

GENERAL NOTES FOR BRIDGE "A"

SPECIFICATIONS:

Comply with the requirements of the 2009 Oklahoma Standard Specifications for Highway Construction, except as modified by the Plans and Special Provisions.

VERIFICATION OF EXISTING CONDITIONS:

All dimensions of the existing components shown on the plans are approximate. The Contractor shall verify all data necessary to connect the new material and shall be solely responsible for the accuracy thereof.

Bidders shall fully inform themselves of the nature of the work and conditions under which it will be performed. The Contractor shall adopt methods consistent with good construction practice and shall take all necessary precautions to prevent damage to the existing bridges or attachments. Any damage to the existing bridge structures or roadway due to the Contractor's negligence shall be repaired at the Contractor's expense, to the satisfaction of the Engineer.

Contractor shall be aware of existing conditions and potential hazards during construction. Contractor shall take precautions to maintain the integrity of any existing utilities and structures. Any damage to these items during construction shall be repaired and/or replaced at the Contractor's expense to the Engineer's satisfaction.

PLANS:

The original project plans are available from:
 Reproduction Branch
 Oklahoma Department of Transportation
 200 N.E. 21st Street
 Oklahoma City, Oklahoma 73105

The bridge was constructed under the following Project No.
 Bridge "A" (Str. 3) F.A.P. No. 1-44-2(1681087)

SURVEYING AND CONSTRUCTION STAKING:

The Contractor will be required to conduct all surveying and construction staking necessary for the completion of the project as directed by the Engineer. The surveying and construction staking required for completion of the project may include, but is not limited to, the following:

1. Establishing horizontal control including the staking of centerline bridge and approach roadway and assigning stationing as directed by the Engineer.
2. Establishing vertical control including the setting of benchmarks.
3. Measuring the elevations along the existing bridge deck slab at centerline, edges of driving lanes and edges of shoulders.
4. Measuring the elevations along the existing approach roadway at centerline, edges of driving lanes and edges of shoulders.
5. Measuring and setting construction stakes as necessary for conducting the grading and surfacing work on the approach roadway.

All survey data, proposed adjustments in the new finish grades from original, and forming data shall be provided to the Engineer for approval before constructing the new approach slabs and new approach roadway pavement.

All cost of the surveying and construction staking necessary for completion of the project as directed by the Engineer including the cost of materials, labor, equipment, and incidentals shall be included in the price bid per Lump Sum of "CONSTRUCTION STAKING LEVEL 11".

ESTABLISHMENT OF VERTICAL GEOMETRY:

The new bridge deck surfaces at the joint replacements and the approach roadway match the existing. The finished surface elevations will not change and will match the existing profile geometry. If the actual finish surface elevations differ from what is shown in the plans, the Contractor shall notify the Engineer prior to placement of concrete at the new joints and approach roadway for adjustment to maintain acceptable approach transitions.

In order to record the vertical geometry of the existing deck and approach roadway, the Contractor shall field survey the top of existing concrete deck overlay prior to removal of the overlay and deck.

The Contractor shall record all survey data and adjust as required to match the existing finish surface elevations. The adjusted elevations shall be submitted for review prior to performing the work.

HORIZONTAL GEOMETRY & VERTICAL CURVE DATA:

The information shown on the "GENERAL PLAN AND ELEVATION" drawing regarding horizontal geometry and vertical profile was taken from the original construction plans. This information is included for informational purposes only. The Contractor shall field verify the existing horizontal and vertical geometry. The reconstruction of the bridge decks joints are intended to match the profile of the existing bridge deck.

CLEANING BRIDGE SEATS:

All Bridge Seats shall be power washed & cleaned of all debris and allowed to dry before application of Special Concrete Finish.

All cost of Cleaning the Bridge Seats including the cost of materials, labor, equipment and incidentals shall be included in other items of work.

REMOVAL OF BRIDGE ITEMS:

The pay item "REMOVAL OF BRIDGE ITEMS" shall include the removal and disposal of all items to be removed from the existing bridge as specified or shown in the plans including the following:

1. Portions of Parapets at the joints specified on Sheet No. 12.
2. Portions of Abutment Nos. 1 & 2 caps, backwalls, wingwalls as shown in the plans.
3. Portions of the existing Approach Slabs necessary for the installation of the new Approach Slabs.
4. Existing Inlet Grate at Southwest corner of the bridge.

When performing "CLASS C BRIDGE DECK REPAIR", the Contractor shall take every precaution necessary to prevent damaging the existing concrete overlay, bridge deck, steel I-beams, existing diaphragms or other superstructure members, unless otherwise specified on the plans. Any damages caused by the Contractor to existing concrete overlay, bridge deck, steel I-beams, reinforcement, diaphragms or other superstructure members shall be repaired or completely replaced at the Contractor's expense to the satisfaction of the Engineer. The Engineer will determine if the damaged component can be satisfactorily repaired or if the component shall be completely replaced.

The existing structural steel may contain lead-based paint. The Contractor must take all necessary precautions and follow all specifications and regulations in handling and transporting lead-based paint. The removal shall be in accordance with Section 619.04.B.2 of the Standard Specifications and in a manner approved by the Engineer.

When removing the portions of the existing abutments as shown in the plans, the Contractor shall take every precaution necessary to prevent damaging the remaining components of the existing bridge or any new construction attached to the bridge. Only hand tools or hand operated power tools will be allowed to make the removals. No vehicle mounted tools or equipment will be allowed to make removals. Before making any removals with impact tools, all concrete components shall be uniformly saw cut along the removal lines or cut lines shown on the plans. Any damages caused by the Contractor to the existing abutments shall be repaired or completely replaced at the Contractor's expense to the satisfaction of the Engineer. The Engineer will determine if the damaged components can be satisfactorily repaired or if the components shall be completely replaced.

Before making any removals, the Contractor shall submit to the Engineer a plan for removing each item or portions of items to be removed from the existing bridge. The Contractor shall not make any removals until the plan has been approved by the Engineer. The plan shall include a list of all the equipment that will be used to make the removals, a description of how the equipment will be used to make the removals and a sequential list of steps that will be followed by the Contractor to make removals.

Items damaged by the Contractor shall be replaced by the Contractor at no additional cost to ODOT. All materials removed shall become the property of the Contractor and be disposed of in a manner approved by the Engineer.

All costs necessary to complete the work as specified or as shown in the plans including the cost of safety platforms, sawing, cutting, demolition, cleaning and straightening reinforcing steel, containment and removal of debris, materials, labor, equipment and incidentals shall be included in the price bid per Lump Sum of "REMOVAL OF BRIDGE ITEMS".

SUBSTRUCTURE REPAIR:

The existing Abutments and Piers, and any other concrete structure associated with the bridge, shall be repaired with Pneumatically Placed Mortar in a manner approved by the Engineer and in accordance with Section 521 of the Standard Specifications for Highway Construction. The removal of loose concrete shall be done using hand tools only, no power tools will be allowed. Power tools will be allowed only if hand tools prove to be incapable of removing all unsound concrete and if their use is approved by the Engineer. Any damage done to the existing reinforcing steel during the removal process shall be repaired at the Contractor's expense to the satisfaction of the Engineer. Any deteriorated reinforcing steel with a section loss greater than 25%, as determined by the Engineer, shall be reported to the Bridge Engineer for remedial action. Prior to mortar application, blast clean the concrete surface and reinforcing steel free of debris and corrosion. Apply Pneumatically Placed Mortar to replace deteriorated concrete. Build up mortar to patch the original lines and grades of the member being repaired. All mortar repairs shall be sealed with a water repellent substance.

The Contractor may propose and use as an alternate one of the following repair methods:

1. Cast-in-place concrete
2. Pre-placed aggregate concrete
3. Formed and pumped concrete and mortar
4. Troweling and dry-packing of repair mortar
5. Class A Concrete (to be used under the existing beams)

The actual location and extent of the repairs shall be determined in the field by the Engineer. The repairs shall only be made in the areas selected by the Engineer. Payment will be made only for the actual repairs performed.

If the Contractor elects to use a method other than Pneumatically Placed Mortar, they shall submit to the Engineer, for their approval, a proposed work plan. The work plan should include surface preparation methods, patching material, bonding agents, material placing methods, compatibility with Corrosion Inhibitors and finishing methods. The Contractor shall repair a test area to verify the effectiveness of their proposed repair methods prior to commencement of the work on the entire structure. Faulty repairs shall be replaced by the Contractor at no expense to the State. The cost for all patching methods will be included in the price bid per Square Yard of "PNEUMATICALLY PLACED MORTAR".

REPAIR OF CRACKS IN SUBSTRUCTURE:

The existing Abutments and Piers contain cracks that shall be repaired. The cracks shall be repaired by cleaning and injecting with epoxy. The crack repairs shall be performed in accordance with Section 520 of the Standard Specifications. The actual location and extents of the crack repairs shall be determined in the field by the Engineer. Payment will only be made for the actual crack repairs performed.

All cost to complete the crack repairs 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 "PREPARATION OF CRACKS, ABOVE WATER" and the price bid per Gallon of "EPOXY RESIN, ABOVE WATER".

EXPOSURE OF DETERIORATED STRUCTURAL STEEL:

If any deteriorated structural steel (including but not limited to flanges, webs, connection plates, stiffeners, bearings and diaphragms) is exposed during any construction activity, the Contractor shall be responsible for notifying the Engineer who in turn shall notify the Bridge Engineer as to the extent of the damage. The Bridge Engineer shall determine if any repairs are necessary; and if so, what method of repair shall be used.

STRUCTURAL STEEL:

All structural steel for diaphragms shall conform to AASHTO M270 (ASTM A709), Grade 50W (Weathering Steel, Non-Fracture Critical Charpy V-Notch tested for Zone 2), unless otherwise noted. High strength bolts shall be used at all connection locations. Fabrication and erection shall be done in accordance with Section 506 of the Standard Specifications.

All shop and field welding shall be arc welding and shall be done in accordance with the current ANSI/AWS D1.5 Bridge Welding Code. Field welders shall be pre-qualified by the Oklahoma Department of Transportation.

High Strength Bolted Connections shall conform to the provision of the Section 506.04.F.6 of the Standard Specifications.

CLASS B & C BRIDGE DECK REPAIR:

The quantities of "CLASS B BRIDGE DECK REPAIR", & "CLASS C BRIDGE DECK REPAIR" are for estimating purposes only. Actual areas to be repaired using Class B or C Bridge Deck Repair shall be determined by the Engineer during the construction process.

Payment only for actual repairs performed will be allowed. Payment will not be made for repairs not made. The repair shall be in accordance with Section 505 of the Standard Specifications.

All costs of the repair including labor, equipment, materials and incidentals necessary to complete the work as shown shall be included in the price bid per Square Yard of "CLASS B BRIDGE DECK REPAIR" or "CLASS C BRIDGE DECK REPAIR".

CONCRETE:

All concrete shall be placed in the dry. All exposed edges shall have a 3/4" chamfer unless noted or shown on plans. All chamfer strips shall be sized lumber. All Class "A" and Class "AA" Concrete shall be air-entrained.

All concrete in the High Density Concrete Overlay, Bridge Deck, Approach Slabs & Parapets shall be Class "AA" Concrete, f'c = 4,000 p.s.i. minimum strength at 28 days. All concrete in the Substructure shall be Class "A" Concrete, f'c = 3,000 p.s.i. minimum strength at 28 days.

The Class AA Concrete used for the 1 1/4" High Density Concrete Overlay shall have steel and polypropylene fiber blend additives such as Novomesh 850 manufactured by Propex, PSI Crimped Steel Fiber FB manufactured by Euclid Chemical or approved equal. Fiber additives shall conform to Section 701.15 of the Standard Specifications and Special Provision Section 435 "Fiber Reinforced, Bonded Portland Cement Concrete Overlay". Application rate shall be a minimum of 40 pounds of fiber reinforcement per cubic yard of concrete. Fiber reinforcement to be included in the price bid per Square Yard of "BRIDGE DECK CONCRETE OVERLAY".

When vibrating concrete containing epoxy coated reinforcing steel, the vibrator shall be equipped with a plastic tip designed to prevent damage to the epoxy coating.

High Early Strength (HES) Concrete shall be used for deck/joint repairs. Deck repairs shall obtain a minimum compressive strength of 3,000 p.s.i. prior to placement of loads on repaired areas. Payment of HES Concrete is included in the price bid per Square Yard of "CLASS C BRIDGE DECK REPAIR".

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	

GILCREASE EXPRESSWAY RAMP OVER COUNTY ROAD & BNSF RR BRIDGE "A"		TULSA COUNTY	DESIGN	JTR	4/16
			DETAIL	JTR	4/16
SUMMARY OF PAY QUANTITIES AND NOTES (BRIDGE) (SHEET 1 OF 4)			CHECK	BRT	5/16
			GARVER		
STATE OF OKLAHOMA	DEPARTMENT OF TRANSPORTATION				
	JOB PIECE NO. 29773(04)	SHEET NO. 3			