

GENERAL NOTES FOR BRIDGE "A" CONTINUED

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	29773(04)			
DESCRIPTION				REVISIONS	DATE

REINFORCING:

All reinforcing steel shall have 2" clearance unless shown or noted otherwise. All reinforcing steel shall be deformed bars, cold bent with no welds. Bar bend dimensions are out to out, unless noted otherwise. All reinforcing steel to be Grade 60.

Field welding of crossing reinforcing bars shall not be permitted. Tack welding of reinforcing bars shall be prohibited in all cases.

All longitudinal top reinforcing in the bridge slab shall be supported on approved continuous metal high chairs spaced at 4'-0" maximum on centers and the bottom layer of reinforcing steel shall be supported on approved metal slab bolsters spaced at 4'-0" maximum on centers.

APPROACH SLAB:

Class AA concrete shall be used in the Approach Slabs with epoxy coated reinforcing. The quantity given is based on the actual Square Yards of the Approach Slabs. All costs of concrete, reinforcing steel, longitudinal construction joint sealant, sawed and sealed construction joint between new deck and approach slab, sawing of joints, excavation, labor, equipment, and incidentals necessary to complete the work as specified shall be included in the price bid per Square Yard of "APPROACH SLAB".

SEALED EXPANSION JOINT:

The Sealed Expansion Joints located on Sheet No. 12 shall be constructed as shown on the plans and in accordance with Standards EJ-SQ-03E & EJ-DTL-01E & in a manner approved by the Engineer except that Bars W1 & W2 on Standard EJ-DTL-01E shall be modified to fit within the limits of the slab with appropriate clearances.

All cost necessary to complete the work as specified or as shown in the plans including the cost of materials, labor, equipment and incidentals shall be included in the price bid per Linear Foot of "SEALED EXPANSION JOINT".

SPECIAL CONCRETE FINISH

The Special Concrete Finish shall be a liquid applied urethane coating such as CIM 1000 as manufactured by CIM Industries, Inc., IM-129 as manufactured by Custom Linings, or an approved equal. Product information for CIM 1000 can be obtained from Laster Castor Corp. of Tulsa, Oklahoma, phone number 918-234-7777. Product information for IM129 can be obtained from Custom Linings, phone number 719-395-4414.

The Special Concrete Finish shall be applied to the following concrete surfaces of the bridge:

- (a) Front, sides and exposed areas of the Abutment Seats and Backwalls.
- (b) Top, sides and ends of Pier Caps.

The equipment and methods of applying the urethane coating shall be in accordance with the product coating profile and instruction guides for application to concrete. Precautionary measures shall be in accordance with the Material Safety Data Sheets as provided by the manufacturer.

The coating shall be 60 mils dry thickness and 68 mils wet thickness. In addition to applying the coating to the concrete substructure units as shown in the plans, the coating shall return up the vertical surfaces of the pier and abutment bearing pads to provide a water tight seal with the concrete pedestals. Surface preparations and product mixing shall be per the manufacturer's recommendations and all new concrete shall have a minimum strength of 3000 psi at the time of application. Primer shall be applied to the concrete surfaces prior to applying the coating. All concrete work shall be completed prior to the application of the Special Concrete Finish.

Water repellent will not be required on surfaces that are coated with Special Concrete Finish.

Payment will be made at the Contract unit price bid per Square Yard of "SPECIAL CONCRETE FINISH", which price shall be full compensation for all materials, labor, tools, equipment and incidentals necessary to complete the work as specified.

PENETRATING WATER REPELLENT SURFACE TREATMENT:

A penetrating water repellent surface treatment shall be applied to the following concrete surfaces of the bridge:

- (a) Edges and underside cantilever portion of the existing & new bridge deck.
- (b) Outside face of the existing and new concrete parapets.
- (c) Front, sides and exposed areas of the Abutment Seat, Backwall and Wingwalls not covered with Special Concrete Finish.
- (d) Top, bottom, sides and ends of the Pier Cap not covered with Special Concrete Finish.

All costs associated with the use of Penetrating Water Repellent Surface Treatment including the cost of materials, labor, equipment and incidentals shall be included in the price bid per Square Yard of "WATER REPELLENT (VISUALLY INSPECTED)".

FLOOD COATING TREATMENT:

A Flood Coat Deck Seal shall be applied to the following concrete surfaces of the bridge:

- (a) The driving surfaces of the bridge deck.
- (b) The roadway faces and top of the existing and new concrete parapets.

The Contractor must prevent the Flood Coat Deck Seal from penetrating any joint that has been sealed with Silicone. If the Flood Coat Deck Seal penetrates any Silicone joint, the Contractor, at his own expense, will be required to:

- (1) After bulk cure, remove all Flood Coat Deck Seal from these joints.
- (2) Remove and replace the Silicone Joint Sealant.

This work will be performed after all other work on the bridge has been completed.

All cost to seal the bridge decks with Flood Coat including the cost of materials, labor, equipment and incidentals shall be included in the price bid per Square Yard of "DECK AREA SEALED (FLOODCOATS)".

RAILROAD PROTECTION:

Contractor shall use extreme care and take any measure necessary to insure that no debris is dropped onto railroad R.O.W. at the bridges. This shall be accomplished by the use of baskets, netting, wrapping, work platform, or other similarly effective means. Cost of protection system and removing and disposing of debris shall be included in other items of work.

SAWED AND SEALED JOINTS:

The new Sawed & Sealed Construction Joints at Pier Nos. 1-4 as shown on Sheet Nos. 12 & 16 and all joints in the existing Slope Walls shall be sealed with Rapid Cure Joint Sealant in accordance with Subsection 701.08.G and as shown on the plans.

All costs including materials, labor, equipment and incidentals necessary to complete the work as shown in the plans shall be included in the price bid per Linear Foot of "RAPID CURE JOINT SEALANT".

The Deck Slab Construction Joints within the spans, as shown on Sheet Nos. 12 & 16, shall be sealed with High Molecular Weight Methacrylate in accordance with Section 523 of the specifications & as shown in the plans.

All costs of sealing Deck Slab Construction Joints within the spans including materials, labor, equipment & incidentals necessary to complete the work as shown in the plans shall be included in the price bid per Linear Foot of "SEALER CRACK PREPARATION" & per Gallon of "SEALER RESIN".

DRAINS AT END OF BRIDGE:

The Asphalt Widening for the bridge guardrailing shall be in accordance with Standards THRI-1-02, SKT-1-00, GHW1-1-00 & GHW2-1-00. All costs of Asphalt Widening shall be included in Roadway Pay Items.

There are 6.40 cubic yards of Class C Concrete required to construct the Slope Drains, Splash Basins and 6" Concrete Curbs at the ends of the Bridge. All costs of the Slope Drains, Splash Basins and 6" Concrete Curbs including material, labor, equipment and incidentals necessary to complete the work as shown in the plans shall be included in the price bid per Cubic Yard of "CLASS C CONCRETE".

UTILITY LINE RE-ATTACHMENT:

The Contractor shall provide temporary support to the existing electrical conduit during construction at the existing parapets. The Contractor shall also re-connect the existing conduit within the parapets once the repairs are completed as shown on the plans.

All costs of temporary support, connection, labor, equipment, and incidentals necessary to complete the work as shown on in the plans shall be included in other items of work.

(PL) REPAIR BRIDGE ITEM (TYPE A):

Item "(PL) REPAIR BRIDGE ITEM (TYPE A)" shall consist of resetting existing Expansion Bearings at Abutment Nos. 1 & 2 and Pier Nos. 1 & 4.

The number and location of bearings to be reset shall be determined by the Engineer. The bearings shall be reset such that the roller bearing stiffener is vertical. Care shall be taken when the beam is jacked up so the bridge deck and diaphragms are not damaged. All falsework shall be in accordance with Section 502 of the Standard Specifications.

All costs including falsework, jacking, engineering services, resetting, labor, equipment, and incidentals necessary to complete the work shown in the plans shall be included in the price bid per Each of "(PL) REPAIR BRIDGE ITEM (TYPE A)".

FALSEWORK AND JACKING:

The Contractor will be required to install falsework at locations specified in the plans to support the existing superstructure while the expansion roller bearings at Abutment Nos. 1 and 2 and Pier Nos. 1 and 4 (to be determined by the Engineer) are reset. Care shall be taken when the beams are jacked up so the bridge deck and diaphragms are not damaged.

The Contractor shall submit to the Bridge Engineer of the Oklahoma Department of Transportation a falsework and jacking plan. The plan shall include a layout of falsework and any required jacking, structural calculations for the design of the falsework, jacking scheme, jacking sequence and jack capacities. The falsework and jacking shall have the capacity to support the dead loads of the bridge and all construction loads carried by the bridge. The Contractor shall install the falsework in manner so as not to damage the existing bridge or any new construction attached to the bridge. The submitted plan shall be designed and sealed by a Professional Engineer registered in the State of Oklahoma. The plan and structural calculations shall be prepared in accordance with the AASHTO Standard Specifications for Highway Bridges, latest edition and Section 502 of the Standard Specifications. Installation of the falsework and jacking shall not begin until the Contractor has received approval of the submitted plan from the Bridge Engineer.

All cost necessary to complete the work as specified or as shown in the plans including the cost of falsework, jacking, engineering services, materials, labor, equipment, and incidentals shall be included in the price bid per Lump Sum of "(PL) FALSEWORK JACKING".

STAY-IN-PLACE FORMS:

Stay-in-Place Steel Deck Forms will not be allowed.

(PL) REPAIR BRIDGE ITEMS:

Unsound concrete in the piers and abutments of the existing bridge shall be repaired as described here. Prior to repairing an area, ensure that all unsound concrete has been removed from the area and the newly exposed surface has been prepared in accordance with Section 521.04.C of the Standard Specifications. Repair any deteriorated reinforcing steel bars with section loss greater than 25%, and apply corrosion inhibitor to the repair areas in accordance with Special Provision 535-1.

The removed concrete shall be replaced with one of the following materials as specified in Section 701 of the Standard Specifications:

1. High Density Concrete (HDC)
2. Latex Modified Concrete (LMC)
3. Very Early Strength Type I Concrete (VES I)
4. Very Early Strength Type III Concrete (VES III)
5. Rapid Setting Latex Modified Concrete (RSLMC)

The concrete temperature shall not exceed 85°F. Cold weather practices shall be implemented under any of the following conditions:

The air temperature was less than 55°F within 24 hours before placement of concrete, or the substrate temperature is less than 55°F during placement of concrete, or the air temperature will be less than 55°F within 6 hours after placement of concrete.

Cold weather practices shall be as follows:

Maintain a concrete mix temperature of 75°F during placement, and ensure the air temperature is rising during placement, and complete placement during the warmest part of the day.

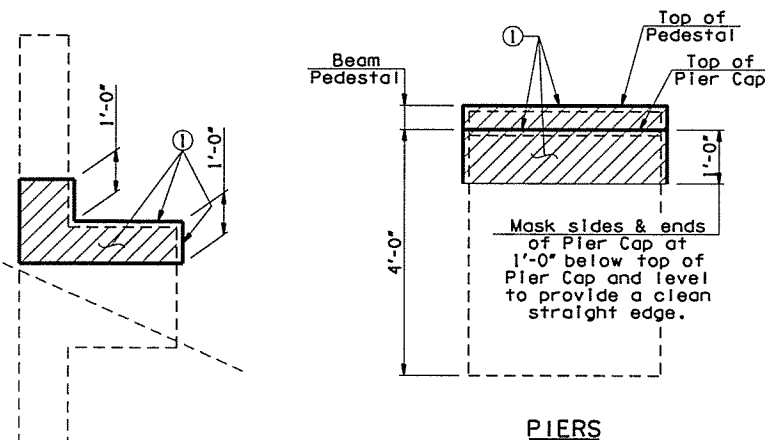
Air temperatures shall be greater than 45°F when placing early strength concrete.

Alternatively, the removed concrete may be replaced with one of the following commercially available shotcrete products used in accordance with the Manufacturer's recommendations and as approved by the Engineer:

6. QUIKRETE SHOTCRETE MS with polypropylene fibers
7. SIKACEM 103F
8. SIKACEM 133
9. SIKACRETE 211 SCC PLUS
10. BASF MASTEREMACO S 210SP
11. BASF MASTEREMACO S 211SP
12. PROSPEC SHOTCRETE 300V
13. EUCOSHOT F

The new concrete shall be placed to the original neat lines of the structural component under repair and finished to provide a surface texture matching that of the adjacent existing concrete.

All costs to complete the repairs including all costs of removals, cleaning, surface preparation, corrosion inhibitor, new concrete, proportioning, mixing, formwork, placing concrete, finishing concrete, material, labor, equipment and incidentals shall be included in the unit price bid per Square Yard of "(PL) REPAIR BRIDGE ITEMS".



ABUTMENTS

- ① Apply CIM 1000, Special Concrete Finish, to all surfaces shown with heavy lines and hatch (including Pedestal steps and ends of cap).

GILCREASE EXPRESSWAY RAMP OVER COUNTY ROAD & BNSF RR BRIDGE "A"		DESIGN	JTR	4/16
SUMMARY OF PAY QUANTITIES AND NOTES (BRIDGE) (SHEET 2 OF 4)		CHECK	BRT	5/16
		GARVER		
STATE OF OKLAHOMA	DEPARTMENT OF TRANSPORTATION			
JOB PIECE NO. 29773(04)		SHEET NO. 4		