

**DEPARTMENT OF TRANSPORTATION**  
**DIVISION OF ENGINEERING SERVICES**  
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*Flex your power!  
Be energy efficient!*

January 12, 2009

04-Ala-880-48.4/50.0  
04-1706U4  
ACBRIM-ACIM-880-1(057)E

Addendum No. 9

Dear Contractor:

This addendum is being issued to the contract for construction on State highway in ALAMEDA COUNTY IN OAKLAND ON ROUTE 880 FROM 0.8 KM NORTH OF 16TH AVENUE OVERCROSSING TO OAK-MADISON STREET UNDERCROSSING.

Submit bids for this work with the understanding and full consideration of this addendum. The revisions declared in this addendum are an essential part of the contract.

Bids for this work will be opened on February 4, 2009.

This addendum is being issued to revise the Project Plans, the Notice to Contractors and Special Provisions, the Proposal and Contract and provide a copy of additional Information Handout.

Project Plan Sheets 40, 321, 326, 331, 332, 333, 334, 335, 338, and 396 are revised. Half-sized copies of the revised sheets are attached for substitution for the like-numbered sheet(s).

In the Special Provisions, Section 4, "BEGINNING OF WORK, TIME OF COMPLETION, AND LIQUIDATED DAMAGES," the following paragraphs are added after the last paragraph:

"It is anticipated that water will be available in sufficient quantities for the prosecution of the work. However, water shortages may occur during the life of the contract. Arrangements or commitments obtained by the Department are not a part of the contract. It is expressly understood and agreed that the Department assumes no responsibility to the bidder or Contractor whatsoever in respect to the arrangements made with the source. The Contractor shall assume all risks in connection with the use of the source and the terms upon which the use shall be made. There is no warranty or guaranty, either expressed or implied, to the quantity of water that can be obtained from the source. If the Department has compiled "Materials Information", as referred to in "Watering" of these special provisions, the bidder or Contractor is cautioned to make independent investigations and obtain the commitments or allocations as the bidder or Contractor deems necessary to verify the quantity of water available. The Contractor shall make arrangements or obtain commitments or allocations necessary to provide water for the project.

04-Ala-880-48.4/50.0  
04-1706U4  
ACBRIM-ACIM-880-1(057)E

During the progress of the work, if water becomes unavailable or unavailable in the quantities needed for prosecution of the work, the unavailability of water will be considered a "shortage of materials" in conformance with the provisions in Section 8-1.07, "Liquidated Damages," of the Standard Specifications except for compensation. The Contractor will be granted an extension of time and will not be assessed with liquidated damages for any portion of the delay in completion of the work beyond the time shown above for the completion of the work caused by the unavailability of water, provided the Contractor notifies the Engineer and furnishes proof of the "shortage of materials" as required in the third and fourth paragraphs in Section 8-1.07, "Liquidated Damages," of the Standard Specifications. If the Contractor sustains delay costs or damages which could not have been avoided by the judicious handling of forces, equipment and plant, there shall be paid to the Contractor the amount the Engineer may find to be a fair and reasonable compensation for the part of the Contractor's actual loss, as, in the opinion of the Engineer, was unavoidable, determined in the same manner as provided for right of way delays in Section 8-1.09, "Right of Way Delays," of the Standard Specifications. The Contractor shall be entitled to no other compensation for such delay. The provisions in Section 5-1.116, "Differing Site Conditions," of the Standard Specifications shall not apply to the unavailability of water."

In the Special Provisions, Section 5-1.005, "RETENTION EXCLUSION," is added as attached.

In the Special Provisions, Section 5-1.17, "PROJECT INFORMATION," Item L is added to the third paragraph as follows:

"L. Driveability Study for the Test and Anchor Piles at Bent 3 and Bent 16 for the Fifth Avenue Overhead (Replace), Br No. 33-0027," prepared by Foundation Testing Branch., dated January 2, 2008."

In the Special Provisions, Section 10-1.01, "ORDER OF WORK," the second paragraph is revised as follows:

"Attention is directed to "Relations with San Francisco Bay Conservation Development Commission" and "Sound Control Requirements" of these special provisions. No construction activities shall be performed in the Lake Merritt Channel between November 15 and May 15 of each year. Pile driving operations in the Lake Merritt Channel shall be restricted only to 60 calendar days in the period between June 15 and October 15 of each year and when tide is below mean low water elevation."

In the Special Provisions, Section 10-1.01, "ORDER OF WORK," the seventh paragraph is deleted.

In the Special Provisions, Section 10-1.24, "COOPERATION," is revised as attached.

In the Special Provisions, Section 10-1.43, "EXISTING HIGHWAY FACILITIES," subsection "CONSTRUCTION LOADING ON EXISTING STRUCTURE," is added as attached.

In the Special Provisions, Section 10-1.43, "EXISTING HIGHWAY FACILITIES," subsection "BRIDGE REMOVAL," is revised as attached.

In the Special Provisions, Section 10-1.46, "WATERING," the following paragraph is added:

"Attention is directed to "Beginning of Work, Time of Completion and Liquidated Damages" of these special provisions regarding availability of water."

In the Special Provisions, Section 10-1.69, "PILING," subsection "GENERAL," is revised as attached.

Addendum No. 9  
Page 3  
January 12, 2009

04-Ala-880-48.4/50.0  
04-1706U4  
ACBRIM-ACIM-880-1(057)E

In the Special Provisions, Section 10-1.69, "PILING," subsection "MEASUREMENT AND PAYMENT (PILING)," is revised as attached.

In the Special Provisions, Section 10-1.77, "REINFORCEMENT," the following paragraph is added after the third paragraph:

"Splices in main bent cap reinforcement in all bent locations and at all stages shall be ultimate butt splices."

In the Proposal and Contract, the Engineer's Estimate Items 112, and 133 are revised as attached.

To Proposal and Contract book holders:

Replace pages 8 and 9 of the Engineer's Estimate in the Proposal with the attached revised pages 8 and 9 of the Engineer's Estimate. The revised Engineer's Estimate is to be used in the bid.

Attached is a copy of the Information Handout.

Inquiries or questions in regard to this addendum must be communicated as a bidder inquiry and must be made as noted in the NOTICE TO CONTRACTORS section of the Notice to Contractors and Special Provisions.

Indicate receipt of this addendum by filling in the number of this addendum in the space provided on the signature page of the proposal.

Submit bids in the Proposal and Contract book you now possess. Holders who have already mailed their book will be contacted to arrange for the return of their book.

Inform subcontractors and suppliers as necessary.

This office is sending this addendum by GSO overnight mail to Proposal and Contract book holders to ensure that each receives it. A copy of this addendum is available for the contractor's use on the Internet Site:

**[http://www.dot.ca.gov/hq/esc/oe/weekly\\_ads/addendum\\_page.html](http://www.dot.ca.gov/hq/esc/oe/weekly_ads/addendum_page.html)**

If you are not a Proposal and Contract book holder, but request a book to bid on this project, you must comply with the requirements of this letter before submitting your bid.

Sincerely,

**ORIGINAL SIGNED BY**

ROBERT E. TRAVIS, Chief  
Office of Plans, Specifications & Estimates  
Division of Engineering Services - Office Engineer

Attachments

**ENGINEER'S ESTIMATE**  
**04-1706U4**

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
101	012430	LIGHTWEIGHT EMBANKMENT MATERIAL (CELLULAR CONCRETE)	M3	38 500		
102	390102	ASPHALT CONCRETE (TYPE A)	TONN	28 600		
103	390106	ASPHALT CONCRETE (OPEN GRADED)	TONN	3100		
104	393001	PAVEMENT REINFORCING FABRIC	M2	8650		
105	394002	PLACE ASPHALT CONCRETE (MISCELLANEOUS AREA)	M2	1080		
106	394040	PLACE ASPHALT CONCRETE DIKE (TYPE A)	M	240		
107	394044	PLACE ASPHALT CONCRETE DIKE (TYPE C)	M	420		
108	394046	PLACE ASPHALT CONCRETE DIKE (TYPE D)	M	46		
109	394048	PLACE ASPHALT CONCRETE DIKE (TYPE E)	M	230		
110	415101	CRACK EXISTING CONCRETE PAVEMENT	M2	8740		
111	420201	GRIND EXISTING CONCRETE PAVEMENT	M2	670		
112	041117	FURNISH STEEL PIPE PILE (1219 MM)	M	276		
113 (S)	041118	DRIVE STEEL PIPE PILE (1219 MM)	EA	8		
114	490770	FURNISH PILING (CLASS 625) (ALTERNATIVE V)	M	3080		
115 (S)	490771	DRIVE PILE (CLASS 625) (ALTERNATIVE V)	EA	98		
116	491007	FURNISH PILING (CLASS 400)	M	61		
117 (S)	491008	DRIVE PILE (CLASS 400)	EA	8		
118	041119	FURNISH CAST-IN-STEEL-SHELL CONCRETE PILING (1830 MM)	M	127		
119 (S)	041120	DRIVE CAST-IN-STEEL-SHELL CONCRETE PILE (1830 MM)	EA	3		
120	041121	FURNISH CAST-IN-STEEL-SHELL CONCRETE PILING (2440 MM)	M	2733		

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
121 (S)	041122	DRIVE CAST-IN-STEEL-SHELL CONCRETE PILE (2440 MM)	EA	65		
122 (S)	500001	PRESTRESSING CAST-IN-PLACE CONCRETE	LS	LUMP SUM	LUMP SUM	
123 (F)	510051	STRUCTURAL CONCRETE, BRIDGE FOOTING	M3	215		
124 (F)	510053	STRUCTURAL CONCRETE, BRIDGE	M3	24 100		
125	510072	STRUCTURAL CONCRETE, BARRIER SLAB	M3	490		
126 (F)	510086	STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N)	M3	270		
127	510501	MINOR CONCRETE	M3	190		
128 (F)	510502	MINOR CONCRETE (MINOR STRUCTURE)	M3	156		
129	510526	MINOR CONCRETE (BACKFILL)	M3	29		
130 (F)	511035	ARCHITECTURAL TREATMENT	M2	2050		
131 (F)	012431	ARCHITECTURAL SURFACE (LIGHT SANDBLAST)	M2	1550		
132 (F)	012432	ARCHITECTURAL SURFACE (MEDIUM SANDBLAST)	M2	760		
133 (S)	518051	PTFE SPHERICAL BEARING	EA	64		
134 (S)	519126	JOINT SEAL ASSEMBLY (MR 80 MM)	M	51		
135 (S)	519127	JOINT SEAL ASSEMBLY (MR 90 MM)	M	47		
136 (S)	519132	JOINT SEAL ASSEMBLY (MR 321 MM - 400 MM)	M	94		
137 (S-F)	520102	BAR REINFORCING STEEL (BRIDGE)	KG	6 800 000		
138 (S-F)	520110	BAR REINFORCING STEEL (EPOXY COATED) (BRIDGE)	KG	723 000		
139 (S-F)	520120	HEADED BAR REINFORCEMENT	EA	16 800		
140 (S-F)	530100	SHOTCRETE	M3	158		

**5-1.005 RETENTION EXCLUSION**

The Department does not retain moneys from progress payments due to the Contractor for work performed (Pub Cont Code § 7202). The 3rd paragraph in Section 9-1.06, "Partial Payments," of the Standard Specifications does not apply.

#### **10-1.24 COOPERATION**

Attention is directed to Section 7-1.14, "Cooperation," and Section 8-1.10, "Utility and Non-Highway Facilities," of the Standard Specifications and these special provisions.

It is anticipated that work by other contractors working on the following contracts may be in progress adjacent to or within the limits of this project during progress of the work on this contract:

1. Contract No. 04-165424: to replace bridge in Oakland on Route 880, from 0.80 km South of High Street to 0.20 km South of Fruitvale Avenue, from KP 43.6 to KP 45.5;
2. Contract No. 04-260004: to widen ramp in Oakland on Route 880, from Madison Street to Adeline Street, from KP 49.9 to KP 52.1;
3. Contract No.G-121810 of City of Oakland: to replace Embarcadero Bridge over Lake Merritt Channel;
4. Contract No. 04-0A7104: to replace the overcrossing at 23<sup>rd</sup> Ave and 29<sup>th</sup> Ave, and widen roadway in Oakland from KP 45.7 to KP 47.0;
5. Contract No. 04-177904: to rehabilitated Route 880 bridge deck in Oakland from 0.1 KP to 0.3 KP west of Fruitvale Avenue Overhead; and
6. Contract No. 04-667004 (City of Oakland Project): Oak to Ninth Redevelopment Project from KP 48.1 to KP 50.1.

The Contractor shall attend joint weekly meetings to be organized by the Engineer with other Contractors and operation manager of adjacent projects in order to minimize potential conflicts. The Contractor shall coordinate with other Contractors, agencies, or their authorized representative performing work within project limits.

## **CONSTRUCTION LOADING ON EXISTING STRUCTURE**

Construction loading imposed on existing structures shall not exceed the load carrying capacity of the existing structure or any structural elements thereof.

If the Contractor imposes any loading on the existing structure, or portions thereof, the Contractor shall submit a complete construction loading plan for each loading condition, to the Engineer for review and approval as provided in Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications. In addition to the construction loading plan, if the load effects caused by the Contractor's loading exceed the force envelopes of the HS-20 loading or Caltrans 13 axle permit vehicle, or exceeds the allowable stresses of the existing structure or portion thereof, the Contractor shall submit a structural analysis of all the affected elements in the existing structure.

The structural analysis shall be in accordance with the Caltrans Bridge Design Specifications April 2000 LFD Version. The load factors used for the analysis shall be in accordance with Group  $I_{PC}$ ,  $I_{PW}$  or  $I_{P3D}$  as defined in Table 3.22.1A. Material design properties used in the analysis shall be based on the test results of the materials tested by the Contractor at the Contractor's expense. If available, material design properties as indicated on the as-built plans may be used in lieu of material testing performed by the Contractor, subject to the approval by the Engineer. Material testing and the results from material testing may be subject to verification by the Engineer.

Both the construction loading plan and its supporting analysis shall be prepared and signed by an engineer registered as a Civil Engineer in the State of California. The construction loading plan shall include details and sequences for all anticipated dead and live construction loading applied to the existing structure, all details and erection procedures of any temporary supports, and all features required to perform the construction loading on the existing structure in a safe and controlled manner. No construction loading will be allowed on the existing structure until the appropriate construction loading plan has been approved by the Engineer. The Contractor shall allow the Engineer 8 weeks to review a complete construction loading plan and design analysis. The construction loading plan review period will not commence until the construction loading plan and its design analysis is deemed complete by the Engineer.

If the construction loading exceeds the capacity of the existing structure or portions thereof, the Contractor shall design and install temporary supports as necessary to ensure that the capacity of the structure or any affected element of the structure is not exceeded. Temporary supports shall conform to the requirements in "Temporary Supports" of these special provisions.

Full compensation for determining the load carry capacity of the existing structure, furnishing and submitting a construction loading plan and structural analysis, including material testing, designing, furnishing, constructing, monitoring, maintaining, and removing temporary supports for construction loads on the existing structure shall be considered as included in the contract prices paid for the various items of work involved and no separate payment will be made therefor.

## **BRIDGE REMOVAL**

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.

### **BRIDGE REMOVAL, LOCATION A** 5<sup>th</sup> Avenue Overhead Bridge Number 33-0027

Bridge removal, location A shall consist of removing in stages the 5<sup>th</sup> Avenue Overhead (Bridge No. 33-0027), a 49-span continuous welded steel girder and rolled beam bridge on reinforced concrete bents and steel column bents supported on timber piles, approximately 778.5 meters long and 33.2 meters wide, as shown on the plans.

### **BRIDGE REMOVAL, LOCATION B** Timber Railroad Bridge

Bridge removal, location B shall consist of removing the existing abandoned timber railroad bridge spanning over Lake Merritt Canal, (concrete skirts to remain), as shown on the plans.

The entire 5<sup>th</sup> Avenue Overhead (Br No. 33-0027) shall be removed to one meter below the original ground or to the top of the footings, whichever elevation is lower. Collision walls and tie walls shall be completely removed at Stage 3. Partial removal of the walls is allowed for construction of the columns during Stages 1 and 2. Existing footings or concrete interfering with the construction of columns and cast-in-steel-shell piles shall be removed.

During Stages 1 and 2, when removal of superstructure results in an unsupported bridge deck overhang, the bridge deck overhang shall be supported at all times to maintain overhang load carrying capacity.

Stage 1 Bridge Removal at 5<sup>th</sup> Avenue Overhead (Replace), Br No 33-0027, is allowed as follows:

- A. Removal of superstructure is to the existing bent cap joint at the limits of Stage 1 Bridge Removal.
- B. At Abutments 1 and 50, and at Piers 2, 3, and 4, removal is to the top of footings to the limits of Stage 1 Bridge Removal.
- C. At Bents 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 23, 24, 25, 26, 30, 31, 32, 33, 34, 35, 40, 41, 42, 43, 44, 45, 46, 47, 48, and 49, removal is to the existing bent cap joint.
- D. At Bents 22, 27, 28, and 29, removal of bent caps and substructure is not allowed.
- E. At Bents 36, 37, 38, and 39, removal is as shown on the plans.

Stage 2 Bridge Removal at 5<sup>th</sup> Avenue Overhead (Replace), Br No 33-0027, is allowed as follows:

- A. Removal of superstructure is to the limits of Stage 2 Bridge Removal.
- B. At Abutments 1 and 50, and at Piers 2, 3, and 4, removal is to the top of footings to the limits of Stage 2 Bridge Removal.
- C. At Bents 36, 37, 38, and 39, removal is as shown on the plans.
- D. At all other locations, removal is not allowed.

Stage 3 Bridge Removal at 5<sup>th</sup> Avenue Overhead (Replace), Br No 33-0027, is allowed as follows:

- A. Removal is allowed at all locations. Any remaining portions of existing structure shall be removed.

Attention is directed to "Construction Loading On Existing Structure" of these special provisions regarding loads imposed on existing structure by the Contractor's construction operations.

Attention is directed to "Existing Paint Systems" of these special provisions regarding red lead paint on the 5<sup>th</sup> Avenue Overhead (Bridge Number 33-0027).

Full compensation for rivet removal during erection of temporary corbel shall be considered as included in the contract lump sum price paid for bridge removal and no additional compensation will be allowed therefor.

Full compensation for removal of temporary corbel shall be considered as included in the contract lump sum price paid for bridge removal and no additional compensation will be allowed therefor.

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, utilities, or railroad property.
- 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, or railroad property.

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 Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications. The number of sets of drawings, design calculations, and unless otherwise specified in the following table, 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 - Weeks
5 <sup>TH</sup> Avenue Overhead (Br No. 33-0027)	6

For bridge removal over railroads, approval by the Engineer of the bridge removal plans will be contingent upon the drawings being satisfactory to the railroad company involved.

Temporary support shoring, temporary bracing, and protective covers over railroads, shall conform to the latest guidelines of the railroad company involved and shall provide the minimum clearances required under "Relations with Railroad Company" of these special provisions for the passage of railroad traffic.

The following additional requirements apply to the removal of bridges or portions of bridges that are 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 traffic or railroad property:

- 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," and "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 or railroad property. 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. Falsework or supports for protective covers shall not extend below the vertical clearance level nor to the ground line at any location within the roadbed.
- I. 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.
- J. 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.

## GENERAL

Piling shall conform to the provisions in Section 49, "Piling," of the Standard Specifications, and these special provisions.

Unless otherwise specified, welding of any work performed in conformance with the provisions in Section 49, "Piling," of the Standard Specifications, shall be in conformance with the requirements in AWS D1.1.

Foundation recommendations are included in the "Information Handout" available to the Contractor as provided for in Section 2-1.03, "Examination of Plans, Specifications, Contract, and Site of Work," of the Standard Specifications.

Attention is directed to "Welding" of these special provisions.

Attention is directed to "Hazardous and Restricted Material," of these special provisions regarding soils containing hazardous materials and to "Construction Loading On Existing Structure" of these special provisions regarding loads imposed on existing structure by the Contractor's construction operations..

Because the railroad agency will not allow working windows, at no time will materials or equipment be allowed to cross over the existing railroad yard track or Track No. 3. At the following locations, piling shall be driven from the existing bridge deck:

- A. Bent 10A, Stage 2 construction.
- B. Bent 9B left, Stage 3 construction.
- C. Bent 8 right, Stage 3 construction.

Difficult pile installation is anticipated due to the presence of soft bay mud overlying dense soils, caving soils, hazardous and contaminated materials, tidal flow fluctuation, high ground water, subsurface concrete debris, underground utilities, overhead utilities, sound control, vibration monitoring, and traffic control.

In addition, it is anticipated that driving piles from the existing bridge deck for all Stage 2 pilings may be necessary.

At the option of the Contractor, vibratory hammers or oscillators may be used to install cast-in-steel-shell concrete piles to the elevations listed in the following table:

Bent Number	Elevation (Meter)
2	-14.6
3	-14.6
4	-13.7
5	-13.7
6	-13.0
7	-13.0
8	-5.2
9	-5.2
10	-5.2
11	-7.9
12	-15.2
13	-16.8
14	-17.9
15	-17.7
16	-17.7
17	-16.6

Should obstructions to driving be encountered, the Contractor shall subexcavate below the bottom of footings, provide special driving tips or heavier pile sections, or take other measures to prevent damage to the piles during driving.

### **MEASUREMENT AND PAYMENT (PILING)**

Measurement and payment for the various types and classes of piles shall conform to the provisions in Sections 49-6.01, "Measurement," and 49-6.02, "Payment," of the Standard Specifications and these special provisions.

Reinforcement furnished and placed in cast-in-place concrete piles of 600 mm or larger will be measured and paid for as bar reinforcing steel (bridge).

Full compensation for subexcavating, for providing special driving tips or heavier pile sections, and for employing other measures to prevent damage to the piles shall be considered as included in the contract unit price paid for drive pile of the various types and classes listed in the Engineer's Estimate, and no additional compensation will be allowed therefore.

Full compensation for removal of hazardous and restricted material from pile excavation, as shown on the plans, as specified in these special provisions, and as directed by the Engineer, shall be considered as included in the contract prices paid for the various types and classes of piles listed in the Engineer's Estimate, and no additional compensation will be allowed therefor.

Full compensation for cleaning out the open ended steel shells prior to installing reinforcement and filling with concrete, for disposing of materials removed from the inside of the pile, and for placing seal course concrete and dewatering the open ended steel shells, as shown on the plans, as specified in these special provisions, and as directed by the Engineer, shall be considered as included in the contract unit price paid for drive pile, and no additional compensation will be allowed therefor.

Full compensation for conforming to the provisions in "Steel Pipe Piling" and "Nondestructive Testing" of these special provisions shall be considered as included in the contract prices paid for the various types and classes of piles listed in the Engineer's Estimate, and no additional compensation will be allowed therefor.