establish marine access shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in designing, constructing, maintaining, and removing

marine access facilities, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

Full compensation for pile proof testing shall be considered as included in the contract lump sum price paid for establish marine access and no separate payment will be made therefor.

The adjustment provisions in Section 4-1.03, "Changes," of the Standard Specifications shall not apply to the contract lump sum price for establish marine access. Full compensation for damages due to delays shall be considered as included in the payments made in accordance with "Time-Related Overhead" of these special provisions and Section 8-1.09, "Right of Way Delays," of the Standard Specifications and no additional compensation will be allowed therefor.

## 5-1. SUPPLEMENTAL PROJECT INFORMATION

Supplemental project information attached to the project plans are:

The contractor is advised that the project lies within the jurisdiction of the following:

1. California Department of Fish and Game
2. California Regional Water Quality Control Board
3. U.S. Army Corps of Engineers
4. San Francisco Bay Conservation and Development Commission
5. San Francisco Bar Pilots
6. United States Coast Guard
7. United States Fish and Wildlife Service
8. National Marine Fisheries Services

Supplemental project information attached to the project plans are:

1. Log of Test Borings

Supplemental project information included in the Information Handout and Information Available for Inspection are:

### INFORMATION HANDOUT

#### Structure Information Handout

Data and information shown in the Materials Information are:

1. Project specific design criteria "Design Criteria, San Francisco-Oakland Bay Bridge East Span Seismic Safety Project, Self Anchored Suspension Bridge, dated April, 2002 by T. Y. Lin International/Moffatt & Nichol Engineers, a Joint Venture"
2. Mass Concrete Report dated January 25, 2001 by Ric Maggenti, P.E. Materials & Research Engineer of Caltrans. Appendix to Mass Concrete Report: Mass Concrete Pours at Dublin 580/680 Interchange
3. "Test Method for Coefficient of Linear Thermal Expansion of Concrete"
3. Notification of California Department of Transportation Qualification Requirement for Ultrasonic Testing Personnel
4. The recommendations of CEB-FIP Model Code 1978 for Concrete Structures (Comité Euro-international du Béton, and the Fédération Internationale de la Précontrainte)
5. NCHRP Report 402
6. Integrated shop drawings (ISDs) for YBI Transition Structures Contract No. 04-0120S4.
7. SFOBB Cantilever Truss Inspection Reports

#### Geotechnical Information Handout

Data and information shown in the Materials Information are:

1. Pile Installation Demonstration Project (PIDP) Geotechnical Report: Main Text & Appendices

2. Ground Motion Report: Main Text and Appendices
3. Final Marine Geophysical Survey Report:  
Volume-1, Main Text and Appendices
4. Final Marine Geotechnical Site Characterization Report:  
Volume-1, Main Text and Illustrations. Volume-2A through Volume-2H
5. Phase-I Subcontractor Reports:  
Volume-1 through Volume-4
6. Phase-II Subcontractor Reports:  
Volume-1 through Volume-3
7. Final Yerba Buena Island Geotechnical Site Characterization Report:  
Volume-1, Main Text, Volume-2 through 4
8. Geotechnical Foundation Report for the Yerba Buena Island Approach and  
Self-Anchored Suspension Bridge
9. Geotechnical Report for Design and Construction of Retaining Walls No. 51  
and  
50A, YBITS#1, Eastern Tunnel Approach (Goat) Slopes, Yerba Buena Island  
(YBI)
- 10 Geotechnical Report for Design and Construction of Retaining Walls No. 50,  
52, 53, and 55, YBITS#1, Eastern Tunnel Approach (Goat) Slopes, Yerba  
Buena Island (YBI)

**District Information Handout (To be added by District)**

- a. Permits, Letters and Agreements, including, but not limited to:
  1. California Department of Fish and Game (CDFG), Incidental Take Permit No  
2081-2001-021-01, Issued November 19, 2001
  2. California Regional Water Quality Control Board (RWQCB), Copies of the  
Order and the Waste Discharge Requirements
  - 3- United States Army Corps of Engineers(ACOE), Permit No 023013-OS,  
issued December 04, 2001 and Letters of Modification
  - 4- San Francisco Bay Conservation Development Commission (BCDC), Permit  
8-01, Issued November 20, 2001, and Amendments
  - 5- United States Coast Guard, USCG), Bridge Permit, Bridge Permit No 3-01-  
11, Dated December 11, 2001
  - 6- United States Fish and Wildlife Service (USFWS), Biological Opinion, issued  
October 29, 2001
  - 7- National Marine Fisheries Service (NMFS), Biological Opinion, Issued  
October 30, 2001 and Incident Harassment Authorization issued May 1, 2007
  - 8- Template for Directional Signs
  - 9- USCG License No. HSCG-Z71111-09-RP-060L

The latest versions of environmental permits can be found at the following website:

[www.biomitigation.org](http://www.biomitigation.org)

b. Archaeological Survey Reports

c. Underwater Debris

- d. SFOBB East Span Survey Info
- e. Private Aid to Navigation Sample Form
- f. Geotechnical & Material Report for YBIg. "Site Investigation Report, SFOBB East Span Seismic Safety Project, Yerba Buena Island," Geocon, June 2001.
- h. "Supplemental Site Investigation Report, Yerba Buena Island Duct Bank," Geocon, March 2007.
- i. Ground Penetration Report No. 6488-01, GEO Vision, November 2006.
- j. Historical Maps (1917, 1932, 1933)

As-built plans of the existing San Francisco-Oakland Bay Bridge are available for inspection, upon written request, at the Duty Senior at the District 4 Office, 111 Grand Avenue, Oakland, CA 94612, email: [duty\\_senior\\_district04@dot.ca.gov](mailto:duty_senior_district04@dot.ca.gov), telephone number (510) 286-5209, and fax number (510) 622-1805. Requests shall be made on company letterhead and shall include the information requested, the purpose for the information (include contract or permit numbers), and contact information.

When a request to review, inspect, or copy as built plans is approved by the Duty Senior, the Contractor shall provide photo identification and fill and sign a "Confidentiality Agreement Form" with the Department.

The "Confidentiality Agreement Form" is available at the following Internet address:

[http://www.dot.ca.gov/hq/esc/confidentiality\\_agreement.pdf](http://www.dot.ca.gov/hq/esc/confidentiality_agreement.pdf)

When the Contractor's work is finished, the Contractor shall return all obtained as-built plans back to the office of Duty Senior at the District 4 Office, 111 Grand Avenue, Oakland, California 94612, fax number: (510) 622-1805, email: [duty\\_senior\\_district04@dot.ca.gov](mailto:duty_senior_district04@dot.ca.gov), telephone (510) 286-5209.

## 5-1. SOUND CONTROL REQUIREMENTS

Sound control shall conform to these special provisions.

Attention is directed to "Supplemental Project Information," of these special provisions for reference to the USCG License DTTCG-Z71111-03RP-002L, Amendment No. 1, Maintenance and Logistic Command Pacific.

The noise level from the Contractor's operations, between the hours of 7:00 p.m. and 7:00 a.m., shall not exceed 78 dBA at a distance of 15 m from the source. Impact-type mechanical operations generated from the bridge removal, and jack-hammering shall not be conducted between the hours of 7:00 p.m. and 7:00 a.m. In addition, pile-driving shall not be conducted between the hours of 7:00 p.m. and 12:00 p.m. At all times, the Contractor shall be responsible for complying with local ordinances regulating noise levels as well as the sound requirements of this section.

Noise monitoring activities will be conducted by the Department. The Contractor shall coordinate with the Department monitors and allow them access to noise monitoring locations.

The Contractor shall provide one "Type 1" sound level meter and one acoustic calibrator, which will be used by the Department during the life of the contract, at least 30 days prior to the construction start. The Contractor shall provide training by a person trained in noise monitoring to one Department employee designated by the Engineer. The sound level meter shall be calibrated and certified by the manufacturer or other independent acoustical laboratory prior to delivery to the Department. The Contractor shall provide annual recalibration by the manufacturer or other independent acoustical laboratory. All equipment shall be capable of taking measurements using the A-weighting network and the "slow" response of the sound level meter. The measurement microphone shall be fitted with an appropriate windscreen. All equipment shall be returned to the Contractor at the acceptance of the contract. Equipment damaged by actions of the Department or the public shall be paid for as extra work as provided in Section 4-1.03D for the Standard Specifications.

Each internal combustion engine, used for any purpose on the job or related to the job, shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without the muffler.

The noise level requirement shall apply to the equipment on the job or related to the job, including but not limited to trucks, transit mixers or transient equipment that may or may not be owned by the Contractor. The use of loud sound signals shall be avoided in favor of light warnings except those required by safety laws for the protection of personnel.

Full compensation for conforming to the requirements of this section shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation will be allowed therefor.

## 5-1. SPECIES PROTECTION

Attention is directed to the existence of environmental work restrictions that require special precautions to be taken by the Contractor to protect the species of concern in conforming with the provisions in "Bird Protection" and "Establish Marine Access" of these special provisions.

The Contractor shall comply with the California Endangered Species Act, the Federal Endangered Species Act, the Federal Migratory Bird Treaty Act, Magnuson-Stevens Fishery Conservation and Management Act, and the Marine Mammal Protection act, which govern the protection of the following regulated species:

Central California Coast Coho Salmon (*Oncorhynchus kisutch*)  
Central California Coast Steelhead (*Oncorhynchus mykiss*)  
Central Valley Spring Run Chinook Salmon (*Oncorhynchus tshawytscha*)  
Central Valley Steelhead (*Oncorhynchus mykiss*)  
Green Sturgeon (*Acipenser medirostris*)  
Sacramento River Winter Run Chinook Salmon (*Oncorhynchus tshawytscha*)  
Longfin Smelt (*Spirinchus thaleichthys*)  
Pacific Herring (*Clupea pallasii*)  
California Sea Lion (*Zalophus californianus*)  
Harbor Porpoise (*Phocoena phocoena*)  
Gray Whale (*Eschrichtius robustus*)  
Pacific Harbor Seal (*Phoca vitulina rishardii*)  
American Peregrine Falcon (*Falcon peregrines anatum*)  
California Brown Pelican (*Pelecanus erythrorhynchos*)  
California Least Tern (*Sternula antillarum browni*)  
Double-Crested Cormorant (*Phalacrocoraz auritus*)  
Western Gull (*Larus occidentalis*)

## CONSTRUCTION

### Protective Radius

Upon discovery of a regulated species, Contractor shall stop construction activities within a 30.5 m radius of the discovery or as specified elsewhere (attention is directed to "Bird Protection" and "Establish Marine Access), and immediately notify the Engineer. Contractor shall resume construction activities only when provided written notification from the Engineer. The Contractor shall notify the Engineer immediately if any dead or injured regulated species are encountered.

### Protection Measures

Within the project limits, implement the following protection measures:

1. The Contractor must implement the Terms and Conditions of the project permits, licensees, agreements, and certifications (PLACs) and must comply with the laws associated with those PLACs.
2. The Contractor must cooperate with biological monitors designated by the Department.

### **Pacific Herring**

Between December 1 and March 31 of any year, a biologist provided by the State will monitor for herring spawn. If spawning is observed during this time, The Engineer shall have the authority to suspend construction operations that are wholly or partially in the water within 200 meters of the herring spawn, if it is deemed necessary to protect the herring spawn. The Contractor shall comply within 8 hours with the written order of the Engineer to suspend the work. The work shall be suspended for a minimum of 14 days or until the State biologist determines that the herring hatch has been completed.

If, in the opinion of the Engineer, completion of the work is delayed or interfered with due to herring spawning, an extension of time will be granted, in the same manner as provided for in Section 8-1.09, "Right of Way Delays," of the Standard Specifications. No additional compensation will be provided to the Contractor.

**Central California Coast Coho Salmon, Central California Coast Steelhead, Central Valley Spring Run Chinook Salmon, Central Valley Steelhead, Green Sturgeon, Longfin Smelt, Sacramento River Winter Run Chinook Salmon, California Sea Lion, Harbor Porpoise, Gray Whale and Pacific Harbor Seal**

Requirements related to the protection of the above species are discussed are discussed in the "Establish Marine Access" section of these special provisions.

**American Peregrine Falcon, California Brown Pelican, California Least Tern, Double-Crested Cormorant, Western Gull**

Attention is directed to the provisions in "Bird Protection" of these special provisions.

### **MEASUREMENT AND PAYMENT**

Full compensation for conforming to the requirements of this section shall be considered as included in the contract prices paid for the various contract items of work and no additional compensation will be allowed therefore.

## **5-1. BIRD PROTECTION**

### **Regulatory requirements**

The Federal Migratory Bird Treaty Act (16 USC §703-711.), 50 CFR 10, and Fish & Game Code §3503, §3513, and §3800, protect migratory and nongame birds, their occupied nests, and their eggs.

The Federal Endangered Species Act of 1973 (16 USC §1531, §1543) and California Endangered Species Act (Fish & Game Code §2050-§2115.5) prohibit the take of listed species and protect occupied and unoccupied nests of threatened and endangered bird species.

The Bald Eagle Protection Act (16 USC §668) prohibits the destruction of bald and golden eagles occupied and unoccupied nests.

Permits are included in the Project Information handout.

## **CONSTRUCTION**

### **To Implement Bird Protection**

The Contractor shall retain the services of qualified bird experts, approved by the Engineer, who have demonstrated knowledge of the bird species that nest in the project site and field experience in implementing bird protection on bridge structures, with a minimum of four years of relevant experience. This expert will be responsible for planning and implementing the CDFG approved bird protection plan as required by the CDFG Incidental Take Permit.

### **Submittals:**

1. Within 7 days after contract approval, submit each qualified bird expert's name, resume, and statement of qualifications to the Engineer. Allow 15 days for the Engineer's review. If the submittal is incomplete or bird expert's qualifications are inadequate, the Engineer will provide comments. Within 7 days after receiving Engineer's comments, update and re-submit qualifications. Do not start construction activities until the qualified bird experts are authorized by the Engineer.
2. Bird Control Plan: Within 7 days after contract approval, submit a Bird Control Plan to the Engineer which is consistent with methods outlined in the Conceptual Bird Management Plan (provided in Information Handout). Allow 15 days for Engineer's review. If the submittal is incomplete or inadequate the Engineer will provide comments. Within 7 days after receiving Engineer's comments, update and re-submit Bird Control Plan to the Engineer. Do not start construction activities until the Bird Control Plan is approved by the Engineer.
3. Pre-Construction Survey Report: Submit a Pre-Construction Survey Report to the Engineer within 14 days before beginning construction activities.
4. Initial Monitoring Report: Submit an Initial Monitoring Report to the Engineer within 48 hours after commencement of construction activities that includes, at a minimum the requirements for Monitoring Report submittals.
5. Monitoring Report: Submit a Monitoring Report to the Engineer every 5 working days during the monitoring period

6. Incident Report: Submit an Incident Report to the Engineer within 24 hours of the incident.
7. Annual Monitoring Report: Submit to the Engineer no later than January 15 each year of construction.
8. Final Monitoring Report: Submit to the Engineer no later than 20 days after completion of the project.

**Quality Assurance:** The Bird Control Plan must be prepared and signed by a qualified bird expert approved by the Engineer who is knowledgeable of the bird species that nest in the project site and address bird control measures.

**Quality Control:** At minimum, the Bird Control Plan will:

1. Be consistent with methods outlined in the Conceptual Bird Management Plan (provided in Information Handout)
2. Provide a list of species and nesting habitats expected in the project area
3. Include implementation plan for protection measures and exclusion measures including a schedule of when and where specific protection and exclusion measures will be implemented over the life of the project and for ensuring continuity
4. Include schedule for inspecting protection and exclusion measures
5. Include schedule for maintaining protection and exclusion measures
6. Include schedule for removing protection and exclusion measures
7. Include an adaptive management plan for when nesting birds are encountered

#### **Migratory Bird Treaty Act**

Nesting or attempted nesting by migratory and nongame birds is anticipated to occur but is not limited to February 1<sup>st</sup> through August 31<sup>st</sup>. The Department will conduct initial nesting surveys prior to start of construction and will conduct additional nesting surveys during construction as required. When work occurs during the nesting period, the Contractor shall remove unoccupied nests, not protected by the Bald Eagle Protection Act, from all affected structures to remain through any portion of the construction period.

The Contractor shall use exclusion techniques, approved by the Engineer and consistent with the Conceptual Bird Management Plan (provided in Information Handout), to prevent migratory birds from nesting on the ground, on structures, or in trees, shrubs, or other vegetation within the project limits. Exclusion techniques may include but are not limited to:

1. Clearing and grubbing areas required by the contract
2. Tree removal required by the contract
3. Mechanical removal of:
  - a. Nests outside of the nesting period
  - b. Nests that do not have eggs or young birds present during the nesting period, not protected by the Bald Eagle Protection Act, from all affected structures to remain through any portion of the construction period

When migratory or nongame bird nests are discovered which may be adversely affected by construction activity, or when a bird is found injured or killed as a result of construction activity, immediately stop work within 30.5 meters (100 feet) of the nest or bird and notify the Engineer. Work must not resume until the Engineer provides written notification that work may resume at that location.

Stop all work within a 30.5 meters radius of the discovery except as shown in the following table:

**Radius Exceptions**

Species	Work stoppage radius (feet)
Raptors including but not limited to: American Peregrine Falcon	76.2 ft.

When an active nest is discovered, the Contractor shall establish a bird protection zone with a radius of 15.2 meters. No work shall be performed within the bird protection zone. Active nests of raptors require a protection zone with a radius of 76.2 m.

**MEASUREMENT AND PAYMENT**

Exclusion devices, nesting prevention measures and nest removal that are ordered by the Engineer will be paid for as extra work as specified in Section 4-1.03D, "Extra Work," of the Standard Specifications.

A delay to the controlling operation due to migratory or nongame birds or their nests will be considered a temporary suspension of work under Section 8-1.05, "Temporary Suspension of Work," of the Standard Specifications. Adjustments will be made for delays that the Engineer determines are not due to the Contractor's failure to perform the provision of the contract in the same manner as for suspensions due to unsuitable weather in Section 8-1.05.

## 5-1. RELATIONS WITH UNITED STATES COAST GUARD

This project is located in San Francisco Bay at Yuba Buena Island, and is under the jurisdiction of the United States Coast Guard (USCG), Eleventh District, Coast Guard Island, Alameda, California, 94501-5100.

Attention is directed to "Supplemental Project Information," and "Permits, Licenses, Agreements, and Certifications," of these special provisions.

A USCG License and a USCG Bridge Permit have been issued covering work to be performed under this contract. The Contractor shall be fully informed of all rules, regulations and conditions that may govern the Contractor's operations within the construction right-of-way and shall conduct the Contractor's work accordingly. Both the License and the Bridge Permit shall be considered an integral part of the contract special provisions, with each containing specific conditions relative to distinct USCG areas of operation.

Copies of either the License or the Bridge Permit may be obtained at the Department, Plans and Bid Documents, Room 200, Transportation Building, P.O. Box 942874, Sacramento, California 94274-0001, telephone number (916) 654-4490, and are available for inspection at the Duty Senior at the District 4 Office, 111 Grand Avenue, Oakland, CA 94612, email: duty\_senior\_district04@dot.ca.gov, telephone number (510) 286-5209.

The Contractor's attention is directed to Sections 7-1.01, "Laws to be Observed," 7-1.11, "Preservation of Property," and 7-1.12, "Indemnification and Insurance," of the Standard Specifications, and to the section entitled "Sound Control Requirements" of these special provisions.

The Contractor shall comply with all requirements of the USCG with regard to the manner in which he conducts his operations and disposes of material. Any restriction of the channel and all navigation and warning lights shall be in accordance with regulations and subject to the approval of the USCG.

The Contractor's attention is directed to the following conditions which are among those established by the USCG Permit in the work authorization for this project:

**Navigation.**--The Contractor's operations shall conform to the USCG regulations. Work shall be such that the free navigation of the waterway, navigable depths and channel widths are not impaired, except otherwise directed by the USCG. At least 50 calendar days before anchoring barges or constructing temporary structures, including docks and trestles within the construction right-of-way, or as directed by the Engineer, the Contractor shall notify the Engineer, in writing, along with drawings, of their proposed method for anchoring barges and of the location temporary structures, including docks and trestles. The Engineer will transmit the Contractor's proposal to the USCG for approval. The Contractor shall not anchor any barges until their procedure has been approved by the USCG. In the event that the required USCG approval, in the opinion of the Engineer, delays the Contractor's operations, the Contractor will be granted a time extension commensurate with the delays. No barges can be anchored within the ESAs.

**Aids to Navigation.**--The Contractor shall coordinate with the USCG Commander, Eleventh Coast Guard District, Building 50-6, Coast Guard Island, Alameda, California 94501-5100, Telephone (510) 437-2983 for written

authorization at least 60 calendar days prior to any relocation or temporary removal of any aids to navigation within or near any areas involved with dredging or construction. In addition, the Contractor shall not obstruct, willfully damage, make fast to, or interfere with any aid to navigation.

**Navigational Obstructions.**--Any debris, material, plant or machinery that are incidentally dropped into the waters of the Bay during the progress of work, which may present a hazard or which may obstruct navigation shall be promptly recovered or removed. Floating objects shall be immediately recovered or tied down and marked, so that they do not present hazards to navigation. The Contractor shall give immediate notice of in-place obstructions to the proper authorities and shall mark or buoy such obstructions until they are removed. Should the Contractor neglect or delay compliance with the above requirements, such obstructions shall be removed by the Department of Transportation and the cost of such removal will be deducted from the moneys due to the Contractor or may be recovered from their bond.

**Navigational Lighting.**--The Contractor shall keep proper warning lights each night between the hours of sunset and sunrise upon all floating equipment, falsework connected with the work and all buoys which are of a size and location as to endanger or obstruct navigation. The Contractor shall provide suitable navigational lighting at any time that construction operations obstruct the waterways. All floating equipment shall be marked in accordance with USCG Regulations.

**Nighttime Lighting.**--The Contractor shall direct lighting on to the immediate area under construction and avoid shining lights towards residences on YBI and marine traffic. The Contractor shall also not shine lights into the water at night.

**Temporary Structures.**--Following the completion of construction, the Contractor shall remove all temporary structures, including docks and trestles. Pilings shall be removed and shall be cut off at least 1.0 meter below the original mudline in-bay, and 1.0 meter below the original ground in-land.

The Contractor shall be aware of the USCG facilities on the southeast side of Yerba Buena Island and the terms of the USCG License. The Contractor's activities shall not interfere with the twenty-four hour seven day operations at any of the USCG facilities on YBI.

Attention is directed to Section 8-1.06, "Time of Completion," of the Standard Specifications. Days during which the Contractor's operations are restricted in the navigation channel by others shall be considered to be nonworking days if, in the opinion of the Engineer, these restrictions cause a delay in the current controlling operation or operations.

## **PAYMENT**

Full compensation for conforming to the requirements of the relations with United States Coast Guard shall be considered as included in the contract prices paid for the various contract items of work and no additional compensation will be allowed therefor.

## 5-1. ENVIRONMENTALLY SENSITIVE AREAS (GENERAL)

### A. ENVIRONMENTALLY SENSITIVE AREAS

Environmentally sensitive areas (ESA) shall consist of areas within and near the limits of construction where access is prohibited or limited for the preservation of archeological site, historic architectural resource or existing vegetation, or protection of biological habitat as shown on the plans. The Engineer will determine the exact location of the boundaries of the ESAs. No work shall be conducted within the ESAs, except ESAs 1a and 1b:

#### 1. ESA 1a and 1b, Environmentally Sensitive Areas

ESA 1a consists of asphalt concrete paved area and unpaved slope area.

ESA 1b is located within the asphalt concrete paved area.

The boundaries of the paved areas of the ESAs 1a and 1b shall be installed with a 200-mm white thermoplastic delineation. thermoplastic delineation or alternative markings approved by the RE.

Within the paved areas and delineated boundaries of the ESAs 1a and 1b (which includes ATM), no work involving asphalt removal or earth disturbance and/or removal, including but not limited to driving posts for fencing, signing, or utility trenching, shall be allowed without an archaeological monitor. The RE shall contact Department Archaeologist at least 5 days prior to start of work. Limited access to these ESAs may be allowed for vehicle and equipment access, storage or transport of materials or equipment vehicle or equipment access, storage and stockpiling, or transport of materials, when approved in writing by the Engineer.

Within the unpaved slope area of ESA 1a, no work involving earth disturbance, including but not limited to driving posts for fencing, or signing, shall be allowed without an archaeological monitor. The Contractor shall submit to the Engineer the protection plans including the scope of the work, in conformance with the requirements in "Working Drawings," of these special provisions. The Contractor equipment access will not be allowed, unless the Contractor has obtained a written approval from the Engineer.

#### 2. ESA 2a, 2b, and 2c

ESA 2a consists of Building No. 262 (Torpedo Factory), Historic Architectural Resource

ESA 2b consists of the Senior Officers' Quarters Historic District (Quarters 1 through 7), Historic Architectural Resource, and grounds.

ESA 2c consists of Quarters 8, and grounds. Within the boundaries of ESA 2c, limited work is allowed north of Quarters 8 as shown on the plans. This work shall consist of removing a portion of an existing retaining wall, removing base and surfacing, constructing a section of sidewalk, and removing an existing set of

- concrete stairs that provided access to a garage (Building 206), which is no longer extant.
3. ESA 3, Quarters 10, Building 267 (garage), and grounds.
  4. ESA 5, Vegetation, Environmentally Sensitive Areas, including mature vegetation screen located on slope southwest of Quarters 1 (Nimitz House), and pittosporum trees
  5. ESA 6, Tidal wetlands, water-based ESA (by others), located on the north side of YBI
  6. ESA 7, Eelgrass beds, water-based ESA (by others), located on the south sides of YBI
  7. ESA 8, Eelgrass beds, water-based ESA (by others), located on the north sides of YBI
  8. ESA 9a and 9b, concrete retaining walls and weir, Historic Architectural Resource

Attention is directed to Section 7—1.01 "Laws to be Observed," of the Standard Specifications, and in "Licences, Permits, Agreements, and Certifications," of these special provisions, regarding State and Federal regulations, permits, or agreements which pertain to an ESA.

Water-based ESA boundaries have been marked with USCG-approved buoys, and have been established and will be maintained by others.

Land-based ESA boundaries shall be clearly marked by either the installation of Temporary Fence (Type ESA) or thermoplastic pavement delineation as specified elsewhere in these special provisions. The boundaries shall be checked periodically and the markings repaired or replaced as necessary during construction.

Within the boundaries of land-based ESAs 1a (unpaved area), ESAs 2b and 2c, ESA 3, ESA 5, and ESA 9a and 9b and water-based ESAs 6, 7, and 8, no project related activities shall take place, without the written approval from the Engineer. This specifically prohibits construction personnel, vehicle and barge access, storage or transport of any materials, including hydrocarbon and lead contaminated material, or any other project related activities. The Contractor shall take such measures, including the posting of written notices to his employees and subcontractors, to ensure that ESAs are not entered or disturbed.

The Contractor shall mitigate damage or impacts to the ESAs caused by the Contractor's operations, at the Contractor's expense in accordance with Section 7-1.11, "Preservation of Property," of the Standard Specifications. Any additional mitigation assessed to the Department will be the responsibility of the Contractor. If necessary, deductions from moneys due or to become due the Contractor will be made for the mitigation costs.

#### **B. AREA TO BE MONITORED (ATM)**

The Department Archaeologist will monitor the delineated ATM area.

No construction activities involving asphalt removal or earth disturbance and/or removal shall be allowed within the ATM area shown on the plans, unless the Contractor has obtained a written approval from the Engineer.

The Contractor shall obtain the Engineer's approval in writing at least 20 days in advance of the beginning of the removal of the top 0.6-m in depth of roadway excavation within the ATM, in order to have the Department Archaeologist begin to mobilize

### CONSTRUCTION

The Department Archaeologist shall have the authority to halt construction operations in the vicinity of an archaeological find, if significant or potentially significant cultural resources are exposed or if the find will be adversely affected by construction operations.

In the event that human skeletal material or archaeological resources should be uncovered within the ATM area and/or contract limits, the Contractor shall immediately notify the Engineer, who in turn will notify the Department Archaeologist and the State may conduct an archaeological investigation. The Contractor's construction activities within 15-m of the find shall be halted immediately and shall not be resumed until so permitted, in writing by the Engineer.

When determined by the Department Archeologist that an archeological investigation is required, and as requested by the Engineer, the Contractor shall provide construction equipment and operators and/or laborers and shall cooperate with and assist Department Archaeologist(s) in their conducting of any of the archaeological work, if necessary.

The Contractor shall provide, within 24 hours at the request of the Engineer:

1. A grading bucket with flat blade.
2. Suitable access/egress ramp or ladders or stairs in the ATM area as directed by the Engineer.

The above equipment and material items required for the archaeological work as specified in this section will be paid for as extra work as provided in Section 4-1.03D of the Standard Specifications.

If, in the opinion of the Engineer, the Contractor's operations are delayed or interfered with by reason of such discoveries, the State will compensate the Contractor for the delays to the extent provided in Section 8-1.09, "Right of Way Delays," of the Standard Specifications, and not otherwise, except as provided in Section 8-1.10, "Utility and Non-Highway Facilities," of the Standard Specifications.

### C. SPECIAL CONSTRUCTION AREA (SCA)

The special construction area is designated as the landscaping restoration area to be constructed as per shown on the plans.

The Contractor will be allowed inside SCA area. The Contractor shall not encroach into the designated ESA area bounded by ESA 2b, the Senior Officers' Quarters Historic District (Quarters 1 through 7), as shown on the plans. Damages to the existing pavement, sidewalk and curb caused by the Contractor's operations, shall be replaced in kind at the Contractor's expenses.

**PAYMENT**

Full compensation for checking, repairing or replacing the land-based ESA marking shall be considered as included in the contract price paid for various items of work involved and no separate payment will be made therefor.

Full compensation for protecting and submitting the protection plan for the unpaved slope area of the ESA 1a shall be considered as included in the contract price paid for various items of work involved and no separate payment will be made therefor.

## 5-1. PRESERVE HISTORICAL BUILDINGS

Existing listed facilities as shown on the plans are historical buildings, and must be preserved in compliance with the provisions in Section 5-1.18, "Property and Facility Preservation," of the Standard Specifications, and these special provisions.

1. Building No. 262 (Torpedo Factory), Historic Architectural Resource, (ESA 2a)
2. United States Navy – The Senior Officers' Quarters Historic District (Quarters 1 through 7), Historic Architectural Resource, and grounds (ESA 2b)
3. Quarters 8, and grounds, (ESA 2c)
4. United States Coast Guard Base – Quarters 9, B, C, 10, 24, 25, 26, 27, and 267 (garage)
5. Concrete Retaining Walls and Weir, Historic Architectural Resource, (ESA 9a, and 9b)

Attention is directed to "Photo Survey of Existing Facilities," and "Vibration Monitoring," of the special provisions, regarding historical buildings.

The Contractor must take measures to protect the two buildings from damage caused by the Contractor's operations. The Contractor shall submit a building protection plan for the Engineer's review at least 30 days prior to the start of adjacent construction or overhead construction. The Contractor shall also notify the Engineer at least 48 hours prior to the start of adjacent or overhead construction.

The Contractor must bear full liability for any damage to the historical buildings caused by the Contractor's operations.

Should any damage to the historical buildings occur, the Contractor shall notify the Engineer within 24 hours. The Engineer may order the suspension of construction operations until the Contractor takes all necessary measures to prevent further damage to the building, and until an approved repair is completed. The Contractor shall submit a repair plan to the Engineer for approval prior to the start of such work. The Engineer will review the plan within 90 days. All repairs must comply with the Secretary of the Interior's Standards for the Treatment of Historic Properties, and must be undertaken by a licensed preservation architect who meets the Secretary of the Interior's Professional Qualification Standards for Historic Architecture.

The Secretary of the Interior's Standards for Treatment of Historic Properties, and the Secretary of the Interior's Professional Qualification Standards are available at the following websites:

[http://www.nps.gov/history/local-law/arch\\_stnds\\_9.htm](http://www.nps.gov/history/local-law/arch_stnds_9.htm)

The Contractor must bear full liability for any damage to the historical buildings caused by the Contractor's operations.

In the event of failure to preserve the historical buildings, the Department may withhold an amount not less than \$2,000,000 from payments due or that may become due the Contractor under the contract, until an approved repair or reconstruction is complete.

#### 5-1. PERMITS, LICENSES, AGREEMENTS, AND CERTIFICATIONS

Attention is directed to Section 7-1.04, "Permits and Licenses," of the Standard Specifications and these special provisions.

The contractor shall conform to all permits and licenses. The Department has obtained the permits and licenses from the following agencies for this project:

- A. California Regional Water Quality Control Board (RWQCB)
- B. San Francisco Bay Conservation Development Commission (BCDC)
- C. U.S. Army Corps of Engineers (ACOE)
- D. United States Coast Guard (USCG)
- E. California Department of Fish and Game (CDFG)
- F. United States Fish and Wildlife Service (USFWS)
- G. National Marine Fisheries Service (NMFS)

Copies of these permits, and licenses have been made on Compact Disks as part of the information handout that is available to the Contractor, as specified in "Supplemental Project Information," of these special provisions that can be obtained at the Department of Transportation, Plans and Bid Documents Section, MS 26, 1120 N Street, Room 200, Sacramento, CA 95814, Telephone 916-654-4490 or may be seen and are available for inspection at the Duty Senior, District 04 Office, 111 Grand Avenue, Oakland, CA 94612, email: duty\_senior\_district04@dot.ca.gov, telephone number (510) 286-5209.

For the latest versions of environmental permits, the Bidders and Contractor shall visit the website:

[www.biomitigation.org](http://www.biomitigation.org)

Full compensation for conforming to the requirements in these permits, licenses, agreements and certifications shall be considered as included in the prices paid for the various contract items of work and no additional compensation will be allowed therefor.

### 8-1. STATE-FURNISHED MATERIALS

Attention is directed to Section 6-1.02, "State-Furnished Materials," of the Standard Specifications and these special provisions.

The following materials will be furnished to the Contractor:

- A. Directional signs.
- B. Padlocks for backflow preventer assembly enclosures, walk gates, irrigation controller enclosure cabinets, and external cabinet for battery backup system.
- C. 7 meters Roadway light poles, fixtures, and base plate to be installed on YBI Transition Structures Roadway Westbound, and on YBI Transition Structures Roadway and Girder Eastbound, as specified in "Signal, Lighting and Electrical Systems," of these special provisions.
- D. 7 meters light poles and fixtures including base plates, luminaires and light fixtures to be installed on YBI Transition Structures Roadway Westbound, and on YBI Transition Structures Roadway and Girder Eastbound, as specified in "Signal, Lighting and Electrical Systems," of these special provisions.
- E. Model 170 controller assembly, and completely wired controller cabinet.
- F. Call boxes.

Completely wired controller cabinets, with auxiliary equipment but without controller unit, will be furnished to the Contractor at Caltrans Electrical Maintenance Station, 30 Rickard Street, San Francisco, CA 94134, telephone number (415) 330-6509.

7 meters light poles and fixtures and 3.5 meter Bike Path Lighting Assembly and fixtures will be furnished to the Contractor at a location within 16 km of the project limits. At least 48 hours before you pick up the materials, inform the Engineer, what you will pick up, and when you will pick it up.

The Contractor shall notify the Engineer not less than 48 hours before State-furnished material is to be picked up by the Contractor. A full description of the material and the time the material will be picked up shall be provided.

### 10-1. COOPERATION

It is anticipated that work by another contractor may be in progress adjacent to or within the limits of this project during progress of the work on this contract. The following table lists contracts anticipated to be in progress during this contract.

Contract No.	Co-Rte-KP	Location	Type of Work
04-0120F4	04-SF-80-KP 13.2/KP 13.9	Yerba Buena Island	Construct Self-Anchored Suspension Bridge Superstructure
04-0120M4	04-Ala-80- KP 1.6/ KP 2.7	San Francisco-Oakland Bay Bridge Toll Plaza, in Oakland,	Construct Oakland Touchdown westbound roadway and eastbound structures and roadway
04-0120N4	<u>04-SF-80-KP 12.6/Ala-80-KP 2.7</u>	Yerba Buena Island	Install electrical systems
<u>04-0120S4</u>	04-SF-80-KP 12.7/KP 13.2	Yerba Buena Island	Constructing Yerba Buena Island <u>Transition Structures</u>
04-014034	04-Ala-80-KP 12.9/KP 13.2	Maintenance Yard	Construct Substation in Maintenance
<u>04-3A6404</u>	<u>04-SF-80-KP 12.3/KP 13.2</u>	<u>Yerba Buena Island</u>	<u>Constructing westbound ramps</u>
<u>04-012094</u>	<u>04-SF-80-KP 12.5/Ala-80-KP-3.2</u>	<u>East Span of the San Francisco-Oakland Bay Bridge</u>	<u>Removal of remaining portion of the existing east span of the San Francisco-Oakland Bay Bridge (504' Truss Spans, 288' Truss Spans, and Marine Foundations)</u>
<u>Project by the City of San Francisco</u>	<u>04-SF-80-KP 11.8/KP 12.4</u>	<u>Yerba Buena Island</u>	<u>Treasure Island Road viaduct replacement</u>
<u>Project by United States Coast Guard</u>	<u>04-SF-80-KP 12.6/KP 13.1</u>	<u>Yerba Buena Island</u>	<u>High voltage utility project</u>
<u>Project by the Treasure Island Development Authority</u>	<u>04-SF-80-KP 12.0/KP 13.1</u>	<u>Yerba Buena Island</u>	<u>Macalla Road reconstruction &amp; YBI development</u>

Comply with Section 7-1.14, "Cooperation," of the Standard Specifications.

## 10-1. \_\_ WATER POLLUTION CONTROL

### GENERAL

#### Summary

Discharges of storm water from the project must comply with NPDES General Permit for "Storm Water Discharges Associated with Construction and Land Disturbance Activities" (Order No. 2009-009-DWQ, NPDES No. CAS000002). Manage work activities to reduce the discharge of pollutants to surface waters, groundwater, or municipal separate storm sewer systems including work items shown in the verified Bid Item List for:

1. Prepare Storm Water Pollution Prevention Plan. SWPPP preparation includes obtaining SWPPP acceptance, amending the SWPPP, preparing a CSMP and a SAP, and monitoring and inspecting WPC practices at the job site.
2. Storm Water Sampling and Analysis Day. Storm Water Sampling and Analysis Day includes reporting of storm water quality per qualifying rain event. If specified for the risk level, the work includes preparation, collection, analysis, and reporting of storm water samples for turbidity, pH, and other constituents.
3. Storm Water Annual Report. Storm Water Annual Report preparation includes certifications, monitoring and inspection results, and obtaining Storm Water Annual Report acceptance.
4. Rain Event Action Plan. If specified for the project risk level, REAP preparation includes preparing and submitting REAP forms and monitoring weather forecasts.

Do not start work until:

1. SWPPP is accepted
2. WDID is issued
3. SWPPP has been reviewed by the RWQCB. If the RWQCB requires time for SWPPP review, allow enough time for the RWQCB to review the SWPPP as specified under "Submittals" of these special provisions.

This job is Risk Level 2.

#### Definitions and Abbreviations

**active and inactive areas:** (1) Active areas have soil disturbing work activities occurring at least once within 14 days, and (2) Inactive areas are areas that have not been disturbed for at least 15 days.

**BMPs:** Best Management Practices are water pollution control practices.

**construction phase:** Construction phases are (1) Highway Construction including work activities for building roads and structures, (2) Plant Establishment including maintenance on vegetation installed for final stabilization, and (3) Suspension where work activities are suspended and areas are inactive.

**CSMP:** Construction Site Monitoring Program.

**NAL:** Numeric Action Level

**NEL:** Numeric Effluent Limit

**NPDES:** National Pollutant Discharge Elimination System

**NOI:** Notice of Intent

**normal working hours:** The hours you normally work on this project

**Preparation Manual:** The Department's "Storm Water Pollution Prevention Plan and Water Pollution Control Program Preparation Manual."

**QSD:** Qualified SWPPP Developer

**QSP:** Qualified SWPPP Practitioner

**REAP:** Rain Event Action Plan.

**RWQCB:** Regional Water Quality Control Board.

**SAP:** Sampling and Analysis Plan

**SSC:** Suspended Sediment Concentration

**SWRCB:** State Water Resources Control Board

**SWPPP:** Storm Water Pollution Prevention Plan

**WDID:** Waste Discharge Identification Number

**WPC:** Water Pollution Control

**WPC Manager:** Water Pollution Control Manager. The WPC Manager implements water pollution control work described in the SWPPP and oversees revisions and amendments to the SWPPP.

### **Submittals**

Within 20 days after contract approval, start the following process for SWPPP acceptance:

1. Submit 3 copies of the SWPPP and allow 20 days for the Engineer's review. If revisions are required, the Engineer provides comments and specifies the date that the review stopped.
2. Change and resubmit the SWPPP within 15 days of receipt of the Engineer's comments. The Engineer's review resumes when the complete SWPPP is resubmitted.
3. When the Engineer accepts the SWPPP, submit an electronic and 4 printed copies of the accepted SWPPP.
4. If the RWQCB reviews the accepted SWPPP, the Engineer submits one copy of the accepted SWPPP to the RWQCB for their review and comment. RWQCBs requiring 30 days to review SWPPPs include Lahontan for jobs in the Lake Tahoe Hydrologic Unit and the Mammoth Lakes Hydrologic Unit.
5. If the Engineer requests changes to the SWPPP based on RWQCB comments, amend the SWPPP within 10 days.

Submit:

1. Storm water training records including training dates and subjects for employees and subcontractors. Include dates and subjects for ongoing training, including tailgate meetings.
2. Employee training records:
  - 2.1. Within 5 days of SWPPP acceptance for existing employees
  - 2.2. Within 5 days of training for new employees
  - 2.3. At least 5 days before subcontractors start work for subcontractor's employees

Prepare a Storm Water Annual Report for the reporting period from July 1st to June 30th:

1. If construction occurs from July 1st through June 30th, submit the report no later than July 15th for the prior reporting period
2. If construction ends before June 30th, submit the report within 15 days after contract acceptance

Submit the Storm Water Annual Report as follows:

1. Submit 2 copies of the Storm Water Annual Report and allow 10 days for the Engineer's review. If revisions are required, the Engineer provides comments and specifies the date that the review stopped.
2. Change and resubmit the Storm Water Annual Report within 5 days of receipt of the Engineer's comments. The Engineer's review resumes when the complete Storm Water Annual Report is resubmitted.
3. When the Engineer accepts the Storm Water Annual Report, insert the WPC Manager's signed certification and the Engineer's signed certification.

Submit one electronic copy and 2 printed copies of the accepted Storm Water Annual Report.

Submit as required:

1. NAL Exceedance Reports
2. NEL Exceedance Reports
3. Visual Monitoring Reports
4. Inspection Reports
5. BMP Status Report

At least 5 days before operating any construction support facility:

1. Submit a plan showing the location and quantity of WPC practices associated with the construction support facility
2. If you will be operating a batch plant or a crushing plant under the General Industrial Permit, submit a copy of the NOI approved by the RWQCB and the SWPPP approved by the RWQCB

## Quality Control and Assurance

### Training

Provide storm water training for:

1. Project managers
2. Supervisory personnel
3. Employees involved with WPC work

Train all employees, including subcontractor's employees, in the following subjects:

1. WPC rules and regulations
2. Implementation and maintenance for:
  - 2.1. Temporary Soil Stabilization
  - 2.2. Temporary Sediment Control
  - 2.3. Tracking Control
  - 2.4. Wind Erosion Control
  - 2.5. Material pollution prevention and control
  - 2.6. Waste management
  - 2.7. Non-storm water management
  - 2.8. Identifying and handling hazardous substances
  - 2.9. Potential dangers to humans and the environment from spills and leaks or exposure to toxic or hazardous substances

Employees must receive initial WPC training before working on the job.

Conduct weekly training meetings covering:

1. WPC BMP deficiencies and corrective actions
2. BMPs that are required for work activities during the week
3. Spill prevention and control
4. Material delivery, storage, use, and disposal
5. Waste management
6. Non-storm water management procedures

Training for personnel to collect water quality samples must include:

1. SAP review
2. Health and safety review
3. Sampling simulations

A Storm Water Information Handout has been prepared for this contract and is available as described in "Supplemental Project Information" of these special provisions.

If you operate construction support facilities, protect storm water systems or receiving waters from the discharge of potential pollutants by using WPC practices.

Construction support facilities include:

1. Staging areas
2. Storage yards for equipment and materials
3. Mobile operations
4. Batch plants for PCC and HMA
5. Crushing plants for rock and aggregate
6. Other facilities installed for your convenience such as haul roads

If you operate a batch plant to manufacture PCC, HMA, or other material; or a crushing plant to produce rock or aggregate; obtain coverage under the General Industrial General Permit. You must be covered under the General Industrial Permit for batch plants and crushing plants located:

1. Outside of the job site
2. Within the job site that serve one or more contracts

Discharges from manufacturing facilities such as batch plants must comply with the general waste discharge requirements for Order No. 97-03-DWQ, NPDES General Permit No. CAS000001, issued by the SWRCB for "Discharge of Stormwater Associated with Industrial Activities Excluding Construction Activities." The General Industrial Permit is available at:

<http://www.waterboards.ca.gov/>

You may obtain copies of the Preparation Manual from the Publication Distribution Unit. The mailing address for the Publication Distribution Unit is:

State of California  
Department of Transportation  
Publication Distribution Unit  
1900 Royal Oaks Drive  
Sacramento, California 95815  
Telephone: (916) 445-3520

For the Preparation Manual and other WPC references, go to the Department's "Construction Storm Water and Water Pollution Control" Web site at:

<http://www.dot.ca.gov/hq/construc/stormwater/stormwater1.htm>

#### **Water Pollution Control Manager**

Assign one WPC Manager to implement the SWPPP. The WPC Manager must comply with the Permit (Order No. 2009-009-DWQ, NPDES No. CAS000002) qualifications for a QSP and a QSD. You may assign a different QSD to prepare the SWPPP.

The QSD must have the following qualifications:

1. Department approved storm water management training described in the Department's "Construction Storm Water and Water Pollution Control" web site
2. Registration or certification described in the Permit (Order No. 2009-009-DWQ, NPDES No. CAS000002)

The QSP must meet the qualifications of the QSD or have the following certifications:

1. Department approved storm water management training described in the Department's "Construction Storm Water and Water Pollution Control" web site
2. Certification described in the Permit

At the job site, the WPC Manager must:

1. Be responsible for WPC work
2. Be the primary contact for WPC work
3. Oversee the maintenance of WPC practices
4. Oversee and enforce hazardous waste management practices
5. Have the authority to mobilize crews to make immediate repairs to WPC practices
6. Ensure that all employees have current water pollution control training
7. Implement the accepted SWPPP and amend the SWPPP when required

WPC Manager must oversee:

1. Inspections of WPC practices identified in the SWPPP
2. Inspections and reports for visual monitoring
3. Preparation and implementation of REAPs
4. Sampling and analysis
5. NAL exceedance reports
6. NEL exceedance reports
7. SWPPP annual certification
8. Annual reports
9. BMP status reports

### **STORM WATER POLLUTION PREVENTION PLAN**

This work includes preparing a SWPPP including a CSMP, obtaining SWPPP acceptance, amending the SWPPP, inspecting and reporting on WPC practices at the job site. If specified by the risk level, the work includes preparing REAPs. The SWPPP must comply with the Preparation Manual and the Permit. The SWPPP must be submitted in place of the water pollution control program under Section 7-1.01G, "Water Pollution," of the Standard Specifications.

You may request, or the Engineer may order, changes to the WPC work. Changes may include the addition of new WPC practices. Additional WPC work will be paid for as extra work under Section 4-1.03D, "Extra Work," of the Standard Specifications.

The SWPPP must include sections as specified for the project risk level as follows:

1. For risk level 1:
  - 1.1. Schedule
  - 1.2. CSMP
  
2. For risk level 2:
  - 2.1. Schedule
  - 2.2. CSMP
  - 2.3. Adherence to Effluent Standards for NALs
  - 2.4. REAP
  
3. For risk level 3:
  - 3.1. Schedule
  - 3.2. CSMP
  - 3.3. Adherence to Effluent Standards for NALs and NELs
  - 3.4. REAP

The SWPPP must include WPC practices:

1. For storm water and non-stormwater from areas outside of the job site related to project work activities such as:
  - 1.1. Staging areas
  - 1.2. Storage yards
  - 1.3. Access roads
  
2. For activities or mobile operations related to contractor obtained NPDES permits
3. Construction support facilities

The SWPPP must include a copy of permits obtained by the Department such as Fish & Game permits, US Army Corps of Engineers permits, RWQCB 401 Certifications, and RWQCB Waste Discharge Requirements for Aerially Deposited Lead Reuse.

Amend the SWPPP annually and resubmit it by July 15th.

Amend the SWPPP if:

1. Changes in work activities could affect the discharge of pollutants
2. WPC practices are added by change order work
3. WPC practices are added at your discretion
4. Changes in the amount of disturbed soil are substantial
5. Objectives for reducing or eliminating pollutants in storm water discharges have not been achieved
6. There is a Permit violation

Whenever you amend the SWPPP, follow the same process specified for SWPPP acceptance.

Retain a printed copy of the accepted SWPPP at the job site.

### **SWPPP Schedule**

The SWPPP schedule must:

1. Describe when work activities will be performed that could cause the discharge of pollutants into storm water
2. Describe WPC practices associated with each construction phase
3. Identify soil stabilization and sediment control practices for disturbed soil areas

### **Construction Site Monitoring Program (CSMP)**

The QSD must prepare a CSMP as part of the SWPPP. The CSMP must be developed before starting work and be revised to reflect current construction activities as necessary.

The CSMP must include sections for the project risk level as follows:

1. For risk level 1:
  - 1.1. Visual Monitoring
  - 1.2. SAP for Non-Visible Pollutants
2. For risk level 2:
  - 2.1. Visual Monitoring
  - 2.2. SAP for Non-Visible Pollutants
  - 2.3. SAP for sediment and turbidity
  - 2.4. SAP for pH
3. For risk level 3:
  - 3.1. Visual Monitoring
  - 3.2. SAP for Non-Visible Pollutants
  - 3.3. SAP for sediment and turbidity
  - 3.4. SAP for pH
  - 3.5. Receiving Water Sampling
  - 3.6. SAP for temporary active treatment systems

### **Visual Monitoring**

The WPC Manager must oversee the performance of visual inspections for qualifying rain events. A qualified rain event is a storm that produces at least 12 mm of precipitation with a 48 hour or greater period between storms.

For each qualifying rain event, perform visual inspections and record observations during normal working hours as follows:

1. Record the time, date, and rain gauge reading
2. Observe:
  - 2.1. Within 2 days before the storm:
    - 2.1.1. Drainage areas for spills, leaks, or uncontrolled pollutants
    - 2.1.2. Proper implementation of WPC practices
    - 2.1.3. Storm water storage areas for leaks and adequate freeboard
  - 2.2. Every 24 hours during the storm:
    - 2.2.1. WPC practices for effective operation
    - 2.2.2. WPC practices needing maintenance and repair
  - 2.3. Within 2 days after the storm event:
    - 2.3.1. Discharge locations
    - 2.3.2. WPC practices to evaluate the design, implementation, and effectiveness
    - 2.3.3. To identify where additional WPC practices may be needed

Perform non-stormwater discharge visual inspections as follows:

1. At least once during each of the following periods:
  - 1.1. January through March
  - 1.2. April through June
  - 1.3. July through September
  - 1.4. October through December
2. Observe flowing and contained storm water for the presence of floating and suspended materials, sheen on the surface, discoloration, turbidity, odors, and sources of observed pollutants
3. Observe the job site for the presence of authorized and unauthorized non-stormwater discharges and their sources

The WPC Manager must prepare visual inspection reports that include the following:

1. Name of personnel performing the inspection, inspection date, and date inspection report completed
2. Storm and weather conditions
3. Locations and observations
4. Corrective actions taken

Maintain visual inspections reports at the job site as part of the SWPPP.

## Sampling and Analysis

### General

Include a SAP in the CSMP to monitor the effectiveness of WPC practices.

The SAP must comply with the Preparation Manual.

Assign trained personnel to collect water quality samples. Document their training in the SAP.

Describe the following water quality sampling procedures in the SAP:

1. Sampling equipment
2. Sample preparation
3. Collection
4. Field measurement methods
5. Analytical methods
6. Quality assurance and quality control
7. Sample preservation and labeling
8. Collection documentation
9. Sample shipping
10. Chain of custody
11. Data management and reporting
12. Precautions from the construction site health and safety plan
13. Laboratory selection and certifications

Whenever assigned field personnel take samples, comply with the equipment manufacturer's recommendation for collection, analysis methods, and equipment calibration.

Samples taken for laboratory analysis must follow water quality sampling procedures and be analyzed by a State-certified laboratory under 40 CFR Part 136, "Guidelines Establishing Test Procedures for the Analysis of Pollutants."

The SAP must identify the State-certified laboratory, sample containers, preservation requirements, holding times, and analysis method. For a list of State-certified laboratories go to:

<http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx>

Obtain, install, and maintain a rain gauge at the job site. Observe and record daily precipitation.

Document sample collection during precipitation.

You are not required to physically collect samples under the following conditions:

1. During dangerous weather conditions such as flooding or electrical storms
2. Outside of normal working hours

Retain water quality sampling documentation and analytical results with the SWPPP at the job site.

Show pollutant sampling locations on SWPPP drawings.

If discharges or sampling locations change because of changed work activities or knowledge of site conditions, amend the SAP.

If the job is risk level 2 or risk level 3, collect and analyze at least 3 samples for each day of each qualifying rain event. Collect effluent samples at all locations where the storm water is discharged off-site.

### **Analytical Results and Evaluation**

Submit an electronic copy (in file format .xls, .txt, .csv, .dbs, or .mdb) and a printed copy of water quality analytical results, and quality assurance and quality control within 48 hours of field analysis sampling, and within 30 days for laboratory analysis. Also provide an evaluation of whether the downstream samples show levels of the tested parameter that are higher than the control sample.

Electronic water quality analysis results must have the following information:

1. Sample identification number
2. Contract number
3. Constituent
4. Reported value
5. Analytical method
6. Method detection limit
7. Reported limit

If downstream samples show increased levels, assess WPC practices, site conditions, and surrounding influences to determine the probable cause for the increase.

### **SAP for Non-Visible Pollutants**

The SAP must include a description of the sampling and analysis strategy for monitoring non-visible pollutants.

The SAP must identify potential non-visible pollutants present at the job site associated with any of the following:

1. Construction materials and waste
2. Existing contamination due to historical site usage
3. Application of soil amendments, including soil stabilization materials, with the potential to change pH or contribute toxic pollutants to storm water

SWPPP drawings must show the locations planned for storage and use of potential non-visible pollutants.

The SAP must include sampling procedures for the following conditions when observed during a storm water visual inspection. For each of the following, collect at least one sample for each qualifying storm event:

1. Materials or waste containing potential non-visible pollutants that are not stored under watertight conditions
2. Materials or waste containing potential non-visible pollutants that are stored under watertight conditions, but a breach, leakage, malfunction, or spill is observed; the

leak or spill has not been cleaned up before precipitation; and material or waste could discharge non-visible pollutants to surface waters or drainage system

3. Chemical applications, including fertilizer, pesticide, herbicide, methyl methacrylate concrete sealant, or non-pigmented curing compound used during precipitation or within 24 hours preceding precipitation, and could discharge pollutants to surface waters or drainage system
4. Applied soil amendments, including soil stabilization materials that could change pH levels or contribute toxic pollutants to storm water runoff and discharge pollutants to surface waters or drainage system, unless available independent test data indicates acceptable concentrations of non-visible pollutants in the soil amendment
5. Storm water runoff from an area contaminated by historical usage of the site that could discharge pollutants to surface waters or drainage systems

The SAP must provide sampling procedures and schedule for:

1. Sample collection during the first 2 hours of each rain event that generate runoff
2. Sample collection during normal working hours
3. Each non-visible pollutant source
4. Uncontaminated control sample

The SAP must identify locations for sampling downstream and control samples, and reasons for selecting those locations. Select control sample locations where the sample will not come in contact with materials, waste, or areas associated with potential non-visible pollutants or disturbed soil areas.

#### **SAP for Sediment and Turbidity**

If the job is risk level 2 or risk level 3, sample and analyze for turbidity:

Parameter	Test Method	Detection Limit (Min)	Unit
Turbidity	Field test with calibrated portable instrument	1	NTU

If the job is risk level 3 and the turbidity NEL has been exceeded, sample and analyze for SSC:

Parameter	Test Method	Detection Limit (Min)	Unit
SSC	ASTM Method D3977-97	5	Mg/L

#### **SAP for pH**

If the job is risk level 2 or risk level 3, sample and analyze for pH:

Parameter	Test Method	Detection Limit (Min)	Unit
pH	Field test with calibrated portable instrument	0.2	pH units

### **Receiving Water Sampling**

If the job is risk level 3, obtain samples from representative and accessible locations:

1. Upstream of the discharge point
2. Downstream of the discharge point

Show receiving water sampling locations on SWPPP drawings.

If there are several discharge points, obtain samples from a single upstream and a single downstream location.

### **Rain Event Action Plan (REAP)**

The WPC Manager must submit a REAP to protect the job site at least 48 hours before a predicted rain event.

Prepare a REAP when National Weather Service is predicting at least a 50 percent probability of precipitation within 72 hours.

For the REAP, use approved forms and include:

1. Site location
2. Risk level
3. Contact information including 24-hour emergency phone numbers for:
  - 3.1. WPC Manager
  - 3.2. Erosion and sediment control providers or subcontractors
  - 3.3. Storm water sampling providers or subcontractors
4. Storm Information
5. Construction phase information for:
  - 5.1. Highway Construction including active and inactive areas for work activities for building roads and structures
  - 5.2. Plant Establishment including maintenance on vegetation installed for final stabilization where areas are inactive
  - 5.3. Suspension where work activities are suspended and areas are inactive
6. Construction phase information including:
  - 6.1. Construction activities
  - 6.2. Subcontractors and trades on the job site
  - 6.3. Pre-storm activities including:
    - 6.3.1. Responsibilities of the WPC Manager

- 6.3.2. Responsibilities of the crew and crew size
- 6.3.3. Stabilization for active and inactive disturbed soil areas
- 6.3.4. Stockpile management
- 6.3.5. Corrective actions taken for deficiencies identified during pre-storm visual inspection

6.4. Activities to be performed during storm events including:

- 6.4.1. Responsibilities of the WPC Manager
- 6.4.2. Responsibilities of the crew and crew size
- 6.4.3. BMP maintenance and repair

6.5. Description of flood contingency measures

You must have the REAP onsite at least 24 hours before a predicted rain event. A printed copy of each REAP must be at the job site as part of the SWPPP.

Implement the REAP including mobilizing crews to complete activities no later than 24 hours before precipitation occurs.

#### **IMPLEMENTATION REQUIREMENTS**

Monitor the National Weather Service Forecast Office on a daily basis. For forecasts, go to:

<http://www.srh.noaa.gov/forecast>

Whenever you or the Engineer identifies a deficiency in the implementation of the accepted SWPPP:

1. Correct the deficiency immediately, unless the Engineer authorizes an agreed date for correction
2. Correct the deficiency before precipitation occurs

If you fail to correct the deficiency by the agreed date or before the onset of precipitation, the Department may correct the deficiency and deduct the cost of correcting the deficiency from payment.

Continue SWPPP implementation during any temporary suspension of work activities.

Install WPC practices within 15 days or before predicted precipitation, whichever occurs first.

#### **Numeric Action Levels (NALs)**

If the job is risk level 2 or risk level 3, then it is subject to NALs:

Parameter	Test Method	Detection Limit (Min)	Unit	Numeric Action Level
pH	Field test with calibrated portable instrument	0.2	pH units	Lower NAL = 6.5 Upper NAL = 8.5
Turbidity	Field test with calibrated portable instrument	1	NTU	250 NTU

### **Numeric Effluent Limits (NELs)**

If the job is risk level 3, then it is subject to NELs:

Parameter	Test Method	Detection Limit (Min)	Unit	Numeric Effluent Limit
pH	Field test with calibrated portable instrument	0.2	pH units	Lower NEL = 6.0 Upper NEL = 9.0
Turbidity	Field test with calibrated portable instrument	1	NTU	500 NTU

The storm event daily average for storms up to the 5-year, 24-hour storm, must not exceed the NEL for turbidity.

The daily average sampling results must not exceed the NEL for pH.

### **Inspection**

The WPC Manager must oversee inspections for WPC practices identified in the SWPPP:

1. Before a forecasted storm
2. After precipitation that causes site runoff
3. At 24-hour intervals during extended precipitation
4. On a predetermined schedule, a minimum of once a week

The WPC Manager must oversee daily inspections of:

1. Storage areas for hazardous materials and waste
2. Hazardous waste disposal and transporting activities
3. Hazardous material delivery and storage activities
4. WPC practices specified under "Construction Site Management" of these special provisions

The WPC Manager must use the Storm Water Site Inspection Report provided in the Preparation Manual.

The WPC Manager must prepare BMP status reports that include the following:

1. Location and quantity of installed WPC practices
2. Location and quantity of disturbed soil for the active or inactive areas

Within 24 hours of finishing the weekly inspection, the WPC Manager must submit:

1. Copy of the completed site inspection report
2. Copy of the BMP status report

## **REPORTING REQUIREMENTS**

### **Storm Water Annual Report**

The WPC Manager must prepare a Storm Water Annual Report. The report must:

1. Use an approved report format
2. Include project information including description and location
3. Include storm water monitoring information including:
  - 3.1. Summary and evaluation of sampling and analysis results including laboratory reports
  - 3.2. Analytical methods, reporting units, detections limits for analytical parameters
  - 3.3. Summary of corrective actions
  - 3.4. Identification of corrective actions or compliance activities that were not implemented
  - 3.5. Summary of violations
  - 3.6. Names of individuals performing storm water inspections and sampling
  - 3.7. Logistical information for inspections and sampling including location, date, time, and precipitation
  - 3.8. Visual observations and sample collection records
4. Include documentation on training for:
  - 4.1. Individuals responsible for NPDES permit compliance
  - 4.2. Individuals responsible for BMP installation, inspection, maintenance, and repair
  - 4.3. Individuals responsible for preparing, revising, and amending the SWPPP

### **NAL Exceedance Report**

If the job is risk level 2 or risk level 3 and an effluent sample exceeds a NAL, notify the Engineer and submit a NAL Exceedance Report no later than 48 hours after the conclusion of the storm event. The report must:

1. Include the following field sampling results and inspections:
  - 1.1. Analytical methods, reporting units, and detection limits
  - 1.2. Date, location, time of sampling, visual observation and measurements
  - 1.3. Quantity of precipitation of the storm event
2. Description of BMPs and corrective actions taken to manage NAL exceedance

### **NEL Violation Report**

If the job is risk level 3 and an NEL is exceeded, notify the Engineer and submit a NEL Violation Report within 6 hours. The report must:

1. Include the following field sampling results and inspections:
  - 1.1. Analytical methods, reporting units, and detection limits
  - 1.2. Date, location, time of sampling, visual observations and measurements
  - 1.3. Quantity of precipitation of the storm event
2. Description of BMPs and corrective actions taken to manage NEL exceedance

If the job is risk level 2 or risk level 3, submit all sampling results to the Engineer no later than 48 hours after the conclusion of a storm event.

### **PAYMENT**

The contract lump sum price paid for prepare storm water pollution prevention plan includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in preparing, obtaining acceptance of, and amending the SWPPP and CSMP, inspecting water pollution control practices, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

For projects with 60 working days or less, payments for SWPPP are made as follows:

1. After the Engineer accepts the SWPPP, the Department includes up to 75 percent of the bid item price in the monthly progress estimate
2. After contract acceptance, the Department pays for the remaining percentage of the bid item price

For projects with more than 60 working days, payments for SWPPP are made as follows:

1. After the Engineer accepts the SWPPP, the Department includes up to 50 percent of the bid item price in the monthly progress estimate
2. The Department pays 40 percent of the bid item price over the life of the contract
3. After contract acceptance, the Department pays for the remaining 10 percent of the bid item

The Department pays \$500 for each Rain Event Action Plan submitted. The contract unit price paid for Rain Event Action Plan includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in preparation and submittal of REAP forms, and monitoring weather forecasts as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

The Department does not adjust payment for an increase or decrease in the quantity of rain event action plans submitted. Section 4-1.03B, "Increased or Decreased Quantities," of the Standard Specifications does not apply.

The Department pays \$2,000 for each Storm Water Annual Report submitted. The contract unit price paid for Storm Water Annual Report includes full compensation for doing all the work involved in submitting the completed Storm Water Annual Report.

The Department does not adjust payment for an increase or decrease in the quantity of storm water annual reports submitted. Section 4-1.03B, "Increased or Decreased Quantities," of the Standard Specifications does not apply.

The work to complete the final Storm Water Annual Report contract item is excluded from Section 7-1.17, "Acceptance of Contract," of the Standard Specifications.

The contract unit price paid for storm water sampling and analysis day includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in preparation, collection, analysis, and reporting of storm water samples per qualifying rain event as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

The Department does not adjust payment for an increase or decrease in the quantity of storm water sampling and analysis. Section 4-1.03B, "Increased or Decreased Quantities," of the Standard Specifications does not apply.

You may request or the Engineer may order laboratory analysis of storm water samples. Laboratory analysis of storm water samples will be paid for as extra work under Section 4-1.03D, "Extra Work," of the Standard Specifications.

The Department does not pay for the preparation, collection, laboratory analysis, and reporting of storm water samples for non-visible pollutants if WPC practices are not implemented before precipitation or if a failure of a WPC practice is not corrected before precipitation.

The Department does not pay for implementation of WPC practices in areas outside the highway right-of-way not specifically provided for in the drawings or in the special provisions.

The Department does not pay for WPC practices installed at your construction support facilities.

WPC practices for which there are separate bid items of work are measured and paid for as those bid items of work.

For each failure to submit a completed Storm Water Annual Report, the Department withholds \$10,000. This withhold is in addition to other withholds under Section 9-1.07E(3) "Performance Failure Withholds," of the Standard Specifications.

Each failure to comply with any part of these special provisions and each failure to implement water pollution control practices are considered separate performance failures.

If, in the opinion of the Engineer, completion of the work is delayed or interfered with because the RWQCB fails to review the SWPPP within the specified time, you will be compensated for resulting losses and an extension of time will be granted under Section 8-1.09, "Delays," of the Standard Specifications.

#### **10-1. EMERGENCY ACCES ROAD CONTINGENCY PLAN**

Attention is directed to the local streets, Treasure Island Road and Southgate Road which serve local traffic between the Treasure Island and Yerba Buena Island.

Attention is also directed to the closure of Southgate Road during the construction period of the contract. Should the Treasure Island Road Viaduct become unusable due to instability or major damage, a minimum of one unpaved traffic lane, at the vicinity of Southgate Road for use by public traffic will be required within one hour.

The Contractor shall stage the work such that the contingency plan to provide an emergency access road is possible with minimal impact to the work within one hour at any time. Should the viaduct become unusable, the Contractor will receive a written notice to implement the contingency plan from the Engineer. Minimal impact to the work as used herein is defined to mean that major operations such as excavations and concrete pours are not prevented from continuing by local traffic using the emergency access road.

The Contractor shall prepare a written contingency plan to provide the emergency access road through the work during all phases of the work. The plan shall show anticipated traffic routes, variations as the work progresses, and the equipment, materials, and general work necessary to implement the emergency access road. The Contractor shall submit the contingency plan in conformance with "Working Drawings," of these special provisions for the Engineer's approval 30 working days prior to the start of any closure of the portion of Southgate road within the contract limits. The Contractor will not be required to implement any part of the plan except as directed by the Engineer.

The emergency access road may be an unpaved roadway and shall conform to the following requirements:

1. A minimum 3.6-meter wide traffic lane
2. A minimum vertical clearance of 3.7-meter.
3. A finished profile grade of not to exceed 10%.
4. Temporary railing (Type K) along the edge of traveled way to shield fixed objects and drop offs

Full compensation for staging the work and providing a contingency plan for the emergency access road through the work within one hour shall be considered as included in the prices paid for the various contract items of work and no separate payment will be made therefor.

Should any portion of the plan be implemented at the written direction of the Engineer, such work will be paid for as extra work as provided in Section 4-1.03D "Extra Work" of the Standard Specifications.

If, in the opinion of the Engineer, completion of the work is delayed or interfered with due to the implementation of the emergency access road, an extension of time will be granted, in the same manner as provided for in Section 8-1.09, "Right of Way Delays," of the Standard Specifications. No additional compensation will be provided to the Contractor.

#### **10-1. MAINTAINING TRAFFIC**

Maintaining traffic shall conform to the provisions in Sections 7-1.08, "Public Convenience," Section 7-1.09, "Public Safety," and Section 12, "Construction Area Traffic Control Devices," of the Standard Specifications, "Public Safety" of these special provisions and these special provisions.

Closure is defined as the closure of a traffic lane or lanes, including shoulder, ramp or connector lanes, within a single traffic control system.

Closures shall conform to the provisions in "Traffic Control System for Lane Closure" of these special provisions.

Closures are only allowed during the hours shown in the lane requirement charts included in this section "Maintaining Traffic," except for work required under Sections 7-1.08, "Public Convenience," and Section 7-1.09, "Public Safety."

The full width of the traveled way shall be open for use by public traffic when construction operations are not actively in progress.

The closure of the westbound off-ramp will be allowed for one 25 day period in order to perform construction operations in the vicinity that require closure of the ramp. Closure of this ramp shall be restricted to when public traffic will be least inconvenienced and delayed, as determined by the Engineer.

The Contractor shall notify the United States of Coast Guard Officer, at (415) 399-3504, at least 5 business days before work begins. The Contractor shall cooperate with United States of Coast Guard to handle traffic on the westbound off-ramp, Wendy Way, Torpedo Factory Rd. and Macalla Rd., which lead to USCG Access Rd., through the work area and shall make arrangements to keep the work area clear of parked vehicles.

Attention is directed to "Bridge Tolls" of these special provisions. The access of the contractor's trucks hauling material and surplus materials to and from the project site, from westbound Route 80, westbound and eastbound on and off-ramps to and from Treasure Island/Yerba Buena Island, shall not be allowed, during the peak periods from 5:00 a.m. to 10:00 a.m., and 3:00 p.m. to 7:00 p.m., on weekdays. Furthermore, the access of the contractor's trucks hauling materials to the project site from westbound Route 80 through the bus and carpool lanes, at San Francisco-Oakland Bay Bridge toll plaza, shall not be allowed, during the peak periods from 5:00 a.m. to 10:00 a.m., and 3:00 p.m. to 7:00 p.m., on weekdays.

The Contractor is encouraged to organize carpool, vanpool, boat, or other modes of mass transit for transport of manpower, materials and equipment to the maximum extent, practical, from San Francisco/Oakland to and from the project site.

Attention is directed to "Cooperation," of these special provisions.

The Contractor shall provide access and maintain Macalla Rd., Wendy Way, and Torpedo Factory Rd., which are the primary access to United States Coast Guard (USCG), United States Navy facilities, University of California-Berkeley (UCB) Seismographic Stations, and other contractors to various project sites on Yerba Buena Island, in the vicinity of the contract, at all times

The Contractor shall provide and maintain a 3.6 m lane access road to Sanitary Sewer Lift Pump Station, at all time. The Contractor shall submit a written request for an approval from San Francisco Public Utilities Commission through the Engineer at least 96 hours in advance for any construction operation that may block the access road to the sanitary sewer lift pump station.

Full compensation for providing and maintaining the above access shall be considered as included in the contract price paid for various items of work involved and no additional compensation will be allowed therefor.

Personal vehicles of the Contractor's employees shall not be parked on the traveled way or shoulders including sections closed to public traffic.

Personal vehicles of the Contractor's employees shall not be parked within the right of way on the traveled way or shoulders including any section closed to public traffic, except in the area proposed by the Contractor and approved by the Engineer. Vehicles

outside areas designated as Temporary Construction Easements will be ticketed by local parking authorities.

When work vehicles or equipment are parked on the shoulder within 1.8 m of a traffic lane, the shoulder area shall be closed as shown on the plans.

If minor deviations from the lane requirement charts are required, a written request shall be submitted to the Engineer at least 15 days before the proposed date of the closure. The Engineer may approve the deviations if there is no significant increase in the cost to the State and if the work can be expedited and better serve the public traffic.

Designated legal holidays are: January 1st, the third Monday in February, the last Monday in May, July 4th, the first Monday in September, November 11th, Thanksgiving Day, and December 25th. When a designated legal holiday falls on a Sunday, the following Monday shall be a designated legal holiday.

Special Days are: the third Monday in January, February 12th, March 31st, the second Monday in October, and any day on which a major event, as determined by the Engineer, is scheduled at Candlestick Park, AT&T Park, downtown San Francisco, Treasure Island, O.co Coliseum, or downtown Oakland.

## **10-1. CLOSURE REQUIREMENTS AND CONDITIONS**

Closures shall conform to the provisions in "Maintaining Traffic" of these special provisions and these special provisions.

The Engineer will have the authority to disapprove any closure schedule request, deny or abort any closure on any portion of the traveled way, when deemed necessary for the safe and efficient operation of public traffic or when necessary to resolve conflicts in closure schedules' among Contractors or other State forces performing work within the State right of way

Attention is directed to "Cooperation," of these special provisions, regarding other Contractors' activities, and State forces during the progress of the work under this contract.

### **CLOSURE SCHEDULE**

By noon Monday, the Contractor shall submit a written schedule of planned closures for the following week period, defined as Sunday noon through the following Sunday noon. Closures involving work (temporary barrier placement and paving operations) that will reduce horizontal clearances, traveled way inclusive of shoulders, to 2 lanes or less shall be submitted not less than 25 days and not more than 125 days before the anticipated start of operation. Closures involving work (pavement overlay, overhead sign installation, falsework and girder erection) that will reduce the vertical clearances available to the public, shall be submitted not less than 25 days and not more than 125 days before the anticipated start of operation.

The Closure Schedule shall show the locations and times of the proposed closures. The Closure Schedule request forms furnished by the Engineer shall be used. Closure Schedules submitted to the Engineer with incomplete or inaccurate information will be rejected and returned for correction and resubmittal. The Contractor will be notified of disapproved closures or closures that require coordination with other parties as a condition of approval.

Closure Schedule amendments, including adding additional closures, shall be submitted by noon to the Engineer, in writing, at least 3 business days in advance of a planned closure. Approval of Closure Schedule amendments will be at the discretion of the Engineer.

The Engineer shall be notified of cancelled closures 2 business days before the date of closure.

Closures that are cancelled due to unsuitable weather may be rescheduled at the discretion of the Engineer.

### **CONTINGENCY PLAN**

A detailed contingency plan shall be prepared for reopening closures to public traffic. If required by "Beginning of Work, Time of Completion and Liquidated Damages" of these special provisions, the contingency plan shall be submitted to the Engineer before work at the job site begins. Otherwise, the contingency plan shall be submitted to the Engineer within one business day of the Engineer's request.

### LATE REOPENING OF CLOSURES

If a closure is not reopened to public traffic by the specified time, work shall be suspended in conformance with the provisions in Section 8-1.05, "Temporary Suspension of Work," of the Standard Specifications. No further closures are to be made until the Engineer has accepted a work plan, submitted by the Contractor, that will insure that future closures will be reopened to public traffic at the specified time. The Engineer will have 2 business days to accept or reject the Contractor's proposed work plan. The Contractor will not be entitled to compensation for the suspension of work resulting from the late reopening of closures.

For each 10-minute interval, or fraction thereof past the time specified to reopen the closure, the Department will deduct the amount as indicated in the table below per interval from moneys due or that may become due the Contractor under the contract.

<u>Type of Facility</u>	<u>Route or Segment</u>	<u>Period</u>	<u>Damages/Interval (\$)</u>
<u>Mainline</u>	80	<u>1st half hour</u>	<u>\$4,300 / 10 minutes</u>
		<u>2nd half hour</u>	<u>\$6,400 / 10 minutes</u>
		<u>2nd hour and beyond</u>	<u>\$8,500 / 10 minutes</u>
<u>Ramps</u>	80	<u>1st half hour</u>	<u>\$4,300 / 10 minutes</u>
		<u>2nd half hour</u>	<u>\$6,400 / 10 minutes</u>
		<u>2nd hour and beyond</u>	<u>\$8,500 / 10 minutes</u>

### COMPENSATION

The Engineer shall be notified of delays in the Contractor's operations due to the following conditions, and if, in the opinion of the Engineer, the Contractor's controlling operation is delayed or interfered with by reason of those conditions, and the Contractor's loss due to that delay could not have been avoided by rescheduling the affected closure or by judicious handling of forces, equipment and plant, the delay will be considered a right of way delay and will be compensated in conformance with the provisions in Section 8-1.09, "Right of Way Delays," of the Standard Specifications:

1. The Contractor's proposed Closure Schedule is denied and his planned closures are within the time frame allowed for closures in "Maintaining Traffic" of these special provisions, except that the Contractor will not be entitled to compensation for amendments to the Closure Schedule that are not approved.
2. The Contractor is denied a confirmed closure.

Should the Engineer direct the Contractor to remove a closure before the time designated in the approved Closure Schedule, delay to the Contractor's schedule due to removal of the closure will be considered a right of way delay and compensation for the delay will be determined in conformance with the provisions in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

## 10-1. HANDLING, TRANSPORTATION, AND DISPOSAL OF CONTAMINATED MATERIAL

### GENERAL

#### Summary

This work includes temporary storage, confirmation testing, transportation, and disposal of contaminated material.

Comply with Section 19, "Earthwork," of the Standard Specifications.

Test results used to determine the nature and extent of contaminated material are provided as described in "Supplemental Project Information," of these special provisions.

#### Definitions

**Class II waste:** Contaminated material that is not regulated as a hazardous waste but requires handling as a designated waste under Water Code § 13173. Designated as roadway excavation (Class II) or structure excavation (Class II). Does not include rock.

**Resource Conservation and Recovery Act (RCRA):** Federal law that provides guidelines for managing solid waste.

**Non-RCRA hazardous waste:** Contaminated material regulated as a hazardous waste under California law but not under RCRA. Also known as California hazardous waste. Designated as roadway excavation (Type H) or structure excavation (Type H). Does not include rock.

#### Submittals

**Soil Management Plan:** At least 20 days before starting clearing and grubbing or earthwork at the job site, submit a soil management plan that includes:

1. Schedule of activities.
2. Method of excavation and equipment to be used.
3. Dust control procedures
4. Storage methods and locations for contaminated material.
5. Haul routes.
6. Spill contingency plan.

The Engineer reviews the soil management plan within 15 days. Resubmit required revisions within 5 days. Do not start clearing and grubbing or earthwork until the plan is accepted by the Engineer. No adjustment for time or money is made if resubmittals of the work plan are required due to deficiencies in the plan.

**Waste Disposal Documents:** Submit a disposal facility waste disposal request for the Engineer's signature.

Before transporting hazardous waste, submit a copy of the transporter's valid hazardous waste transporter registration.

Submit completed waste shipment forms and disposal facility weight tickets within 35 days after shipment. The Department withholds payment until the completed forms are submitted.

**Sampling and Analysis Plan:** At least 20 days before starting material sampling, submit a sampling and analysis plan (SAP). The SAP must be signed by a California registered professional engineer or California registered professional geologist experienced in contaminated site characterization. The SAP must include:

1. Purpose and scope of the investigation, including:
  - 1.1. Additional disposal facility requirements
  - 1.2. Reclassification of material
  - 1.3. Characterization of material outside of the excavation pay limits
2. Sampling locations and methods
3. Analytical methods
4. Name, address, and Environmental Laboratory Accreditation Program certification number of the testing laboratory
5. Quality assurance/quality control procedures

Base the sampling and analysis procedures on guidelines in:

1. USEPA, SW 846, "Test Methods for Evaluating Solid Waste, Volume II: Field Manual Physical/Chemical Methods"
2. ASTM, D 1452, "Soil Investigation and Sampling by Auger Borings"
3. ASTM, D 1586, "Penetration Test and Split-Barrel Sampling of Soils"
4. ASTM, D 1587, "Thin-Walled Tube Sampling of Soils for Geotechnical Purposes"
5. ASTM, D 6282-98(2005), "Standard Guide for Direct Push Soil Sampling for Environmental Site Characterizations"

The Engineer reviews the SAP within 15 days. Resubmit required revisions within 5 days. Do not start sampling until the plan is approved by the Engineer. No adjustment for time or money will be made if resubmittals of the SAP are required due to deficiencies in the plan.

#### **Quality Control and Assurance**

**Regulatory Requirements:** Laws and regulations that govern this work include:

1. Health and Safety Code, Div 20, Ch 6.5 (California Hazardous Waste Control Act)
2. 22 CA Code of Regs, Div 4.5 (Environmental Health Standards for the Management of Hazardous Waste)
3. 8 CA Code of Regs
4. Water Code § 13173

**Permits and Licenses:** Obtain all permits and licenses, pay all charges and fees, and give all notices necessary and incident to the due and lawful prosecution of the work, including registration for transporting vehicles carrying hazardous waste, under Section 7-1.04, "Permits and Licenses," of the Standard Specifications.

For hazardous waste disposal, the Engineer obtains the Environmental Protection Agency generator identification number and Board of Equalization identification number and signs all manifests as the generator. Notify the Engineer at least 5 days before starting waste transport and at least 24 hours before subsequent loads when there is a break in hauling of more than 5 days.

## **CONSTRUCTION**

Apply water to control dust at all times while performing clearing and grubbing or earthwork activities in work areas containing contaminated material. Apply water under Section 17, "Watering," of the Standard Specifications. Excavation, transportation, storage, and handling of contaminated material must result in no visible dust migration off the job site.

Prevent mixing of contaminated material with uncontaminated material. No additional payment is made for material requiring reclassification because of failure to segregate the material after excavation.

Characterization and disposal of additional material from excavations performed outside of the pay limits are included in the contract price for excavation. Assume the material has the same handling, transportation and disposal requirements as adjacent material. Furnish replacement material suitable for the planned use under Section 19, "Earthwork," of the Standard Specifications.

### **Temporary Storage**

Transfer contaminated material directly from the excavation to any of the following:

1. Transport vehicles
2. Storage containers
3. Stockpile locations approved by the Engineer

Construct stockpile locations as follows:

1. The stockpiled material must not contain free liquids that separate readily.
2. Furnish and place undamaged chemically resistant geomembrane liners.
  - 2.1. Non-reinforced liner must be at least 0.5-mm thick.
  - 2.2. Scrim-reinforced liner must have a minimum weight of 20 kg/100 square meters.
3. Furnish and place undamaged geomembrane covers.
  - 3.1. Non-reinforced liner must be at least 0.25-mm thick.

- 3.2. Scrim-reinforced liner must have a minimum weight of 13 kg/100 square meters.
4. The dimensions of the geomembrane must exceed the dimensions of the stockpile at all times.
5. Seal the seams in multiple geomembrane liners to prevent leakage.
6. Cover stockpiles at the end of each day or before storm events to prevent windblown dispersion and precipitation run-off and run-on.
7. If more than one sheet is required to cover the material, overlap the sheets a minimum of 450 mm.
8. Secure the cover to keep it in place. Do not use driven anchors except at the perimeter of the stockpile. Inspection and maintenance must comply with "Water Pollution Control" of these special provisions.

These stockpiling requirements apply to temporary storage outside of an excavation or a transport container including:

1. Staging of excavated material next to the excavation before pick up by loading equipment
2. Accumulating material for full transport loads
3. Awaiting test results required by a disposal facility

Start removing storage containers and stockpiles containing hazardous waste within 90 days of accumulating any quantity of material. After final removal has occurred, complete any cleanup required by the Engineer.

### **Sampling and Analysis**

Test the material for any additional acceptance requirements requested by the disposal facility or for confirmation of classifications specified on the plans or in the special provisions. Use sampling and analysis procedures approved by the Engineer and the disposal facility. Prepare and submit a sampling and analysis plan before starting any tests.

The Engineer makes the final decision on reclassification or characterization of material after review of the test results. Allow 5 business days for review of test results. Changes in classification of materials will comply with Section 4-1.03, "Changes," of the Standard Specifications.

### **Transportation**

Prepare a non-hazardous waste manifest or other shipping form for each load of Class II waste. Prepare a uniform hazardous waste manifest for each load of hazardous waste using the appropriate waste code. Transport hazardous waste using a transporter registered with the Department of Toxic Substances Control.

Cover the cargo during transport to prevent spillage or dust release. You agree to indemnify the State from any cost or liability due to spillage during transport of contaminated material to a disposal facility.

## **Disposal**

Dispose of contaminated material as follows:

1. Roadway excavation (Class II) or structure excavation (Class II) – Haul and dispose of the material at a permitted Class II waste management facility.
- 2.. Roadway excavation (Type H) or structure excavation (Type H) – Haul and dispose of the material at a permitted non-RCRA hazardous waste management facility.

Obtain waste disposal approval from the appropriate disposal facility. Type H material is not eligible for an exemption to the Board of Equalization disposal fees as provided under Health and Safety Code §§ 25174.1 and 25174.7.

## **MEASUREMENT AND PAYMENT**

Quantities of roadway excavation and structure excavation, of the types shown in the Engineer's Estimate, will be measured in the same manner specified for roadway excavation and structure excavation in Section 19, "Earthwork," of the Standard Specifications.

Full compensation for handling, transportation, and disposal of Class II waste is included in the contract price paid per cubic meter for roadway excavation (Class II) and structure excavation (Class II) and no additional compensation will be allowed therefor.

Full compensation for handling, transportation, and disposal of non-RCRA hazardous waste is included in the contract price paid per cubic meter for roadway excavation (Type H) and structure excavation (Type H) and no additional compensation will be allowed therefor.

#### **10-1. TEMPORARY SUPPORTS (CANTILEVER TRUSS)**

Temporary supports for existing structure during bridge removal, if required shall be designed, furnished, constructed, monitored, maintained, and removed in conformance with the provisions in these special provisions.

Attention is directed to "Bridge Removal (Cantilever Truss)" of these special provisions.

Attention is directed to "Marine Pile Driving Energy Attenuator" of these special provisions.

Attention is directed to "Permits and Licenses" of these special provisions.

Temporary supports shall include jacking assemblies and appurtenant items necessary to jack and support the structures if required by the Contractor's bridge removal plan.

Attention is directed to the sections "Order of Work" of these special provisions.

#### **TEMPORARY SUPPORT DESIGN AND DRAWINGS**

The Contractor shall submit to the Engineer working drawings and design calculations for the temporary supports. Such drawings and design calculations shall be stamped and signed by an engineer who is registered as a Civil Engineer in the United States. The engineer shall have at least 10 years experience as a registered Civil Engineer and shall have prepared demolition plans for at least one large, continuous steel truss bridge. The temporary support working drawings and design calculations shall conform to the requirements in "Working Drawings" of these special provisions except that the Engineer's approval is not required. The working drawings shall be independently checked, stamped and signed by another registered Civil Engineer with similar experience and qualifications. The independent check shall include all analysis and calculations necessary to independently check temporary support working drawings. The check engineer shall not be an employee of the Contractor and shall be employed by an independent firm. Independent check calculations shall be submitted with the working drawings.

The Contractor's registered engineer shall provide certification that the working drawings comply with all contract requirements and are adequate for the purpose intended. The Contractor shall allow 30 days for the Engineer's review and comment.

Working drawings for any part of the temporary supports shall include stress sheets, anchor bolt layouts, shop details, and erection and removal plans.

The temporary support working drawings shall include descriptions and values of all loads, including construction equipment loads, descriptions of equipment to be used, complete details and calculations for jacking and supporting the existing structure, and descriptions of the displacement monitoring system. The displacement monitoring system shall include equipment to be used, location of control points, method and schedule of taking measurements, and shall also include provisions to jack the structure should settlement occur in the temporary supports.

A redundant system of supports shall be provided during the entire jacking operation for backup should any of the jacks fail. The redundant system shall include stacks of steel plates added as necessary to maintain the redundant supports at each jack location within 6 mm of the jacking sill or corbels.

When footing type foundations are to be used, the Contractor shall determine the bearing value of the soil and shall show the values assumed in the design of the temporary supports on the temporary support drawings. Anticipated temporary support foundation settlement shall be shown on the temporary support drawings.

When pile type foundations are to be used, the temporary support drawings shall include pile details and show the maximum horizontal distance that the top of a temporary support pile may be pulled in order to position it under its cap. The temporary support plans shall also show the maximum allowed deviation of the top of the pile, in its final position, from a vertical line through the point of fixity of the pile. Piling shall conform to the provisions for piling in "Establish Marine Access" of the special provisions.

Temporary support footings shall be designed to carry the load imposed upon them without exceeding the estimated soil bearing values and anticipated settlements.

Bracing shall be provided, as necessary, to withstand all imposed loads during bridge demolition and erection and removal of any temporary supports. The temporary support drawings shall show provisions for such temporary bracing or methods to be used to conform to these requirements during each phase of erection and removal. Wind loads shall be included in the design of such bracing or methods. Wind loads shall conform to the applicable provisions in Section 51-1.06A(1), "Design Loads," of the Standard Specifications.

The temporary support design calculations shall show a summary of computed stresses in the (1) temporary supports, (2) connections between temporary supports and the existing structure and (3) existing load supporting members. The computed stresses shall include the effect of the jacking sequence. The temporary support design calculations shall also include a lateral stiffness assessment of the temporary support system.

The design of temporary supports shall be based on the use of loads and conditions which are no less severe than those described in "Temporary Support Design Criteria," of these special provisions and on the use of allowable stresses which are no greater than those described in Section 51-1.06A(2), "Design Stresses, Loadings, and Deflections," of the Standard Specifications and these special provisions.

If falsework loads are imposed on temporary supports, the temporary supports shall also satisfy the deflection criteria described in Section 51-1.06A(2), "Design Stresses, Loadings, and Deflections," of the Standard Specifications.

#### **TEMPORARY SUPPORT DESIGN CRITERIA**

The temporary supports shall conform to the requirements of "Manufactured Assemblies" specified herein and shall support the initial jacking loads, if required by the Contractor's bridge removal plan, and the minimum temporary support design loads determined by the Contractor. The vertical design loads shall be adjusted for the weight of temporary supports and jacks, construction equipment loads and additional loads imposed by the Contractor's operations. The construction equipment loads shall be the actual weight of the construction equipment but in no case shall be less than  $960 \text{ N/m}^2$  of deck surface area of the frame involved. A frame is defined as the portion of the bridge between expansion joints.

The temporary supports shall be mechanically connected to their foundations. The mechanical connections shall be designed to tolerate adjustments to the temporary support frame throughout the use of the temporary supports.

### **Manufactured Assemblies**

Manufactured assemblies shall conform to the provisions in Section 51-1.06A(2), "Design Stresses, Loadings, and Deflections," of the Standard Specifications and these special provisions.

Each jack shall be equipped with either a pressure gage or a load cell for determining the jacking force. Pressure gages shall have an accurately reading dial at least 150 mm in diameter. Each jack shall be calibrated by a private laboratory approved by the Transportation Laboratory within 6 months prior to use and after each repair. Each jack and its gage shall be calibrated as a unit with the cylinder extension in the approximate position that it will be at final jacking force and shall be accompanied by a certified calibration chart. Load cells shall be calibrated and provided with an indicator by which the jacking force is determined.

### **SPECIAL LOCATIONS**

Attention is directed to Section 51-1.06A(3), "Special Locations," of the Standard Specifications. All reference to falsework in this section shall also apply to temporary supports.

### **TEMPORARY SUPPORT CONSTRUCTION**

Attention is directed to paragraphs 1 through 7 of Section 51-1.06B, "Falsework Construction," of the Standard Specifications. All reference to falsework in these paragraphs shall also apply to temporary supports.

Welding, welder qualification, and inspection of welding for all steel members shall conform to the requirements of ANSI/AASHTO/AWS D1.1 and to "Falsework" of these special provisions.

Prior to proceeding with bridge removal, an engineer for the Contractor who is registered as a Civil Engineer in the State of California shall inspect the temporary supports, including jacking and displacement monitoring systems, for conformity with the working drawings. The Contractor's registered engineer shall certify in writing that the temporary supports, including jacking and displacement monitoring systems, conform to the working drawings, and that the material and workmanship are satisfactory for the purpose intended. A copy of this certification shall be available at the site of the work at all times.

The Contractor's registered engineer shall be present at the bridge site at all times when jacking operations or adjustments are in progress and when bridge removal operations are in progress. The Contractor's registered engineer shall inspect the jacking and removal operation and report in writing on a daily basis the progress of the operation and the status of the remaining structure. A copy of the daily report shall be furnished to the Engineer on a weekly basis and shall be available at the site of the work at all times. Should an unplanned event occur, the Contractor's registered engineer shall submit immediately to the Engineer for approval, the procedure or proposed operation to correct or remedy the occurrence.

The Contractor shall perform an initial survey as part of the displacement monitoring system to record the location of the existing structure prior to the commencement of any work. Two copies of the survey shall be signed by an engineer, who is registered as a Civil Engineer in the State of California, and submitted to the Engineer.

Vandal-resistant displacement monitoring equipment shall be provided and maintained. Vertical and horizontal displacements of the temporary supports and the existing structure shall be monitored continuously during jacking operations and shall be accurately measured and recorded daily during removal work. As a minimum, elevations shall be taken prior to the start of jacking operations and immediately after jacking is complete.. As a minimum, the existing structure shall be monitored at the piers, at mid span and the ends of cantilevers. Control points at each location shall be located near the center and at both edges of the superstructure. The records of vertical and horizontal displacement shall be signed by an engineer who is registered as a Civil Engineer in the State of California and available to the Engineer at the jobsite during normal working hours, and a copy of the record shall be delivered to the Engineer at the completion of each work day.

A force equal to the dead load shall be applied to the structure by the temporary support system and held until all initial compression and settlement of the system is completed before bridge removal work at the location being supported is begun.

Jacking operations shall be carefully controlled and monitored to ensure that the jacking loads are applied simultaneously to prevent distortion and excessive stresses that would cause instability in the structure being removed. Should unanticipated displacements, or instability in the structure occur, bridge removal operations shall be discontinued until corrective measures satisfactory to the Engineer are performed.

#### **REMOVING TEMPORARY SUPPORTS**

Attention is directed to Section 51-1.06C, "Removing Falsework," of the Standard Specifications. All references to falsework in this section shall also apply to temporary supports.

Full compensation for designing, constructing, maintaining, and removing the temporary supports, including jacking the existing structure and monitoring displacements as specified herein, shall be considered as included in the contract lump sum price paid for Bridge Removal (Portion) Location E and no separate payment will be made therefore.

#### **10-- MARINE PILE DRIVING ENERGY ATTENUATOR**

This work shall consist of designing, furnishing, installing, operating, monitoring, maintaining, and removing an air bubble curtain system to attenuate underwater energy generated by driving piling larger than 914 mm diameter. For purposes of this specification, pile installation refers to all the activities involved with driving a single pile; pile driving refers to the time when the hammer is physically driving the pile.

Attention is directed to "Relations with United States Coast Guard," of these special provisions regarding navigation requirements.

The approved attenuator system shall be operating prior to beginning pile driving at any given pile location. If the attenuator fails, as determined by the Engineer, pile driving shall immediately stop. Piling driving at any given location shall not resume until

the attenuator system at that location is again operating in conformance with the requirements of this section, as determined by the Engineer.

Failure of the attenuator system shall include, but not be limited to, the following methods of failure as determined by the Engineer:

- A. The pressure or flow rate in any meter falls below 90% of its operating value during the pile driving operation;
- B. During inspection of the perforated pipe the Engineer determines that erosion of the holes or debris has clogged the holes that will degrade the performance of the system.

The Contractor shall make provisions for the Engineer to inspect the bubble curtain system for proper operation before each deployment and as necessary during deployment. Proper operation during deployment will be determined by observation of the gauges in the monitoring station and by other methods developed by the Engineer.

At the Contractor's option, cofferdams that conform to the following requirements may be used as a marine pile driving energy attenuator:

- A. Cofferdams shall be continuous (no openings in the sides).
- B. Cofferdams shall be made of concrete or steel members.
- C. Cofferdams shall extend from Mean Higher High Water to at least 0.5 meters below the original mudline.
- D. Cofferdams shall be dewatered prior to pile driving.

The Contractor shall provide adequate means to prevent light from pile driving operations from shining directly into the water. At least 15 minutes prior to and during pile driving operations, the Contractor shall not shine light directly into the water in areas adjacent to piles being driven.

#### **GENERAL**

An air bubble curtain system is generally composed of an air compressor(s), supply lines to deliver the air, distribution manifolds or headers, perforated aeration pipes, and a frame. The frame facilitates transport and placement of the system, keeps the aeration pipes stable, and provides ballast to counteract the buoyancy of the aeration pipes in operation.

Air bubble curtain system shall conform to the following:

- A. Air bubble system shall consist of multiple and concentric layers of perforated aeration pipes stacked vertically in accordance with the following:

Water Depth (m)	No. of Layers
0 to less than 5	1 2
5 to less than 10	2 4
10 to less than 15	3 7
15 to less than 20	4 10
20 to less than 25	5 13

- B. Pipes in any layer shall be arranged in a geometric pattern, which shall allow for the pile driving operation to be completely enclosed by bubbles for the full depth of the water column and for a radial dimension of at least 2 no more than 0.5 meters as measured from the outside surface of the pile.
- C. The lowest layer of perforated aeration pipes shall be designed to ensure contact with the mudline without sinking into the bay mud.
- D. The system shall provide a bubble flux of ~~3.0~~ 2.0 cubic meters per minute per linear meter of pipe in each layer. Air holes shall be 1.6 mm in diameter and shall be spaced approximately 20 mm apart. Air holes shall be placed in four adjacent rows along the pipe to provide uniform bubble flux.
- E. Meters shall be provided in accordance with the following:
  1. Pressure meters shall be installed at all inlets to aeration pipelines and at points of lowest pressure in each branch of the aeration pipeline.
  2. Flow meters shall be installed in the main line at each compressor and at each branch of the aeration pipelines at each inlet. In applications where the feedline from the compressor is continuous from the compressor to the aeration pipe inlet the flow meter at the compressor can be eliminated.
  3. Flow meters shall be installed according to the manufacturer's recommendation based on either laminar flow or non-laminar flow, whichever applies.

Gauges shall be installed above the water line and shall be easily accessible to the Engineer. The Contractor shall keep a continuous electronic log of all meters and gauges when the system is operating. Readings shall be logged every 30 minutes and at other times, as determined by the Engineer, when variation in the readings exceed 10%. The Contractor shall maintain a graphical plot showing the variation of the meter readings with time.

Air pressure and air flow meters and gauges shall be calibrated by a private laboratory approved by the Engineer prior to use in the attenuator system. Meters shall be accurate to within 2 percent.

The Contractor shall monitor the condition of the attenuator system and prepare inspection reports daily during pile installation operations and no less than every other day during periods of no activity.

The Contractor's design, installation, maintenance, monitoring, operation and removal of the attenuator system shall take into account the site conditions and the requirements of pile installation. Factors to be taken into account include anchoring, moving, and dismantling the system; configuration of bay bottom; water velocity; water-surface

conditions; air and water temperatures; and positioning of pile and pile-driving equipment relative to the bubble curtain system.

Water velocity at the site is expected to vary from zero to 2 knots and vary in direction due to changes in tidal flow. The design of the system shall ensure that the system extends from bay bottom to the water surface during maximum water-current conditions and accommodates tidal changes.

The pile-driving barge shall be isolated from the noise-producing operations. This isolation shall be such that noise from the pile driving operation is not transmitted through the barge to the water column. The barge deploying or containing the pile-driving equipment is not required to be contained within the system.

The Contractor shall completely remove the attenuator system at the completion of the project and the system will remain the property of the Contractor.

### **WORKING DRAWINGS**

The Contractor shall submit working drawings with supplement for the attenuator system to the Engineer for approval in conformance with the provisions in "Working Drawings," of these special provisions, except as otherwise noted.

Working drawings with supplement shall be signed by a Mechanical Engineer who is registered in the State of California. Working drawings shall include the following:

- A. Complete details of the system including mechanical and structural details.
- B. Details of anchorage components, air compressors, supply lines, distribution manifolds, aeration pipes and frame.
- C. Details of proposed means of isolating noise-producing systems on the pile-driving barge.
- D. Details of meters, gauges, and recording devices.
- E. Description of measures taken to avoid shining light into the water during pile driving operations.
- F. Details of the manufacturer's recommendations for installation of the flow meters in conditions of laminar flow and non-laminar flow.

The supplement to the working drawing shall include the following:

- A. Independently checked design calculations.
- B. Materials list including the name of the manufacturer and the source, model number, description, and standard of manufacture.
- C. Manufacturer's descriptive data and catalog cuts for all products proposed for the system including air compressors.
- D. Calculations showing pressure loss in the piping system and estimated flows from the most removed orifice of the aeration piping.

Within 60 working days after the approval of the contract, the Contractor shall submit working drawings, with supplements, to the Engineer. The Contractor shall allow the Engineer 20 working days to review the working drawings. If revisions are required, as determined by the Engineer, the Contractor shall revise and resubmit the working

drawings within 15 working days of receipt of the Engineer's comments. The Contractor shall allow the Engineer 10 working days to review the revised working drawings.

The Contractor shall submit inspection reports in conformance with "Working Drawings," of these special provisions within 48 hours following inspection.

Full compensation for marine pile driving energy attenuator including designing, maintaining, monitoring, recording, and removing the attenuator system, as specified in these special provisions shall be considered as included in the contract lump sum price paid for the item of work requiring marine pile driving energy attenuator and no additional compensation will be allowed therefor.

Full compensation for inspections and monitoring of the attenuator system and isolation of pile-driving barge from pile installation noise shall be considered as included in the contract lump sum price paid for the item of work requiring marine pile driving energy attenuator and no additional compensation will be allowed therefor.

If the Contractor elects to use cofferdams for the marine pile driving energy attenuator, no additional compensation will be allowed and no extension of time will be granted for use of this option.

## SECTION 9. DESCRIPTION OF BRIDGE WORK

The bridge work to be done consists, in general, of constructing the following work as shown on the plans:

### WEST TIE-IN PHASE 3 YBI EDGE BEAM SUPPORT STRUCTURE (YBIEBSS) (Bridge No 34-0006)

Construct cast-in-place edge beam support structure and concrete columns under the existing structure.

### WEST TIE-IN PHASE 3 WEST TIE-IN (DEMOLITION) (Bridge No 34-0006) Remove the existing structure.

### SOUTH-SOUTH DETOUR VIADUCT (DEMOLITION) (Bridge No 34-0006) Remove the existing structure.

### EAST TIE-IN (DEMOLITION) (Bridge No 34-0006) Remove the existing structure.

### WEST TIE-IN PHASE 3 YBI VIADUCT DECK TREATMENT (Bridge No 34-0006)

Construct deck treatment and concrete barrier on existing bridge.

### YBI EB ON-RAMP (FINAL) (Bridge No. 340006 S)

A five-span box girder bridge approximately 175 meters long and 12 meters wide. The superstructure consists of a prestressed concrete box girder. The substructure consists of reinforced concrete columns and footings supported by driven steel piles. A portion of the substructure was constructed under a previous contract.

### YBI EB TRANSITION STRUCTURE (MOD) (Bridge No. 34-0006 R)

A bike path extension and removal of the existing Temporary Eastbound On-Ramp structure.

### RETAINING WALL NO. 51 (Bridge Number: 34E0015)

The major portion of the wall consists of steel soldier pile retaining wall with tie back anchors, concrete facing, architectural treatment (fractured rib texture), and a concrete

barrier on a concrete barrier slab. The remaining portion of the wall consists of reinforced concrete cantilever wall with architectural treatment (fractured rib texture), and a concrete barrier.

RETAINING WALL NO. 52

Reinforced concrete retaining wall with architectural treatment (fractured rib texture), and a pedestrian railing.

CANTILEVER TRUSS DEMOLITION

(Bridge No 34-0025)

Remove the existing cantilever truss bridge.

SELF-ANCHORED SUSPENSION BRIDGE

(ERECTION OF BIKE PATH AT PIER W2)

(Bridge No.34-0006)

Erect State-Furnished bike path at Pier W2

**SECTION 10. CONSTRUCTION DETAILS**

**SECTION 10-1. GENERAL**

**10-1.01 ORDER OF WORK**

Order of work shall conform to the provisions in Section 5-1.05, "Order of Work," of the Standard Specifications and these special provisions.

Bridge construction, jacking and removal sequence shall be according to the sequence shown on the plans.

No portion of the existing bridge shall at any time during removal be submerged or make contact with the surface of the water in the bay.

In the event that any portion of the existing bridge is dropped into any part of the water, the Contractor shall cease all removal operations and immediately remove the dropped object and notify the Engineer. The Contractor shall not continue removal operations until a revised bridge removal plan is developed that remedies the problem. Should the Contractor neglect or delay compliance with the above requirements, such objects will be removed by the State and the cost of removal will be deducted from the moneys due to the Contractor.

## 10-1. EXISTING HIGHWAY FACILITIES

The work performed in connection with various existing highway facilities shall conform to the provisions in Section 15, "Existing Highway Facilities," of the Standard Specifications and these special provisions.

The following items on the cantilever truss bridge shall be salvaged:

1. One (1) Aircraft Beacon in Good condition
2. One (1) complete Fog Bell
3. Decorative Lighting Fixtures
4. Pier lighting fixture and Navigation LED lighting
5. Fog Detector at Pier E-3, fog horns on Pier E-2 and Pier E-3
6. Construction Cameras
  - 3 construction cameras at E3-E4
  - 2 construction cameras on South-South Detour eastbound north side
  - 2 construction cameras at E2
  - 3 construction cameras at E3
  - 1 construction camera at E1 north side

Except as otherwise provided for damaged materials in Section 15-2.04, "Salvage," of the Standard Specifications, the materials to be salvaged shall remain the property of the State, and shall be cleaned, packaged, bundled, tagged, and hauled to a location within 25 km of the San Francisco-Oakland Bay Bridge Toll Plaza and stockpiled.

Existing BASE cameras and controllers will be salvaged as directed by the Engineer and such work will be paid for as extra work as provided in Section 4-1.03D, "Extra Work," of the Standard Specifications.

The Contractor shall notify the Engineer a minimum of 30 days prior to hauling salvaged material to storage.

Existing footing concrete which is below ground and outside of the footing limits shown on the contract plans or original contract plans shall be removed as directed by the Engineer and such work will be paid for as extra work as provided in Section 4-1.03D, "Extra Work," of the Standard Specifications.

### **EXISTING PAINT SYSTEMS (CANTILEVER TRUSS)**

The existing paint systems on Bridge Number 33-0025 consist of red lead, zinc and chlorinated rubber undercoats and phenolic aluminum and water based finish coats. Any work that disturbs the existing paint system will expose workers to health hazards and will (1) produce debris containing heavy metal in amounts that exceed the thresholds established in Titles 8 and 22 of the California Code of Regulations or (2) produce toxic fumes when heated. All debris produced when the existing paint system is disturbed shall be contained.

#### **Debris Containment and Collection Program**

Prior to starting work, the Contractor shall submit a debris containment and collection program to the Engineer in conformance with the provisions in Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications, for debris produced when the existing paint system is disturbed. The program shall identify materials, equipment, and methods to be used when the existing paint system is disturbed and shall include working drawings of containment systems, loads applied to the bridge by containment structures, and provisions for ventilation and air movement for visibility and worker safety.

If the measures being taken by the Contractor are inadequate to provide for the containment and collection of debris produced when the existing paint system is disturbed, the Engineer will direct the Contractor to revise the operations and the debris containment and collection program. The directions will be in writing and will specify the items of work for which the Contractor's debris containment and collection program is inadequate. No further work shall be performed on the items until the debris containment and collection program is adequate and, if required, a revised program has been approved for the containment and collection of debris produced when the existing paint system is disturbed.

The Engineer will notify the Contractor of the approval or rejection of the submitted or revised debris containment and collection program within 2 weeks of submittal of the Contractor's program or revised program.

The State will not be liable to the Contractor for failure to approve all or any portion of an originally submitted or revised debris containment and collection program, nor for delays to the work due to the Contractor's failure to submit an acceptable program.

Full compensation for the debris containment and collection program shall be considered as included in the contract price paid for the item of work causing the existing paint system to be disturbed, and no additional compensation will be allowed therefor.

#### **Safety and Health Provisions**

Attention is directed to Section 7-1.06, "Safety and Health Provisions," of the Standard Specifications. Work practices and worker health and safety shall conform to the California Code of Regulations, Title 8, Construction Safety Orders, including Section 1532.1, "Lead."

The Contractor shall furnish the Engineer a written Code of Safe Practices and shall implement an Injury and Illness Prevention Program and a Hazard Communication Program in conformance with the requirements of Construction Safety Orders, Sections 1509 and 1510.

Prior to starting work that disturbs the existing paint system, and when revisions to the program are required by Section 1532.1, "Lead," the Contractor shall submit the compliance programs required in subsection (e)(2), "Compliance Program," of Section 1532.1, "Lead," of the Construction Safety Orders to the Engineer in conformance with the provisions in Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications. The compliance programs shall include the data specified in subsections (e)(2)(B) and (e)(2)(C) of Section 1532.1, "Lead." Approval of the compliance programs by the Engineer will not be required. The compliance programs shall be reviewed and signed by a Certified Industrial Hygienist (CIH) who is certified in comprehensive practice by the American Board of Industrial Hygiene (ABIH). Copies of all air monitoring or jobsite inspection reports made by or under the direction of the CIH in conformance with Section 1532.1, "Lead," shall be furnished to the Engineer within 10 days after the date of monitoring or inspection.

Full compensation for furnishing the Engineer with the submittals and for implementing the programs required by this safety and health section shall be considered as included in the contract price paid for the item of work causing the existing paint system to be disturbed, and no additional compensation will be allowed therefor.

### **Debris Handling**

Debris produced when the existing paint system is disturbed shall not be temporarily stored on the ground or surface waters. Debris accumulated inside the containment system shall be removed before the end of each work shift. Debris shall be stored in approved, leakproof containers and shall be handled in such a manner that no spillage will occur.

Disposal of debris produced when the existing paint system is disturbed shall be performed in conformance with all applicable Federal, State, and Local hazardous waste laws. Laws that govern this work include:

- A. Health and Safety Code, Division 20, Chapter 6.5 (California Hazardous Waste Control Act).
- B. Title 22; California Code of Regulations, Division 4.5, (Environmental Health Standards for the Management of Hazardous Waste).
- C. Title 8, California Code of Regulations.

Except as otherwise provided herein, debris produced when the existing paint system is disturbed shall be disposed of by the Contractor at an approved Class 1 disposal facility in conformance with the requirements of the disposal facility operator. The debris 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. The Contractor shall make all arrangements with the operator of the disposal facility and perform any testing of the debris required by the operator.

At the option of the Contractor, the debris produced when the existing paint system is disturbed may be disposed of by the Contractor at a facility equipped to recycle the debris, subject to the following requirements:

- A. Copper slag abrasive blended by the supplier with a calcium silicate compound shall be used for blast cleaning.
- B. The debris produced when the existing paint system is disturbed shall be tested by the Contractor to confirm that the solubility of the heavy metals is below regulatory limits and that the debris may be transported to the recycling facility as a non-hazardous waste.
- C. The Contractor shall make all arrangements with the operator of the recycling facility and perform any testing of the debris produced when the existing paint system is disturbed that is required by the operator.

Full compensation for debris handling and disposal shall be considered as included in the contract price paid for the item of work causing the existing paint system to be disturbed, and no additional compensation will be allowed therefor.

### **Work Area Monitoring**

The Contractor shall perform work area monitoring of the ambient air and soil in and around the work area at the bridge site to verify the effectiveness of the containment system. The work area monitoring shall consist of collecting, analyzing, and reporting air and soil test results and recommending the required corrective action when specified exposure levels are exceeded. The work area monitoring shall be carried out under the direction of a CIH. The samples shall be collected at locations designated by the Engineer.

Air samples shall be collected and analyzed in conformance with National Institute for Occupational Safety and Health (NIOSH) methods. Air samples for lead detection shall be collected and analyzed in conformance with NIOSH Method 7082, with a limit of detection of at least  $0.5 \mu\text{g}/\text{m}^3$ . Air samples for detection of other metals shall be collected and analyzed in conformance with NIOSH Method 7300, with a limit of detection of at least one percent of the appropriate Permissible Exposure Limits (PELs) specified by the California/Occupational Safety and Health Administration (Cal/OSHA). Alternative methods of sample collection and analysis, with equivalent limits of detection, may be used at the option of the Contractor.

The airborne metals exposure, outside either the containment system or work areas, shall not exceed the lower of either: (1) 10 percent of the Action Level specified for lead by Section 1532.1, "Lead," of the Construction Safety Orders, or (2) 10 percent of the appropriate PELs specified for other metals by Cal/OSHA.

The air samples shall be collected at least once per week during progress of work that disturbs the existing paint system. All air samples shall be analyzed within 48 hours at a facility accredited by the Environmental Lead Laboratory Accreditation Program of the American Industrial Hygiene Association (AIHA). When corrective action is recommended by the CIH, additional samples may be required by the Engineer to be taken, at the Contractor's expense.

Four soil samples shall be collected prior to the start of work, and four soil samples shall be collected within 36 hours following completion of cleaning operations of existing steel. Where the cleaning operations extend over large areas of soil or many separate areas of soil at each bridge site, the samples shall be collected at various times during the contract when determined by the Engineer. A soil sample shall consist of 5 plugs, each

19 mm in diameter and 13 mm deep, taken at each corner and center of a one square meter area. Soil samples shall be analyzed for total lead and zinc in conformance with Method 3050 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," SW-846 published by the United States Environmental Protection Agency.

There shall be no increase in the concentrations of heavy metal in the soil in the area affected when the existing paint system is disturbed. When soil sampling, after completion of work that disturbs the existing paint system, shows an increase in the concentrations of heavy metal, the area affected shall be cleaned and resampled at the Contractor's expense until soil sampling and testing shows concentrations of heavy metal less than or equal to the concentrations collected prior to the start of work.

In areas where there is no exposed soil, there shall be no visible increase in the concentrations of heavy metal on the area affected when the existing paint system is disturbed. Any visible increase in the concentrations of heavy metal, after completion of work that disturbs the existing paint system, shall be removed at the Contractor's expense.

Air and soil sample laboratory analysis results, including results of additional samples taken after corrective action as recommended by the CIH, shall be submitted to the Engineer. The results shall be submitted both verbally within 48 hours after sampling and in writing with a copy to the Contractor, within 5 days after sampling. Sample analysis reports shall be prepared by the CIH as follows:

- A. For both air and soil sample laboratory analysis results, the date and location of sample collection, sample number, contract number, bridge number, full name of the structure as shown on the contract plans, and District-County-Route-Kilometer Post will be required.
- B. For air sample laboratory analysis results, the following will be required:
  1. List of emission control measures in place when air samples were taken.
  2. Air sample results shall be compared to the appropriate PELs.
  3. Chain of custody forms.
  4. Corrective action recommended by the CIH to ensure airborne metals exposure, outside either the containment system or work areas, is within specified limits.
- C. For soil sample laboratory analysis results, the concentrations of heavy metal expressed as parts per million will be required.

Work area monitoring will be paid for on the basis of a lump sum price.

The contract lump sum price paid for work area monitoring shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in collecting and analyzing samples of ambient air and soil for heavy metals, complete in place, including reporting the test results, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

## Containment System

At the option of the Contractor, the containment system shall consist of either (1) a ventilated containment structure, (2) vacuum shrouded surface preparation equipment and drapes, tarps, or other materials, or (3) an equivalent containment system. The containment system shall contain all water, resulting debris, and visible dust produced when the existing paint system is disturbed.

Falsework or supports for the ventilated containment structure shall not encroach on the required clearances.

The ventilated containment structure shall conform to the provisions for falsework in Section 51-1.06, "Falsework," of the Standard Specifications.

The minimum total design load of the ventilated containment structure shall consist of the sum of the dead and live vertical loads. Dead load shall consist of the actual load of the ventilated containment structure. Live loads shall consist of a uniform load of not less than 2160 Pa, which includes 960 Pa of sand load, applied over the area supported, and in addition, a moving 4.5 kN concentrated load shall be applied to produce maximum stress in the main supporting elements. Assumed horizontal loads need not be included in the design of the ventilated containment structure.

The ventilated containment structure shall be supported with either rigid or flexible supports. The rigid or flexible containment materials on the containment structure shall retain airborne particles but may allow airflow through the containment materials. Flexible materials shall be supported and fastened to prevent escape of abrasive and blast materials due to whipping from traffic or wind and to maintain clearances.

All mating joints between the ventilated containment structure and the bridge shall be sealed. Sealing may be by overlapping of seams when using flexible materials or by using tape, caulking, or other sealing measures.

Multiple flap overlapping door tarps shall be used at entry ways to the ventilated containment structure to prevent dust or debris from escaping.

Baffles, louvers, flapper seals, or ducts shall be used at make-up air entry points to the ventilated containment structure to prevent escape of abrasives and resulting surface preparation debris.

The ventilated containment structure shall be properly maintained while work is in progress and shall not be changed from the approved working drawings without prior approval of the Engineer.

The ventilation system in the ventilated containment structure shall be of the forced input airflow type with fans or blowers.

Negative air pressure shall be employed within the ventilated containment structure and will be verified by visual methods by observing the concave nature of the containment materials while taking into account wind effects or by using smoke or other visible means to observe airflow. The input airflow shall be properly balanced with the exhaust capacity throughout the range of operations.

The exhaust airflow of the ventilation system in the ventilated containment structure shall be forced into dust collectors (wet or dry) or bag houses.

Full compensation for the containment system shall be considered as included in the contract price paid for the item of work causing the existing paint system to be disturbed, and no additional compensation will be allowed therefor.

### **Protective Work Clothing and Hygiene Facilities**

Wherever there is exposure or possible exposure to heavy metals or silica dust at the bridge site, the Contractor shall, for State personnel: (1) furnish, clean, and replace protective work clothing and (2) provide access to hygiene facilities. The furnishing, cleaning, and replacement of protective work clothing and providing access to hygiene facilities shall conform to the provisions of subsections (g), "Protective work clothing and equipment," and (i), "Hygiene facilities and practices," of Section 1532.1, "Lead," of the Construction Safety Orders, and will be required for no more than 3 people.

The protective work clothing and access to hygiene facilities shall be provided during exposure or possible exposure to heavy metals or silica dust at the bridge site and during the application of the undercoats of paint.

Protective work clothing and hygiene facilities shall be inspected and approved by the Engineer before being used by State personnel.

The protective work clothing shall remain the property of the Contractor at the completion of the contract.

Full compensation for protective work clothing and access to hygiene facilities for State personnel shall be considered as included in the contract price paid for the item of work causing the existing paint system to be disturbed, and no additional compensation will be allowed therefor.

### **BRIDGE REMOVAL (PORTION)**

Removing bridges or portions of bridges shall conform to the provisions in Section 15.4, "Bridge Removal," of the Standard Specifications and these special provisions.

#### **LOCATION A**

##### **YBI EDGE BEAM SUPPORT STRUCTURE (YBIEBSS)**

(Bridge No. 34-0006)

Remove portion of existing bridge foundation as shown on the plans.

#### **LOCATION B**

##### **WEST TIE-IN (DEMOLITION)**

(Bridge No. 34-0006)

Remove the existing structure as shown on the plans.

#### **LOCATION C**

##### **SOUTH-SOUTH DETOUR VIADUCT (DEMOLITION)**

(Bridge No 34-0006)

Remove the existing structure as shown on the plans

#### **LOCATION D**

##### **EAST TIE-IN (DEMOLITION)**

(Bridge No 34-0006)  
Remove the existing structure as shown on the plans

LOCATION E

YBI EB ON-RAMP (FINAL)  
(Bridge No. 340006 S)

Remove portions of existing retaining wall at Abutment W11 as shown on the plans.

LOCATION F

YBI EB TRANSITION STRUCTURE (MOD)  
(Bridge No. 34-0006 R)

Remove the existing Temporary Eastbound On-Ramp structure as shown on the plans.

Removed materials that are not to be salvaged or used in the reconstruction shall become the property of the Contractor and shall be disposed of in conformance with the provisions in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

The Contractor shall submit a complete bridge removal plan to the Engineer for each bridge listed above, detailing procedures, sequences, and all features required to perform the removal in a safe and controlled manner.

The bridge removal plan shall include, but not be limited to the following:

- A. The removal sequence, including staging of removal operations.
- B. Equipment locations on the structure during removal operations.
- C. Temporary support shoring or temporary bracing.
- D. Locations where work is to be performed over traffic or utilities.
- E. Details, locations, and types of protective covers to be used.
- F. Measures to assure that people, property, utilities, and improvements will not be endangered.
- G. Details and measures for preventing material, equipment, and debris from falling onto public traffic.

When protective covers are required for removal of portions of a bridge, or when superstructure removal works on bridges are involved, the Contractor shall submit working drawings, with design calculations, to the Engineer for the proposed bridge removal plan, and the bridge removal plan shall be prepared and signed by an engineer who is registered as a Civil Engineer in the State of California. The design calculations shall be adequate to demonstrate the stability of the structure during all stages of the removal operations. Calculations shall be provided for each stage of bridge removal and shall include dead and live load values assumed in the design of protective covers. At a minimum, a stage will be considered to be removal of the deck, the soffit, or the girders, in any span; or walls, bent caps, or columns at support locations.

Temporary support shoring, temporary bracing, and protective covers, as required, shall be designed and constructed in conformance with the provisions in Section 51-1.06, "Falsework," of the Standard Specifications and these special provisions.

The assumed horizontal load to be resisted by the temporary support shoring and temporary bracing, for removal operations only, shall be the sum of the actual horizontal loads due to equipment, construction sequence or other causes, and an allowance for wind, but in no case shall the assumed horizontal load to be resisted in any direction be less than 5 percent of the total dead load of the structure to be removed.

The bridge removal plan shall conform to the provisions in "Working Drawings," of these special provisions. Calculations and working drawings shall be stamped by an engineer who is registered as a Civil Engineer in the State of California. The number of sets of drawings, design calculations and the time for reviewing bridge removal plans shall be the same as specified for falsework working drawings in Section 51-1.06A, "Falsework Design and Drawings," of the Standard Specifications.

The time to be provided for the Engineer's review of the bridge removal plans for removing specific structures, or portions thereof, shall be as follows:

Structure or Portion of Structure	Review Time - Days
West Tie-In	30
East Tie-In	30
South-South Detour Viaduct	60

The following additional requirements apply to the removal of bridges or portions of bridges that are closed to public traffic over or adjacent to roadways that may be closed to public traffic for only brief periods of time:

- A. The closure of roadways to public traffic shall conform to the provisions in "Order of Work" and "Maintaining Traffic" of these special provisions.
- B. Prior to closing a roadway to traffic to accommodate bridge removal operations, the Contractor shall have all necessary workers, materials, and equipment at the site as needed to proceed with the removal work in an expeditious manner. While the roadway is closed to public traffic, work shall be pursued promptly and without interruption until the roadway is reopened to public traffic.
- C. Bridge removal operations shall be performed during periods of time that the roadway is closed to public traffic, except as specified herein for preliminary work.
- D. Preliminary work shall be limited to operations that will not reduce the structural strength or stability of the bridge, or any element thereof, to a level that in the judgment of the Engineer would constitute a hazard to the public. This preliminary work shall also be limited to operations that cannot cause debris or any other material to fall onto the roadway. Protective covers may be used to perform preliminary work such as chipping or cutting the superstructure into segments, provided the covers are of sufficient strength to support all loads and are sufficiently tight to prevent dust and fine material from sifting down onto the traveled way. Protective covers shall extend at least 1.2 m beyond the limit of the work underway. Bottom slabs of box girders may be considered to be protective covers for preliminary work performed on the top slab inside the limits of the exterior girders.
- E. Temporary support shoring and temporary bracing shall be used in conjunction with preliminary work when necessary to insure the stability of the bridge.
- F. Temporary support shoring, temporary bracing, and protective covers shall not encroach closer than 2.4 m horizontally from the edge or 4.6 m vertically above any traffic lane or shoulder that is open to public traffic.
- G. During periods when the roadway is closed to public traffic, debris from bridge removal operations may be allowed to fall directly onto the lower roadway provided adequate protection is furnished for all highway facilities. The minimum protection for paved areas shall be a 0.6-m thick earthen pad or a 25-mm thick steel plate placed over the area where debris can fall. Prior to reopening the roadway to public traffic, all debris, protective pads, and devices shall be removed and the roadway swept clean with wet power sweepers or equivalent methods.
- H. The removal operations shall be conducted in such a manner that the portion of the structure not yet removed remains in a stable condition at all times. For girder bridges, each girder shall be completely removed within a span before the removal of the adjacent girder is begun. For slab type bridges, removal

operations within a span shall be performed along a front that roughly parallels the primary reinforcing steel.

The following additional requirements apply to the removal of bridges or portions of bridges whenever the removal work is to be performed over public :

- A. A protective cover shall be constructed before beginning bridge removal work. The protective cover shall be supported by shoring, falsework, or members of the existing structure. The Contractor shall be responsible for designing and constructing safe and adequate protective covers, shoring, and falsework with sufficient strength and rigidity to support the entire load to be imposed.
- B. The construction and removal of the protective cover, and the installation and removal of temporary railings shall conform to the provisions in "Order of Work," "Maintaining Traffic," "Temporary Railings" of these special provisions.
- C. Bridge removal methods shall be described in the working drawings, supported by calculations with sufficient details to substantiate live loads used in the protective cover design. Dead and live load values assumed for designing the protective cover shall be shown on the working drawings.
- D. The protective cover shall prevent any materials, equipment, or debris from falling onto public traffic-. The protective cover shall have a minimum strength equivalent to that provided by good, sound Douglas fir planking having a nominal thickness of 50 mm. Additional layers of material shall be furnished as necessary to prevent fine materials or debris from sifting down upon the traveled way and shoulders.
- E. During the removal of bridge segments, and when portions of the bridge, such as deck slabs or box girder slabs, comply with the requirements for the protective cover, a separate protective cover need not be constructed.
- F. At locations where entire girders are to be removed, the protective cover shall extend at least 3 m beyond the outside face of the bridge railing.
- G. The protective cover shall provide the openings specified under "Maintaining Traffic" of these special provisions, except that when no openings are specified for bridge removal, a vertical opening of 4.6 m and a horizontal opening of 9.8 m shall be provided for the passage of public traffic.
- H. The construction of the protective cover as specified herein shall not relieve the Contractor of responsibilities specified in Section 7-1.12A, "Indemnification," and Section 7-1.12B, "Insurance," of the Standard Specifications.
- I. Before removal of the protective cover, the Contractor shall clean the protective cover of all debris and fine material.

For bridge removal that requires the Contractor's registered engineer to prepare and sign the bridge removal plan, the Contractor's registered engineer shall be present at all times when bridge removal operations are in progress. The Contractor's registered engineer shall inspect the bridge removal operation and report in writing on a daily basis the progress of the operation and the status of the remaining structure. A copy of the daily report shall be available at the site of the work at all times. Should an unplanned event occur or the bridge operation deviate from the approved bridge removal plan, the

Contractor's registered engineer shall submit immediately to the Engineer for approval, the procedure of operation proposed to correct or remedy the occurrence.

## **BRIDGE REMOVAL, PORTION (CANTILEVER TRUSS)**

Removing bridges or portions of bridges shall conform to the provisions in Section 15-4, "Bridge Removal," of the Standard Specifications and these special provisions.

Attention is directed to "Permits and Licenses" of these special provisions.

Attention is directed to "Temporary Supports" and "Falsework" of these special provisions.

### **BRIDGE REMOVAL (PORTION) LOCATION E**

#### **CANTILEVER TRUSS DEMOLITION**

(Bridge No. 33-0025)

Remove existing cantilever truss bridge as shown on the plans.

Removed materials that are not to be salvaged or used in the reconstruction shall become the property of the Contractor and shall be disposed of in conformance with the provisions in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

Welding to existing bridge members will not be permitted. Only high strength bolted connections to existing bridge members will be allowed.

The use of existing fenders for temporary support of the existing bridge, equipment or materials loading will not be permitted.

Expansive cracking agents may be used for concrete removal at Pier E1, as approved by the Engineer.

The Contractor shall submit a complete bridge removal plan to the Engineer for review and comment. The bridge removal plan shall detail the procedures, sequences, and all features required to perform the removal in a safe and controlled manner.

The bridge removal plan shall include, but not be limited to the following:

- A. Complete 3-D computer analysis and evaluation of the bridge for the removal procedure.
- B. Report with a summary of input and output files, including, but not limited to, a table showing demand/capacity ratios for all stages of bridge removal.
- C. The removal sequence, including staging of removal operations.
- D. Methods and details for member or connection strengthening.
- E. Methods and details for supporting or stiffening requirements.
- F. Equipment locations on the structure during removal operations.
- G. Temporary supports, including lifting apparatus, temporary support shoring or temporary bracing.
- H. Details of construction area enclosure.
- I. Locations where work is to be performed over waterway.
- J. Details, locations, and types of protective covers to be used.
- K. Measures to assure that people, property, and utilities will not be endangered.
- L. Details and measures for preventing material, equipment, and debris from falling onto public traffic or in waterway.

M. Methods and description of shipment plan for removed bridge.

N. Methods of hazardous paint removal to ensure that the allowable threshold limits for air quality are not exceeded.

O. Independent check calculations

P. Registered engineer's certification

The bridge removal plan shall be prepared, signed and stamped by an engineer who is registered as a Civil Engineer in the United States. The engineer shall have at least 10 years experience as a registered Civil Engineer and shall have prepared demolition plans for at least one large, continuous steel truss bridge.

The bridge removal plan shall conform to the provisions in "Working Drawings," of these special provisions except the Engineer's approval will not be required. The removal plan shall be independently checked, stamped and signed by another registered Civil Engineer with similar experience and qualifications. The independent check shall include all analysis and calculations necessary to independently check all aspects of the removal plan. The check engineer shall not be an employee of the Contractor and shall be employed by an independent firm. Independent check calculations shall be submitted with the removal plan.

The Contractor's registered engineer and the check engineer shall provide certification that the removal plan complies with all contract requirements and is adequate for the purpose intended. The Contractor shall allow 30 days for the Engineer's review and comment. The design calculations and details shall be adequate to demonstrate the stability of the structure during all stages of the removal operations. Calculations shall be provided for each stage of bridge removal and shall include dead and live loads and the wind load values shown on the plans. At a minimum, a stage will be considered to be removal of the deck, the deck framing, or any truss members, in any span; or pier framing, or steel towers at support locations. Member stresses shall not exceed operating allowable stress limits during application of temporary construction loads and during all phases of demolition.

Temporary support shoring, temporary bracing, and protective covers, as required, shall be designed and constructed in conformance with the provisions in Section 51-1.06, "Falsework," of the Standard Specifications and these special provisions.

The assumed horizontal load to be resisted by the temporary support shoring and temporary bracing, for removal operations only, shall be the sum of the actual horizontal loads due to equipment, construction sequence or other causes, and the wind loads shown on the plans, but in no case shall the assumed horizontal load to be resisted in any direction be less than 5 percent of the total dead load of the structure to be removed.

The following additional requirements apply to the removal of bridges whenever the removal work is to be performed over a waterway:

A. A protective cover shall be constructed before beginning bridge removal work. The protective cover shall be supported by shoring, falsework, or members of the existing structure. The Contractor shall be responsible for designing and constructing safe and adequate protective covers, shoring, and falsework with sufficient strength and rigidity to support the entire load to be imposed.

- B. Bridge removal methods shall be described in the working drawings, supported by calculations with sufficient details to substantiate live loads used in the protective cover design. Dead and live load values assumed for designing the protective cover shall be shown on the working drawings.
- C. The protective cover shall prevent any materials, equipment, or debris from falling onto the waterway. The protective cover shall have a minimum strength equivalent to that provided by good, sound Douglas fir planking having a nominal thickness of 50 mm. Additional layers of material shall be furnished as necessary to prevent fine materials or debris from sifting down upon the waterway.
- D. During the removal of bridge segments, and when portions of the bridge, such as deck slabs, comply with the requirements for the protective cover, a separate protective cover need not be constructed.
- E. The protective cover shall extend at least 3 m beyond the outside face of the truss.
- F. The construction of the protective cover as specified herein shall not relieve the Contractor of responsibilities specified in Section 7-1.12A, "Indemnification," and Section 7-1.12B, "Insurance," of the Standard Specifications.
- G. Before removal of the protective cover, the Contractor shall clean the protective cover of all debris and fine material.

The Contractor's registered engineer shall be present at all times when bridge removal operations are in progress. The Contractor's registered engineer shall inspect the bridge removal operation and report in writing on a daily basis the progress of the operation and the status of the remaining structure. A copy of the daily report shall be available at the site of the work at the end of each shift and at all times. Should an unplanned event occur or the bridge operation deviate from the bridge removal plan, the Contractor's registered engineer shall submit immediately to the Engineer for approval, the procedure of operation proposed to correct or remedy the occurrence.

Full compensation for sawcutting existing concrete, asphalt concrete overlay, and flame cutting existing steel members shall be considered as included in the contract lump sum price paid for bridge removal (portion), location E and no additional compensation will be allowed therefor.

Full compensation for member or connection strengthening, supporting or stiffening requirements, and temporary bracing shall be considered as included in the contract lump sum price paid for bridge removal (portion), location E and no additional compensation will be allowed therefor.

#### **10-1. ERECT BIKE PATH AT PIER W2**

This work shall consist of inspection, shipping, and erection of State-furnished bike path in conformance with the details shown on the plans and the requirements of these special provisions.

The bike path consists of the structural elements, sealing elements, and anchorage elements as shown on the plans.

The Contractor's attention is directed to "State-Furnished Materials" of the special provisions.

Steel materials shall conform to "Steel Structures" of these special provisions. Bike path railing shall conform to "Bike Path Railing" of the special provisions.

Welding shall conform to "Welding" of the special provisions.

Prestressing of high strength rods shall conform to "Prestressing" of the special provisions.

Polyester concrete overlay shall conform to "Polyester Concrete Overlay" of the special provisions.

### **WORKING DRAWINGS**

The Contractor shall submit working drawings in conformance with the provisions in section "Working Drawings" elsewhere in these special provisions, and these special provisions.

Working drawings shall include the method, materials, equipment, and procedures of erection that the Contractor proposes to use.

Working drawing submittal shall include the following:

1. Erection plans including methods, materials, equipment, sequence, lifting mechanisms and locations, and other procedures that the Contractor proposes to use for erection of the bike path.
2. Anchorage components
4. Storage plans for interim storage and on-site storage details including temporary support for the bike path.
5. Plans for transporting and handling the bike path.

A supplement to the working drawings shall include the bike path inspection report as specified in these special provisions.

The working drawings and supplement shall be stamped and signed by an engineer who is registered as a Civil Engineer in the State of California.

After complete working drawings and supplement are received by the Engineer, the Contractor shall allow the Engineer 20 working days to review the submittal. No shipping or erection of the bike path shall begin until the Engineer has reviewed and approved the working drawings and supplement submittal.

Upon completion of erection, the Contractor shall submit to the Engineer certification stating that the bike path was erected in accordance with the approved working drawings erection procedure.

### **STORAGE, TRANSPORTATION, AND HANDLING**

The bike path is stored at a storage facility within 25 km of the San Francisco-Oakland Bay Bridge Toll Plaza. The Contractor shall notify the Engineer at least two weeks prior to pick-up of the bike path from storage.

Prior to transporting the bike path components to the bridge site, the Contractor shall inspect the bike path components for damage at the storage location. The Contractor shall furnish to the Engineer a bike path inspection report. The inspection report shall include the condition of the bike path and any existing damages that may have occurred prior to the Contractor's receiving the bike path. If no damage is found, the Contractor shall include a statement in the inspection report to state that the bike path is in good condition and acceptable for delivery and erection.

Damage to the bike path during transportation or handling shall be repaired to original condition as determined by the Engineer.

Damage to the paint system shall be repaired to original condition as determined by the Engineer.

### **ERECTION**

No bike path shall be erected until the Engineer has reviewed and approved, in writing, the working drawings and supplement.

The bike path shall be erected in accordance with the approved working drawings and supplement.

The installed bike path shall match the finished bike path profile and grades.

Steel shims shall be used as necessary for bike path railing to provide proper alignment as shown on the plans.

### **MEASUREMENT AND PAYMENT**

Erect bike path will be paid for by lump sum price.

The contract lump sum price paid for erect bike path shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in erecting bike path, complete in place, including bike path railing and inspection prior to transporting, storing and transporting bike path, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

Full compensation for prestressing high strength bolts as shown on the plans shall be considered as included in the contract lump sum price paid for erect bike path and no additional compensation will be allowed therefor.