

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

OFFICE ENGINEER

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March 28, 2011

07-LA-47, 103-3.5/4.6, 0.0/1.1

07-138204

Project ID 0700000142

NH-BR-P047(010)N

Addendum No. 3

Dear Contractor:

This addendum is being issued to the contract for CONSTRUCTION ON STATE HIGHWAY IN LOS ANGELES COUNTY IN LONG BEACH AND LOS ANGELES ON ROUTE 47 FROM OCEAN BOULEVARD TO ROUTE 103 JUNCTION AND ON ROUTE 103 FROM ROUTE 47 JUNCTION TO ANAHEIM STREET OVERHEAD.

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 Thursday, April 21, 2011.

This addendum is being issued to revise the Project Plans, the Notice to Bidders and Special Provisions, the Bid book, and the Federal Minimum Wages with Modification Number 18 dated 03/04/11.

Project Plan Sheets 451, 454, 455, 462, 466, 469, 470, 479, 504, 506, 512, 513, 514, 515, 523, 524, 526, 533, 535, 540, 545, 557, 558, 559, 560, 561, 562, 563, 565, 566, 569, 629, 634, 635, 636, 637, 644, 649, 650, 652, 714, 751, 757, 760, 761, 763, 765, 767, 790, 791, 798, 815, 837, 838, 845, 862, 994, and 999 are revised. Copies of the revised sheets are attached for substitution for the like-numbered sheets.

In the Notice to Bidders and Special Provisions, in the "NOTICE TO BIDDERS," the fifth sentence of the seventeenth paragraph is revised as follows:

"Send electronic copy of the Release of Liability, Claims and Hold Harmless Agreement along with number of people attending the site tour to Schuyler_Heim_D7@dot.ca.gov by March 30, 2011."

In the Special Provisions, Section 8-3.01, "WELDING," subsection "STEEL PIPE PILING QUALIFICATION AUDIT," the following paragraph is added after the first paragraph:

"Steel pipe piling qualification audit will not be required for the 18 inch schedule 80 guideway piles at the fender system."

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In the Special Provisions, Section 10-1.32, "MAINTAINING TRAFFIC," the tables after the seventh paragraph are replaced as follows:

Schuyler Heim Bridge

	Number	Width	Height
Vehicle Openings	1	32	15
	Location		Spacing
Falsework Pavement Lighting	Dock Street		R and L 30 staggered 1/2 space

(Width and Height in feet)
(R = Right side of traffic. L = Left side of traffic)
(C = Centered overhead)

Schuyler Heim Bridge

	Number	Width	Height
Navigation opening	1	75	43
	Location		Spacing
Falsework Pavement Lighting	Navigation Channel		R and L 22.5 with C 22.5 staggered 1/2 space

(Width and Height in feet)
(R = Right side of traffic. L = Left side of traffic)
(C = Centered overhead)

Schuyler Heim Bridge

	Number	Width	Height
Vehicle Openings	3	40	21.5
	Location		Spacing
Falsework Pavement Lighting	Pump Station south of channel		R and L 22.5

(Width and Height in feet)
(R = Right side of traffic. L = Left side of traffic)
(C = Centered overhead)

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Schuyler Heim Bridge

	Number	Width	Height
Vehicle Openings	1	60	21.5
	Location		Spacing
Falsework Pavement Lighting	Pump Station north of channel		R and L 22.5 with C 22.5 staggered 1/2 space

(Width and Height in feet)
 (R = Right side of traffic. L = Left side of traffic)
 (C = Centered overhead)

Schuyler Heim Bridge

	Number	Width	Height
Vehicle Openings	1	20	15
	Location		Spacing
Falsework Pavement Lighting	Access roadway to Pump Station north of channel		R 22.5

(Width and Height in feet)
 (R = Right side of traffic. L = Left side of traffic)
 (C = Centered overhead)

NB SR 103 Off-Ramp

	Number	Width	Height
Vehicle Openings	1	32	15
	Location		Spacing
Falsework Pavement Lighting	Pier A Plaza		R and L 30 staggered 1/2 space

(Width and Height in feet)
 (R = Right side of traffic. L = Left side of traffic)
 (C = Centered overhead)

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In the Special Provisions, Section 10-1.48, "EXISTING HIGHWAY FACILITIES," subsection "BRIDGE REMOVAL," the following paragraphs are revised as follows:

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 (portion) and fender removal includes removing existing structures at the following locations as shown on the plans. The existing paint system on the structures contains red lead and chromium.

Bridge Removal (Portion), Location A
Schuyler Heim Bridge
(Br. No. 53-2618)

Bridge removal, (portion) location A consists of removing the existing NB spans 1 through 20 and Dock St On Ramp steel plate girder structure on multi-column bents, supported on a combination of timber piles and driven steel piles as shown on the plans for stage 2 bridge removal.

Bridge Removal (Portion), Location B
Schuyler Heim Bridge
(Br. No. 53-2618)

Bridge removal, (portion) location B consists of removing the existing SB spans 1 through 21 and Dock St Off-Ramp steel plate girder structure on multi-column bents, supported on a combination of timber piles and driven steel piles as shown on the plans for stage 3 bridge removal.

Bridge Removal (Portion), Location C
Schuyler Heim Bridge
(Br. No. 53-2618)

Bridge removal, (portion) location C consists of removing the existing NB spans 21 through 26 and SB spans 22 through 26 and spans 30 through 45 steel plate girder structure on multi-column bents, supported on a combination of timber piles and driven steel piles as shown on the plans for stage 3 bridge removal.

Bridge Removal (Portion), Location D
Schuyler Heim Bridge
(Br. No. 53-2618)

Bridge removal, (portion) location D consists of removing the existing spans 27 through 29 steel truss structure with lift span on multi-column bents, supported on driven steel piles as shown on the plans for stage 3 bridge removal and salvaging eight composite deck panels described below. Piers 26 and 29 shall be removed to elevation – 18 foot. Piers 27 and 28 shall be removed to elevation – 53 foot."

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In the Special Provisions, Section 10-1.73, "PILING," subsection "Load Test Piles," the second paragraph is revised as follows:

"Before piles are drilled, cast, and before reinforcing steel cages are fabricated, load testing of load test pile shown on the plans shall be completed."

In the Special Provisions, Section 10-1.75, "CONCRETE STRUCTURES," is revised as attached.

In the Special Provisions, Section 10-1.76, "PRECAST CONCRETE FENDER MODULES," is revised as attached.

In the Bid book, in the "Bid Item List," Items 126, 131, 139, 147, 155, and 156 are revised as attached.

To Bid book holders:

Replace pages 9 and 10 of the "Bid Item List" in the Bid book with the attached revised pages 9 and 10 of the Bid Item List. The revised Bid Item List is to be used in the bid.

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 Bidders section of the Notice to Bidders 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 Bid book.

Submit bids in the Bid 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 addendum, attachments and the modified wage rates are available for the Contractors' download on the Web site:

http://www.dot.ca.gov/hq/esc/oe/project_ads_addenda/07/07-138204

If you are not a Bid 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,



REBECCA D. HARNAGEL
Chief, Office of Plans, Specifications & Estimates
Office Engineer
Division of Engineering Services

Attachments

10-1.75 CONCRETE STRUCTURES

Portland cement concrete structures shall conform to the provisions in Section 51, "Concrete Structures," of the Standard Specifications and these special provisions.

GENERAL

Attention is directed to "Precast Concrete Quality Control" of these special provisions.

Shotcrete shall not be used as an alternative construction method for reinforced concrete members unless otherwise specified.

When a roughened concrete surface is shown on the plans, the existing concrete surface shall be roughened to a full amplitude of approximately 1/4 inch by abrasive blasting, water blasting, or mechanical equipment.

Neoprene strip shall be furnished and installed in conformance with the details shown on the plans, the provisions in the Standard Specifications, and these special provisions.

Furnishing and installing neoprene strip shall conform to the requirements for strip waterstops as provided in Section 51-1.145, "Strip Waterstops," of the Standard Specifications, except that the protective board will not be required.

Materials for access opening covers in soffits of new cast-in-place concrete box girder bridges shall conform to the provisions for materials in Section 75-1.03, "Miscellaneous Bridge Metal," of the Standard Specifications.

Vertical, horizontal, radial, or normal dimensions shown on the Typical Section in the plans are for zero percent cross slope. At the Contractor's option, the Typical Section of superelevated concrete box girder structures with (1) sloping exterior girders, (2) a straight uninterrupted cross slope between edges of deck, and (3) a single profile grade line, may be rotated around the profile grade line in superelevation areas. The horizontal distances between the profile grade line and the edges of deck shall remain unchanged. The planned girder widths and slab thicknesses shall remain unchanged and the interior girder stems shall remain vertical at the planned locations.

MASS CONCRETE

Structural concrete elements shown on the plans that have a minimum dimension exceeding 7 feet, except for cast-in-place concrete piling, shall be constructed as mass concrete and shall conform to the details shown on the plans and these special provisions.

For mass concrete requirements for cast-in-place concrete piling see "Mass Concrete For Cast-In-Place Concrete Piles" elsewhere in these special provisions.

Thermal Control Plan

Prior to mass concrete construction, the Contractor shall submit to the Engineer for approval, a Thermal Control Plan with design calculations in conformance with the provisions in Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications for each mass concrete element. The number of sets of the Thermal Control Plan and design calculations and review time shall be the same as those specified for falsework working drawings in Section 51-1.06A, "Falsework Design and Drawings," of the Standard Specifications.

The Thermal Control Plan shall show complete details and determine the maximum allowable temperature differentials between the hottest point of the concrete and the exterior faces based on the design assumption that cracking as a result of heat of hydration shall not occur. As a minimum, the Thermal Control Plan shall include the following:

- A. Mix design.
- B. Duration and method of curing.
- C. Procedures to control concrete temperature at time of placement.
- D. Methods of controlling temperature differentials.
- E. Temperature sensor types and locations.
- F. Temperature monitoring and recording system.
- G. Field measures to ensure conformance with the maximum concrete temperature and temperature differential requirements.

Materials

Materials used for mass concrete shall conform to the provisions in Section 90, "Portland Cement Concrete," of the Standard Specifications and these special provisions.

Mass concrete shall contain a minimum of 505 pounds of cementitious material per cubic yard of concrete. When the supplementary cementitious material (SCM) is GGBFS, the amount of SCM shall be at least 50 percent by weight of the total cementitious material used in the mix. When the SCM is not GGBFS, the SCM content shall be at least 25 percent by weight of the total cementitious material used in the mix.

Construction

Prior to mass concrete placement, an engineer for the Contractor who is registered as a Civil Engineer in the State of California shall inspect and test the temperature monitoring and recording system. The Contractor's registered engineer shall be present at the jobsite when the mass concrete operation is in progress and shall report to the Engineer in writing on a daily basis the progress of the operation. A copy of the daily report shall be available at the jobsite.

Mechanical cooling systems may be used to control the internal temperature of mass concrete during curing.

If the Contractor elects to use a mechanical cooling system, the mechanical cooling system shall be designed in conformance with the Thermal Control Plan and the following requirements:

- A. The mechanical cooling system shall be embedded within mass concrete elements and surface connections to cooling pipes shall be removable to a depth of 4 inches from the surface.
- B. Forms shall be designed so that removal of the forms shall not disrupt the cooling or temperature monitoring.
- C. Cooling pipes shall not break and deform during mass concrete placement and shall be secured to prevent movement. Damaged cooling pipes shall be removed and replaced immediately.
- D. The mechanical cooling system shall be pressure tested at 30 psi for 30 minutes for leaking prior to mass concrete placement. Coolant circulation shall be in progress at the time that concrete placement begins.
- E. After cooling is completed, cooling pipes shall be fully grouted under pressure with a nonshrink grout mixture in conformance with ASTM Designation: C 1107 and ASTM Designation: C 827 for 0.0 percent shrinkage, and 0.0 percent minimum and 4.0 percent maximum expansion. The placement of nonshrink grout shall be in conformance with the manufacturer's recommendations.
- F. After surface connections to the cooling pipes are removed, the holes shall be reamed and filled with mortar conforming to Section 51-1.135, "Mortar," of the Standard Specifications.

The temperature monitoring and recording system for mass concrete shall consist of temperature sensors connected to a data acquisition system capable of printing, storing, and downloading data to a computer. Temperature sensors shall be located such that the maximum temperature difference within a mass concrete element can be monitored. As a minimum, concrete temperatures shall be monitored at the calculated hottest location, on at least 2 outer faces, 2 corners, and top surfaces.

Temperature readings shall be automatically recorded on an hourly or more frequent basis. A redundant set of sensors shall be installed near the primary set. Provisions shall be made for recording the redundant set, but records of the redundant sensors need not be made if the primary set is operational. The hourly temperature recording may be discontinued when the maximum internal temperature is falling, the difference between the interior concrete temperature and the average daily air temperature is less than the allowable temperature difference for three consecutive days, and there are no mass concrete elements to be cast adjacent. Data shall be printed and submitted to the Engineer daily.

Methods of concrete consolidation shall prevent damage to the temperature monitoring and recording system. Wiring from temperature sensors cast into the concrete shall be protected to prevent movement. Wire runs shall be kept as short as possible. The ends of the temperature sensors shall not come into contact with either a support or concrete form, or bar reinforcing steel.

When any equipment used in the temperature control and monitoring and recording system fails during the mass concrete construction operation, the Contractor shall take immediate measures to correct the situation as specified in the Thermal Control Plan. Failure to conform to the temperature requirements will be cause for rejection of the concrete.

Acceptance

Mass concrete shall conform to the concrete acceptance criteria and the following temperature requirements:

- A. The maximum allowable temperature of mass concrete shall not exceed 160°F.
- B. The maximum temperature differential of mass concrete shall not exceed the requirement as determined in the Thermal Control Plan.

If the Contractor fails to conform to any of the temperature requirements above, the mass concrete elements will be rejected. The rejected mass concrete shall be removed at the Contractor's expense. The Contractor shall modify the Thermal Control Plan and design calculations to correct the problem and resubmit the revised Thermal Control Plan.

The Contractor shall allow the Engineer 15 days for review and approval of the revised Thermal Control Plan. Mass concrete placement shall not begin until the Engineer has approved the revised Thermal Control Plan. No extension of time or compensation will be made for any rejected mass concrete element or revisions of the Thermal Control Plan.

Mass concrete will be measured and paid for in conformance with the provisions in Section 90-11, "Measurement and Payment," of the Standard Specifications.

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

FALSEWORK

Falsework shall conform to the provisions in Section 51, "Concrete Structures," of the Standard Specifications and these special provisions.

Attention is directed to "Railroad Relations and Insurance" of these special provisions for additional requirements for falsework over railroads.

In addition to the provisions 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 working drawings for specific structures, or portions thereof, shall be as follows:

Structure or Portion of Structure	Total Review Time - Weeks
Schuyler Heim Bridge	11

Temporary crash cushion modules, as shown on the plans and conforming to the provisions in "Temporary Crash Cushion Module" of these special provisions, shall be installed at the approach end of temporary railings which are located less than 15 feet from the edge of a traffic lane. For 2-way traffic openings, temporary crash cushion modules shall be installed at the departing end of temporary railings which are located less than 6 feet from the edge of a traffic lane.

The Contractor's engineer who signs the falsework drawings shall also certify in writing that the falsework is constructed in conformance with the approved drawings and the contract specifications prior to placing concrete. This certification shall include performing any testing necessary to verify the ability of the falsework members to sustain the stresses required by the falsework design. The engineer who signs the drawings may designate a representative to perform this certification. Where falsework contains openings for railroads, vehicular traffic, or pedestrians, the designated representative shall be qualified to perform this work, shall have at least 3 years of combined experience in falsework design or supervising falsework construction, and shall be registered as a Civil Engineer in the State of California. For other falsework, the designated representative shall be qualified to perform this work and shall have at least 3 years of combined experience in falsework design or supervising falsework construction. The Contractor shall certify the experience of the designated representative in writing and provide supporting documentation demonstrating the required experience if requested by the Engineer.

Welding and Nondestructive Testing

Welding of steel members, except for previously welded splices and except for when fillet welds are used where load demands are less than or equal to 1,000 pounds per inch for each 1/8 inch of fillet weld, shall conform to AWS D1.1 or other recognized welding standard. The welding standard to be utilized shall be specified by the Contractor on the working drawings. Previously welded splices for falsework members are defined as splices made prior to the member being shipped to the project site.

Splices made by field welding of steel beams at the project site shall undergo nondestructive testing (NDT). At the option of the Contractor, either ultrasonic testing (UT) or radiographic testing (RT) shall be used as the method of NDT for each field weld and any repair made to a previously welded splice in a steel beam. Testing shall be performed at locations selected by the Contractor. The length of a splice weld where NDT is to be performed, shall be a cumulative weld length equal to 25 percent of the original splice weld length. The cover pass shall be ground smooth at the locations to be tested. The acceptance criteria shall conform to the requirements of AWS D1.1, Clause 6, for cyclically loaded nontubular connections subject to tensile stress. If repairs are required in a portion of the weld, additional NDT shall be performed on the repaired sections. The NDT method chosen shall be used for an entire splice evaluation including any required repairs.

For all field welded splices, the Contractor shall furnish to the Engineer a letter of certification which certifies that all welding and NDT, including visual inspection, are in conformance with the specifications and the welding standard shown on the approved working drawings. This letter of certification shall be signed by an engineer who is registered as a Civil Engineer in the State of California and shall be provided prior to placing any concrete for which the falsework is being erected to support.

For previously welded splices, the Contractor shall determine and perform all necessary testing and inspection required to certify the ability of the falsework members to sustain the stresses required by the falsework design. This welding certification shall (1) itemize the testing and inspection methods used, (2) include the tracking and identifying documents for previously welded members, (3) be signed by an engineer who is registered as a Civil Engineer in the State of California, (4) and shall be provided prior to erecting the members.

TEMPORARY HINGE TIEDOWNS

Temporary hinge tiedowns, complete with anchorages, shall be installed and tensioned as shown on the plans within 10 days after completion of longitudinal post-tensioning and before releasing bridge falsework in the hinge span and adjoining span.

The hinge tiedowns listed in the following table shall be left in place and shall become the property of the State. Hinge tiedowns to be left in place shall be maintained fully tensioned during the contract and the Contractor shall check the tension in the hinge tiedowns and shall adjust the hinge tiedowns to provide the tension force shown on the plans immediately before acceptance of the contract.

BRIDGE NAME OR NUMBER	HINGE IN SPAN NO.
Schuyler Heim Bridge	23 & 24

Working drawings and calculations for temporary hinge tiedowns shall be submitted in conformance with the provisions for working drawings for prestressing systems in Section 50-1.02, "Drawings," of the Standard Specifications. The working drawings and calculations shall be signed by a civil engineer registered in the State of California. Working drawings shall include details of the procedures and methods for the gradual tensioning and detensioning of the hinge tiedowns. The Contractor shall allow 20 days after complete drawings and all support data are submitted for the review of working drawings.

Hinge tiedowns and anchorages shall be made from materials that do not yield during an extended period of time under sustained loading. The hinge tiedowns shall provide for checking and simple adjustment of the force during their service life using commonly available equipment and tools. The hinge tiedowns shall provide for easy and gradual detensioning, simple removal and a minimal amount of repair to the bridge surfaces after removal. The tiedowns shall be cased for a height of 10 feet above the ground surface with plastic pipe or steel pipe held in place with vandal resistant retaining devices. Anchorages shall be covered and protected from vandalism.

Metal exposed to the atmosphere shall be protected from corrosion at least equivalent to the protection afforded by cleaning and priming with inorganic zinc primer.

The hinge tiedowns shall not impair the structural integrity of the bridge or its foundation. The design of hinge tiedown anchorages shall include any strengthening of bridge components and foundation material necessary to support the hinge tiedown anchorages, including providing for the moments and loads induced into the substructure and foundations.

Additional concrete, reinforcement and other materials necessary to accommodate the hinge tiedowns shall be provided. Such additions shall conform to the provisions for similar work in these special provisions and the Standard Specifications. Rearrangement of reinforcing steel, prestressing steel, and other bridge materials necessary to accommodate the hinge tiedowns shall be shown on the working drawings.

Hinge tiedowns shall not be attached to the bridge columns unless otherwise shown on the plans.

Stressing of high-tensile wire, strand, or bars shall conform to the provisions in Section 50-1.08, "Prestressing," of the Standard Specifications.

Hinge tiedowns shall be tensioned after prestressing the concrete and before releasing the falsework in the supporting hinge span and adjoining span. The tension force shall be as shown on the plans.

Unless otherwise shown on the plans, the tension force for the entire hinge shall be distributed to a minimum of 2 tiedowns with an approximately equal amount in each tiedown and shall be placed symmetrically about the centerline of the structure. No more than one-half of the tension force at a tiedown shall be applied before an equal force is applied at the adjacent tiedowns. At no time during the tensioning operations shall more than one-sixth of the tension force for the entire hinge be applied eccentrically about the centerline of the structure.

The contract unit price paid for temporary hinge tiedown anchor shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in constructing temporary hinge tiedown anchors, 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 furnishing, installing, and maintaining the tiedowns, and including additional concrete, reinforcement, earthwork, and any materials to be left in place, shall be considered as included in the contract unit price paid for temporary hinge tiedown anchor and no separate payment will be made therefor.

COST REDUCTION INCENTIVE PROPOSALS FOR CAST-IN-PLACE PRESTRESSED BOX GIRDER BRIDGES

Except as provided herein, cast-in-place prestressed box girder bridges shall be constructed in conformance with the details shown on the plans and the provisions in Section 50, "Prestressing Concrete," and Section 51, "Concrete Structures," of the Standard Specifications.

If the Contractor submits cost reduction incentive proposals for cast-in-place prestressed box girder bridges, the proposals shall be in conformance with the provisions in Section 5-1.14, "Cost Reduction Incentive," of the Standard Specifications and these special provisions.

The Engineer may reject any proposal which, in the Engineer's judgment, may not produce a structure which is at least equivalent to the planned structure.

At the time the cost reduction incentive proposal (CRIP) is submitted to the Engineer, the Contractor shall also submit 4 sets of the proposed revisions to the contract plans, design calculations, and calculations from an independent checker for all changes involved in the proposal, including revisions in camber, predicted deck profile at each construction stage, and falsework requirements to the Offices of Structure Design, Documents Unit, P.O. Box 942874, Sacramento, CA 94274-0001 (1801 30th Street, Sacramento, CA 95816), telephone (916) 227-8230. When notified in writing by the Engineer, the Contractor shall submit 12 sets of the CRIP plan revisions and calculations to the Offices of Structure Design for final approval and use during construction. The calculations shall verify that all requirements are satisfied. The CRIP plans and calculations shall be signed by an engineer who is registered as a Civil Engineer in the State of California.

The CRIP plans shall be either 11" x 17", or 22" x 34" in size. Each CRIP plan sheet and calculation sheet shall include the State assigned designations for the contract number, bridge number, full name of the structure as shown on the contract plans, and District-County-Route-Post Mile. Each CRIP plan sheet shall be numbered in the lower right hand corner and shall contain a blank space in the upper right hand corner for future contract sheet numbers.

Within 3 weeks after final approval of the CRIP plan sheets, one set of the corrected good quality prints on 20-pound (minimum) bond paper, 22" x 34" in size, of all CRIP plan sheets prepared by the Contractor for each CRIP shall be furnished to the Offices of Structure Design, Documents Unit.

Each CRIP shall be submitted prior to completion of 25 percent of the contract working days and sufficiently in advance of the start of the work that is proposed to be revised by the CRIP to allow time for review by the Engineer and correction by the Contractor of the CRIP plans and calculations without delaying the work. The Contractor shall allow a minimum of 8 weeks for the review of a CRIP. In the event that several CRIPs are submitted simultaneously, or an additional CRIP is submitted for review before the review of a previously submitted CRIP has been completed, the Contractor shall designate the sequence in which the CRIPs are to be reviewed. In this event, the time to be provided for the review of any proposal in the sequence shall be not less than the review time specified herein for that proposal, plus 2 weeks for each CRIP of higher priority which is still under review.

Should the review not be complete by the date specified in the Contractor's CRIP, or such other date as the Engineer and Contractor may subsequently have agreed to in writing and if, in the opinion of the Engineer, the Contractor's controlling operation is delayed or interfered with by reason of the delay in review of CRIP plans and calculations, an extension of time commensurate with the delay in completion of the work thus caused will be granted as provided in Section 8-1.07, "Liquidated Damages," of the Standard Specifications except that the provisions in Section 8-1.09, "Right of Way Delays," of the Standard Specifications shall not apply.

Permits and approvals required of the State have been obtained for the structures shown on the plans. Proposals which result in a deviation in configuration may require new permits or approvals. The Contractor shall be responsible for obtaining the new permits and approvals before the Engineer will reach a decision on the proposal. Delays in obtaining permits and approvals will not be reason for granting an extension of contract time.

All proposed modifications shall be designed in conformance with the bridge design specifications and procedures currently employed by the Department. The proposal shall include all related, dependent or incidental changes to the structure and other work affected by the proposal. The proposal will be considered only when all aspects of the design changes are included for the entire structure. Changes, such as but not limited to, additional reinforcement and changes in location of reinforcement, necessary to implement the CRIP after approval by the Engineer, shall be made at the Contractor's expense.

Modifications may be proposed in (1) the thickness of girder stems and deck slabs, (2) the number of girders, (3) the deck overhang dimensions as specified herein, (4) the amount and location of reinforcing steel, (5) the amount and location of prestressing force in the superstructure, and (6) the number of hinges, except that the number of hinges shall not be increased. The strength of the concrete used may be increased but the strength employed for design or analysis shall not exceed 6,000 psi.

Modifications proposed to the minimum amount of prestressing force which must be provided by full length draped tendons are subject to the provisions in "Prestressing Concrete" of these special provisions.

No modifications will be permitted in (1) the foundation type, (2) the span lengths or (3) the exterior dimensions of columns or bridge superstructure, except that the overhang dimension from face of exterior girder to the outside edge of roadway deck may be uniformly increased or decreased by 25 percent on each side of the box girder section. Fixed connections at the tops and bottoms of columns shown on the plans shall not be eliminated.

The Contractor shall be responsible for determining construction camber and obtaining the final profile grade as shown on the plans.

The Contractor shall reimburse the State for the actual cost of investigating CRIPs for cast-in-place prestressed box girder bridges submitted by the Contractor. The Department will deduct this cost from any moneys due, or that may become due the Contractor under the contract, regardless of whether or not the proposal is approved or rejected.

DECK CLOSURE POURS

Where a deck closure pour is shown on the plans, reinforcement protruding into the closure space and forms for the closure pour shall conform to the following:

- A. During the time of placement of concrete in the deck, other than for the closure pour itself, reinforcing steel which protrudes into the closure space shall be completely free from any connection to the reinforcing steel, concrete, or other attachments of the adjacent structure, including forms. The reinforcing steel shall remain free of any connection for a period of not less than 24 hours following completion of the pour.
- B. Forms for the closure pour shall be supported from the superstructure on both sides of the closure space.

ELASTOMERIC BEARING PADS

Elastomeric bearing pads shall conform to the provisions in Section 51-1.12H, "Elastomeric Bearing Pads," of the Standard Specifications.

PRECAST ISOLATION CASING

Precast reinforced isolation casings shall conform to the provisions in Section 51, "Concrete Structures," of the Standard Specifications.

Ladder rungs shall conform to Section 75, "Miscellaneous Metal," of the Standard Specifications.

Grout shall conform to Section 50-1.09, "Bonding and Grouting," of the Standard Specifications.

Epoxy coated reinforcement shall conform to "Epoxy-Coated Prefabricated Reinforcement" of these special provisions,

The contract price paid per cubic yard for precast concrete isolation casing shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, including reinforcing, ladder rungs, links with mechanical couplers, and grout, and for doing all the work involved in furnishing and placing precast isolation casings, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

MEASUREMENT AND PAYMENT

Measurement and payment for concrete in structures shall conform to the provisions in Section 51-1.22, "Measurement," and Section 51-1.23, "Payment," of the Standard Specifications and these special provisions.

Full compensation for roughening existing concrete surfaces to a full amplitude of approximately 1/4 inch, where shown on the plans, shall be considered as included in the contract price paid per cubic yard for structural concrete, bridge and no separate payment will be made therefor.

Full compensation for furnishing and installing access opening covers in soffits of new cast-in-place box girder bridges shall be considered as included in the contract price paid per cubic yard for structural concrete, bridge and no separate payment will be made therefor.

Concrete and bar reinforcing steel for the reinforced concrete railroad crash wall will be measured and paid for by the cubic yard as structural concrete, bridge and by the pound as bar reinforcing steel (bridge), respectively.

Full compensation for public notification and airborne monitoring for deck crack treatment shall be considered as included in the contract price paid per cubic yard for structural concrete, bridge, and no additional compensation will be allowed therefor.

10-1.76 PRECAST CONCRETE FENDER MODULES

Precast concrete fenders shall conform to the provisions in Section 51, "Concrete Structures," of the Standard Specifications and these special provisions.

Attention is directed to "Precast Concrete Quality Control," of these special provisions.

The precast fender installation procedure shall not overstress the fenders and shall allow for adjustment of final grades, as shown on the plans.

At the option of the Contractor, alternate erection loads and configurations may be used provided the Contractor submits detailed structural calculations for the revised loading and configuration for the Engineer's approval.

WORKING DRAWINGS

The Contractor shall submit working drawings for precast fenders in conformance with the provisions in Section 5-1.02, "Plans and Working Drawings" of the Standard Specifications.

Working drawings shall include complete details and substantiating calculations for the precast fender modules including the method, materials, equipment, and installation procedure the Contractor proposes to use.

Working drawing submittals shall include the following

- A. Complete details of the precast fenders.
- B. Methods for transporting, storing, lifting, removing existing fenders concurrently, and installing precast fenders.
- C. Complete details and calculations for the precast fender temporary support system.

After complete working drawings and supplement are received by the Engineer, the Contractor shall allow the Engineer 20 days to review the submittal

At the option of the Contractor, the precast fender closure pour may be placed under water. If the Contractor elects to place the precast fender closure pour under water, the Contractor shall demonstrate the adequacy of the placement procedure by constructing and testing a full-size mock-up of the fender closure joint. Approval of the Contractor's proposed placement plan is contingent on approval and successful testing of the full size mock-up, as determined by the Engineer.

The mock-up shall replicate the production placement operation conditions. The Contractor's methods and procedures shall be fully documented on the approved working drawings.

After placement, the mock-up shall be tested by Contractor. Testing shall consist of taking 2 core samples, at locations selected by the Engineer. Core samples shall be examined for voids, density, concrete strength, and shall be of equal quality to concrete placed in a dry condition.

CONSTRUCTION

The Contractor shall take all precautions necessary to minimize cracking of the precast concrete elements

Precast concrete fender modules will be jointly inspected by the Engineer and the Contractor after casting, after moving to storage, and before and after erection. Crack widths larger than 0.00015 inch shall be repaired. Cracks longer than 0.3 inch shall be filled with pressure-injected epoxy. Cracks to be filled shall be cleaned and filled by pressure injection methods so that all portions of the crack are completely filled with epoxy. No repairs shall begin until the Engineer has approved the repair plan.

Fender slab shrinkage cracks along the interface with the base concrete shall be treated with a low viscosity concrete repair compound such as methacrylate or approved equal in accordance with the manufacturer's recommendations.

Surfaces of precast fenders and footing interface shall be cleaned as specified for construction joints in Section 51-1.13, "Bonding," of the Standard Specifications.

Upon completion of the precast fender installation, the Contractor shall remove the erection dowels inserted into the pin hole blockouts and fill the pin holes with non-shrink grout.

MEASUREMENT AND PAYMENT

The contract unit price paid for furnish precast concrete fender modules shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, including reinforcing steel as required, and for doing all the work involved in furnishing precast concrete fender modules at the site of the work complete and ready for erection, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

The contract unit price paid for erect precast concrete fender modules shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in erecting precast concrete fender modules, including prestressing modules together with epoxy coated strand, 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 plastic plugs, sealing cracks in precast fender slabs, bearing pads, roughening surfaces, and for filling pin holes with non-shrink grout shall be considered as included in the contract unit price paid for erect precast concrete fender modules and no additional compensation will be allowed therefor.

BID ITEM LIST

07-138204

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
121	019860	GRIND EXISTING ASPHALT CONCRETE PAVEMENT (WEIGH-IN-MOTION)	SQFT	9,600		
122	019861	GRIND EXISTING CONCRETE PAVEMENT (WEIGH-IN-MOTION)	SQFT	8,500		
123	042913	FURNISH 18" STEEL PIPE PILING	LF	9,625		
124	042914	DRIVE 18" STEEL PIPE PILE	EA	77		
125	490603	24" CAST-IN-DRILLED-HOLE CONCRETE PILING	LF	4,175		
126	490604	30" CAST-IN-DRILLED-HOLE CONCRETE PILING	LF	7,501		
127	490618	96" CAST-IN-DRILLED-HOLE CONCRETE PILING	LF	504		
128	490622	120" CAST-IN-DRILLED-HOLE CONCRETE PILING	LF	6,374		
129	490623	156" CAST-IN-DRILLED-HOLE CONCRETE PILING	LF	1,072		
130	042915	132" CAST-IN-DRILLED-HOLE CONCRETE PILING	LF	3,152		
131	042916	144" CAST-IN-DRILLED-HOLE CONCRETE PILING	LF	5,893		
132	042917	132" PERMANENT STEEL CASING	LF	1,457		
133	042918	144" PERMANENT STEEL CASING	LF	1,505		
134	042919	156" PERMANENT STEEL CASING	LF	1,065		
135	500001	PRESTRESSING CAST-IN-PLACE CONCRETE	LS	LUMP SUM	LUMP SUM	
136	042920	PRESTRESSING CAST-IN-PLACE CONCRETE (TRANSVERSE)	LS	LUMP SUM	LUMP SUM	
137	042921	PRESTRESSING CAST-IN-PLACE CONCRETE (HIGH-STRENGTH BARS)	LS	LUMP SUM	LUMP SUM	
138	042922	TEMPORARY HINGE TIEDOWN ANCHOR	EA	8		
139	510000	SEAL COURSE CONCRETE	CY	4,878		
140 (F)	510051	STRUCTURAL CONCRETE, BRIDGE FOOTING	CY	1,093		

BID ITEM LIST

07-138204

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
141 (F)	510053	STRUCTURAL CONCRETE, BRIDGE	CY	68,528		
142 (F)	510060	STRUCTURAL CONCRETE, RETAINING WALL	CY	597		
143 (F)	510072	STRUCTURAL CONCRETE, BARRIER SLAB	CY	615		
144 (F)	510086	STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N)	CY	356		
145 (F)	510502	MINOR CONCRETE (MINOR STRUCTURE)	CY	258		
146	042923	FRACTURED RIB TEXTURE WITH WAVE PATTERN	SQFT	3,724		
147 (F)	042924	PRECAST CONCRETE ISOLATION CASING	CY	1,522		
148	042925	FURNISH PRECAST CONCRETE FENDER MODULE	EA	48		
149	042926	ERECT PRECAST CONCRETE FENDER MODULE	EA	48		
150	518051	PTFE SPHERICAL BEARING	EA	71		
151	042927	JOINT SEAL ASSEMBLY (MR=33")	LF	110		
152	042928	JOINT SEAL ASSEMBLY (MR=42")	LF	110		
153	042929	JOINT SEAL ASSEMBLY (MR=54")	LF	515		
154	042930	JOINT SEAL ASSEMBLY (MR=60")	LF	440		
155	042931	JOINT SEAL ASSEMBLY (MR=24")	LF	76		
156 (F)	520102	BAR REINFORCING STEEL (BRIDGE)	LB	26,188,000		
157 (F)	520103	BAR REINFORCING STEEL (RETAINING WALL)	LB	170,670		
158 (F)	520110	BAR REINFORCING STEEL (EPOXY COATED) (BRIDGE)	LB	690,000		
159 (F)	520120	HEADED BAR REINFORCEMENT	EA	15,495		
160 (F)	560218	FURNISH SIGN STRUCTURE (TRUSS)	LB	130,296		