

**GENERAL NOTES**

DESCRIPTION	REVISIONS	DATE

**SPECIFICATIONS:**

ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH 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 BRIDGE COMPONENTS AND APPROACH ROADWAY SHOWN ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS 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 WORK 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 BRIDGE ATTACHMENTS OR APPROACH ROADWAY. ANY DAMAGE TO THE EXISTING BRIDGE STRUCTURE OR ROADWAY DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE ENGINEER.

THE STATIONING SHOWN ON THE PLANS IS BASED ON THE STATIONING ON THE EXISTING BRIDGE CONSTRUCTION PLANS. THE CONSTRUCTION PLANS FOR THE EXISTING BRIDGE STRUCTURE MAY BE OBTAINED FROM THE REPRODUCTION BRANCH OF THE OKLAHOMA DEPARTMENT OF TRANSPORTATION, FEDERAL AID PROJECT NO. I-244-2(115)096.

**CLEANING OF DEBRIS:**

THE CONTRACTOR SHALL REMOVE ALL DEBRIS FROM THE TOPS OF PIERS AND BRIDGE SEATS. ALL COST TO CLEAN THE DEBRIS SHALL BE INCLUDED IN OTHER ITEMS OF WORK.

**REMOVED MATERIALS:**

UNLESS NOTED OTHERWISE, ALL MATERIALS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND DISPOSED IN A MANNER APPROVED BY THE ENGINEER. SEE SECTION 619.04(b) OF THE STANDARD SPECIFICATION.

**EXPOSURE OF DETERIORATED STEEL:**

IF ANY DETERIORATED STRUCTURAL STEEL IS EXPOSED DURING SAND BLASTING, 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. THE DAMAGED OR DETERIORATED AREAS SHALL NOT BE DISTURBED UNTIL A REPAIR PROCESS HAS BEEN PRESCRIBED BY THE ENGINEER.

**DEQ PERMIT NOTE:**

IF THE CONTRACTOR ELECTS TO BUILD A ROAD(S) TO PERFORM WORK, THE CONTRACTOR WILL BE RESPONSIBLE FOR EFFECTIVE EROSION AND SEDIMENT CONTROL IN ACCORDANCE WITH THE DEQ OKR10 GENERAL CONSTRUCTION REGULATIONS. IF THE AREA OF DISTURBANCE IS ONE OR MORE ACRES AND IS NOT ALREADY COVERED BY A DEQ PERMIT, THE CONTRACTOR WILL BE REQUIRED TO OBTAIN A DEQ STORM WATER CONSTRUCTION PERMIT WHICH WILL INCLUDE AN APPLICATION (NOTICE OF INTENT) TO DEQ PRIOR TO EARTH DISTURBING ACTIVITIES, A STORM WATER POLLUTION PREVENTION PLAN AND THE INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENT CONTROLS. IN ADDITION THE CONTRACTOR WILL BE RESPONSIBLE FOR PERMANENT STABILIZATION MEASURES AFTER REMOVAL OF THE WORK ROAD(S). ALL COSTS ASSOCIATED WITH THE CONTRACTORS' WORK ROAD INCLUDING A DEQ PERMIT, EROSION AND SEDIMENT CONTROLS AND PERMANENT STABILIZATION, ETC. WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

**EPOXY INJECTION:**

THE EXISTING SUBSTRUCTURE UNITS HAVE APPROXIMATELY 85 L.F. OF CRACKS THAT SHALL BE CLEANED AND INJECTED WITH EPOXY. THE LOCATION AND EXTENT OF THE CRACKS IN THE SUBSTRUCTURE TO BE SEALED SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER. THIS WORK SHALL BE IN ACCORDANCE WITH SECTION 520 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

ALL COSTS INCLUDING LABOR, EQUIPMENT, MATERIAL, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK DESCRIBED ABOVE SHALL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF "PREPARATION OF CRACKS ABOVE WATER" AND PRICE BID PER GALLON OF "EPOXY RESIN ABOVE WATER".

**FALSEWORK JACKING:**

ITEM "(PL) FALSEWORK JACKING" SHALL CONSIST OF PROVIDING TEMPORARY SUPPORT OF THE EXISTING STRUCTURE DURING REMOVAL AND REPLACEMENT OF BEARING DEVICES AND REMOVAL AND REPLACEMENT OF PIER NO. 2. POSITIVE SUPPORT IS REQUIRED TO STABILIZE INDIVIDUAL ELEMENTS IN THE ASSEMBLY AS WELL AS STABILIZE THE ASSEMBLY AS A UNIT. THE CONTRACTOR IS TO PROVIDE AN ADEQUATE NUMBER OF JACKS IN THE JACKING ASSEMBLY TO PREVENT ANY DAMAGE FROM OCCURRING TO THE BRIDGE IN THE EVENT OF A FAILURE OF A SINGLE JACK.

JACKS SHALL HAVE A RATED CAPACITY OF AT LEAST ONE AND ONE-HALF TIMES THE CALCULATED LOAD. THE CONTRACTOR'S ENGINEER SHALL DETERMINE THE CALCULATED LOAD AND INCLUDE PROVISIONS FOR THE STRUCTURE SELF-WEIGHT AND HIGHWAY LOAD (IF APPLICABLE) INCLUDING IMPACT. ALL FALSEWORK TO BE USED FOR THIS PROJECT SHALL BE DESIGNED, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN OKLAHOMA. THE SIGNED AND SEALED FALSEWORK DRAWINGS SHALL BE SUBMITTED TO THE STATE BRIDGE DIVISION FOR APPROVAL. FALSEWORK CONSTRUCTION MAY BEGIN ONLY AFTER THE BRIDGE DIVISION APPROVES THE FALSEWORK DRAWINGS. ALL COSTS INCLUDING FALSEWORK DESIGN, SUBMITTAL OF WORKING DRAWINGS FOR APPROVAL, LABOR, EQUIPMENT, MATERIAL, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS DESCRIBED ABOVE SHALL BE INCLUDED IN THE PRICE BID PER LUMP SUM "(PL) FALSEWORK JACKING".

**BRIDGE DECK FORMWORK BRACING:**

THE CONTRACTOR IS TO USE FORMWORK BRACING AS SHOWN ON ODOT STANDARD B40-STL-BM-BRACING. BRACING AND TENSION TIES SHALL BE SPACED AT INTERVALS NO GREATER THAN 4 FEET. FINISHING MACHINE RAILS WILL BE LOCATED ON THE TOP FLANGE OF THE EXTERIOR BEAMS. ALL CANTILEVER FORMING BRACKETS SHALL BE ADJUSTABLE DURING PLACEMENT OF THE FLOOR CONCRETE IN ORDER TO MAINTAIN PROPER GRADES OF OVERHANG. IF THE CONTRACTOR USES SHIMS TO ADJUST THE FORMING BRACKETS, HE MUST PROVIDE THE ENGINEER A METHOD TO PREDICT THE CRUSH AND SETTLEMENT OF THE SHIMS.

THE BARS SHALL BE PLACED PERPENDICULAR TO THE BEAMS. THE TIE BARS SHALL HAVE A MINIMUM OF 1 INCH COVER AND SHALL BE NO HIGHER THAN THE TOP LAYER OF REINFORCING STEEL.

NO WELDING TO THE TOP FLANGE OF THE BEAMS OR THE SHEAR CONNECTORS WILL BE PERMITTED. THE STEEL TY-BAR CLIP CONNECTION DEVICES SHALL BE EPOXY COATED. AFTER ASSEMBLY ALL EXPOSED THREADS SHALL BE COATED WITH EPOXY PAINT.

THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL, WORKING DRAWINGS FOR THE SUPPORT OF THE OVERHANG FORMS AND BRACING OF THE EXTERIOR BEAMS. THESE DRAWINGS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF OKLAHOMA. DRAWINGS OF THE PROPOSED OVERHANG FORMWORK SUPPORT AND GIRDER BRACING SHALL BE APPROVED BY THE BRIDGE ENGINEER BEFORE ANY CONCRETE IS PLACED.

THE OVERHANG FORMWORK SUPPORT AND GIRDER BRACING WILL NOT BE MEASURED FOR PAYMENT. ALL COST OF THE OVERHANG FORMWORK SUPPORT AND GIRDER BRACING INCLUDING THE COST OF TY-BAR CLIP CONNECTION DEVICES, EPOXY COATED ALL-THREAD TENSION TIES, WOOD STRUTS, EPOXY COATINGS OR PAINT, PROFESSIONAL SERVICES, MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS SHALL BE INCLUDED IN THE UNIT PRICE BID PER CUBIC YARD OF "CLASS AA CONCRETE".

STAY IN PLACE FORMS WILL NOT BE ALLOWED.

**FALL PROTECTION SYSTEM:**

THE CONTRACTOR IS REQUIRED TO PROVIDE A FALL PROTECTION SYSTEM TO PROTECT ALL TRAFFIC FROM BRIDGE DECK DEBRIS DUE TO CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL SUBMIT DETAILS OF PROPOSED FALL PROTECTION SYSTEM FOR REVIEW AND ACCEPTANCE. ALL DETAILS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF OKLAHOMA. THE FALL PROTECTION SYSTEM SHALL BE DESIGNED SO AS NOT TO REDUCE THE EXISTING VERTICAL CLEARANCE MEASURED FROM THE BOTTOM CHORD OF THE EXISTING BEAMS TO THE SURFACE OF THE ROADWAY BELOW. THE CONTRACTOR SHALL VERIFY THE EXISTING VERTICAL CLEARANCE PRIOR TO THE DESIGN AND SUBMITTAL OF THE FALL PROTECTION SYSTEM DETAILS. NO WORK ON THE BRIDGE DECK SHALL BEGIN UNTIL THE FALL PROTECTION SYSTEM IS INSTALLED ACCORDING TO THE APPROVED PLANS.

ALL COSTS INCLUDING DESIGN, MATERIALS, INSTALLATION, MAINTENANCE OF FALL PROTECTION SYSTEM DURING CONSTRUCTION OPERATIONS, REMOVAL OF FALL PROTECTION SYSTEM SUBSEQUENT TO DECK CONSTRUCTION OPERATIONS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS DESCRIBED ABOVE SHALL BE INCLUDED IN THE PRICE BID PER CUBIC YARD OF "CLASS AA CONCRETE".

PRICE BID PER CUBIC YARD OF "CLASS AA CONCRETE" SHALL INCLUDE TEMPORARY VERTICAL CLEARANCE SIGNAGE AS DIRECTED BY THE ENGINEER. THE TEMPORARY VERTICAL CLEARANCE SIGNS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL REMAIN IN PLACE UNTIL INSTALLATION OF THE PERMANENT VERTICAL CLEARANCE SIGNS BY ODOT.

**SWALLOW NOTE:**

CLIFF SWALLOWS AND BARN SWALLOWS ARE SMALL COLONIAL NESTING BIRDS PROTECTED BY THE FEDERAL MIGRATORY BIRD TREATY ACT. THESE SPECIES COMMONLY USE BRIDGES AND CULVERTS FOR NESTING. THE NESTING SEASON FOR THE SWALLOWS RUNS FROM APRIL 1 TO AUGUST 31. ANY ACTIVITIES WHICH WOULD DESTROY ACTIVE NESTS OR HARM EGGS OR BIRDS WOULD VIOLATE THE MIGRATORY BIRD TREATY ACT. SWALLOW USE OF BRIDGE/CULVERT NBI NO. 18132 WAS NOT OBSERVED DURING THE INITIAL SURVEYS CONDUCTED AS PART OF THE BIOLOGICAL STUDIES IN 2014. SWALLOWS MAY OCCUPY THE BRIDGE IN THE FUTURE NESTING SEASONS. THE RESIDENT ENGINEER WILL EVALUATE THE CONTRACTOR'S PROPOSED WORK METHODS AND CONCLUDE WHETHER THE PROPOSED WORK WOULD POSE DISRUPTION TO ANY NESTING BIRDS BEFORE WORK NEAR THE STRUCTURE IS AUTHORIZED. IF THE PROPOSED WORK WILL HARM ANY NESTING BIRDS, THE BRIDGE MAY BE NETTED PRIOR TO APRIL 1 OR THE WORK DELAYED UNTIL THE NESTING SEASON IS COMPLETE. METHODS OTHER THAN NETTING MUST BE PRE-APPROVED BY THE ODOT BIOLOGIST.

**CONSTRUCTION SEQUENCE:**

THE FOLLOWING IS A SUGGESTED SEQUENCE OF CONSTRUCTION FOR THE CONSTRUCTION OF THE PROJECT. THE CONTRACTOR CAN SUBMIT A REVISED SEQUENCE WITH FALSEWORK JACKING DETAILS AND CALCULATIONS FOR REVIEW AND ACCEPTANCE.

1. PLACE TRAFFIC CONTROL DEVICES PER PLANS AND SPECIFICATIONS.
2. REMOVE EXISTING CONCRETE BRIDGE DECK, PARAPETS AND APPROACH SLABS.
3. REMOVE AND REPLACE PORTION OF NORTHEAST WING WALL OF ABUTMENT NO. 2.
4. COMPLETE CONSTRUCTION OF NORTHEAST WING WALL.
5. INSTALL PERFORATED PIPE UNDERDRAINS AND REPAIR RETAINING WALL AT ABUTMENT NO. 2.
6. ENCAPSULATE FRONT FACE ABUTMENT NO. 1 AND PEDESTALS ON ABUTMENT NO. 2.
7. REPLACE PIER NO. 2 AND COMPLETE SUBSTRUCTURE REPAIRS.
8. REPLACE ALL BEARING ASSEMBLIES AND DIAPHRAGM TOP MEMBERS AS SHOWN IN THE DRAWINGS AND AS DIRECTED.
9. CLEAN AND PAINT TOP FLANGE OF BEAMS AND DIAPHRAGM MEMBERS AND NEW STRUCTURAL STEEL.
10. CONSTRUCT NEW CONCRETE DECK, APPROACH SLABS, AND PARAPETS.
11. COMPLETE CONSTRUCTION, REMOVE TRAFFIC CONTROL, AND OPEN BRIDGE TO TRAFFIC.

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DESIGN	JSH	3/14	OKLAHOMA DEPARTMENT OF TRANSPORTATION BRIDGE A <b>GENERAL NOTES (BRIDGE)</b> STATE JOB NO. <u>28880(04)</u>	TULSA COUNTY  SHEET NO. <u>3</u>
DRAWN	MRM	3/14		
CHECKED	JWB	3/16		
APPROVED				
SQUAD	TT			