- 3. (PL) FALSEWORK JACKING IS FOR REMOVAL AND REPLACEMENT OF BEARING ASSEMBLIES AND RECONSTRUCTION OF PIER NO. 2.
- 4. PROVIDE AND INSTALL FIXED BEARING ASSEMBLIES OF THE SIZE, SHAPE, AND LOCATION AS DETAILED IN THE PLANS. THERE IS AN ESTIMATED 190 POUNDS OF STRUCTURAL STEEL FOR EACH FIXED BEARING LOCATED AT PIER NO. 1 AND PIER NO. 3 TOTALING 1140 POUNDS OF WEATHERING STEEL FOR SIX BEARING ASSEMBLIES.

ALL COSTS ASSOCIATED WITH PROVIDING AND INSTALLING THE FIXED BEARING ASSEMBLIES AS SHOWN IN THE PLANS INCLUDING ELASTOMERIC PADS, ANCHOR PLATES, CONTACT PLATES, ANCHOR BOLTS, NUTS, WASHERS, LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS SHALL BE INCLUDED IN THE PRICE BID PER EACH "WEATHERING STEEL FIXED BEARING ASSEMBLY".

5. PROVIDE AND INSTALL EXPANSION BEARING ASSEMBLIES OF THE SIZE, SHAPE, AND LOCATION AS DETAILED IN THE PLANS. THERE IS AN ESTIMATED 130 POUNDS OF STRUCTURAL STEEL FOR EXPANSION BEARINGS LOCATED AT ABUTIMENTS AND AN ESTIMATED 150 POUNDS OF STRUCTURAL STEEL FOR EXPANSION BEARINGS LOCATED AT PIER NO. 2 TOTALING 1620 POUNDS FOR SIX ABUTIMENT BEARINGS AND SIX PIER BEARINGS.

ALL COSTS ASSOCIATED WITH PROVIDING AND INSTALLING THE EXPANSION BEARING ASSEMBLIES AS SHOWN IN THE PLANS INCLUDING ELASTOMERIC PADS, ANCHOR PLATES, CONTACT PLATES, ANCHOR BOLTS, NUTS, WASHERS, LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS SHALL BE INCLUDED IN THE PRICE BID PER EACH "WEATERING STEEL EXPANSION BEARING ASSEMBLY".

6. APPLY SPECIAL CONCRETE FINISH TO EXPOSED SURFACES OF SUBSTRUCTURE ELEMENTS.

SPECIAL CONCRETE FINISH SHALL BE IN ACCORDANCE WITH SECTION 737.02 OPTION II - PAINT TYPE SPRAY FINISH OF THE STANDARD SPECIFICATION. THE SPECIAL CONCRETE FINISH MUST BE COMPATIBLE WITH THE CARBON FIBER-REINFORCED POLYMER USED FOR THE CONCRETE REPAIRS. SEE SPECIAL PROVISION 524 FIBER-REINFORCED POLYMER MATERIAL

- 7. ITEM "SILICONE CONSTRUCTION JOINT" IS TO BE USED FOR SEALING ALL NEW SLOPEWALL JOINTS AS DETAILED ON SHEET 17. ALL LABOR, MATERIALS AND INCIDENTALS NECESSARY TO CLEAN AND SEAL THE SLOPEWALL JOINTS SHALL BE INCLUDED IN THE PAY ITEM PER LINEAR FOOT OF "SILICONE CONSTRUCTION JOINT". REMOVING AND DISPOSING OF ALL VEGETATION AT THE EXISTING SLOPE WALL JOINTS TO THE SATISFACTION OF THE ENGINEER SHALL BE INCLUDED IN THE PAY ITEM PER LINEAR FOOT OF "SILICONE CONSTRUCTION JOINT".
- 8. ITEM "CLASS A CONCRETE" IS TO BE USED FOR ENCAPSULATING THE FRONT FACE OF ABUTMENT NO. 1 (SHEET 10), ENCAPSULATING PEDESTALS OF ABUTMENT NO. 2 (SHEET 11), REPAIR OF RETAINING WALL AT ABUTMENT NO. 2 (SHEET 13), AND REPLACEMENT OF PIER 2 (SHEETS 16 & 17). ALL COST FOR THE REMOVAL OF UNDOUND CONCRETE AND CLEANING EXPOSED REBAR PRIOR TO ENCAPSULATION SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE OF "CLASS A CONCRETE". COST FOR REMOVAL OF PIER NO. 2 IS INCLUDED IN ITEM "REMOVAL OF BRIDGE ITEM (TYPE A)".
- PAY ITEM "SLOPE WALL (4")" SHALL INCLUDE COST FOR REMOVAL AND REPLACEMENT OF EXISTING SLOPE WALLS AS SHOWN ON SHEETS 13 AND 17. INCLUDE COST OF ALL SAW CUTTING REQUIRED FOR REMOVING PORTIONS OF SLOPE WALLS.
- 10. ITEM "PAINTING EXISTING STRUCTURE" CONSISTS OF CLEANING AND PAINTING THE TOP AND SIDES OF ALL TOP FLANGE OF BEAMS AND DIAPHRAGM BY USING CATEGORY E PAINT SYSTEM AS SPECIFIED IN SECTION 512 AND SECTION 730 OF THE STANDARD SPECIFICATIONS.
- 11. PAY ITEM "COLLECTION AND HANDLING OF WASTE" SHALL INCLUDE ALL LABOR MATERIALS, AND INCIDENTALS NECESSARY FOR CLEANING, CONTAINMENT, STABILIZATION, INCINERATION, TRANSPORTATION AND DISPOSAL OF WASTE MATERIALS, PERMITS AND RELATED ITEMS AS SPECIFIED IN THE STANDARD SPECIFICATIONS. THE CONTRACTOR IS RESPONSIBLE FOR TESTING AND WILL COMPLY WITH SECTION 512 OF THE STANDARD SPECIFICATIONS FOR HAZARDOUS AND NON-HAZARDOUS WASTE.
- 12. A PENETRATING WATER REPELLENT SURFACE TREATMENT SHALL BE APPLIED TO THE FOLLOWING CONCRETE SURFACES OF THE BRIDGE:
 - (a) ROADWAY FACE AND TOP OF CONCRETE PARAPET.
 - (b) EDGE OF BRIDGE DECK AND BOTTOM OF SLAB OVERHANG
 - (c) TOP, SIDE AND ENDS OF PIER CAP.
 - (d) EXPOSED SURFACES OF THE PIER COLUMNS.
 - (e) EXPOSED SURFACES OF THE ABUTMENTS
- 13. TO BE USED AS DIRECTED BY THE ENGINEER.
- 14. ITEM "CARBON FIBER-REINFORCED POLYMER" CONSISTS OF WRAPPING COLUMNS OF PIER 1 AND 3 AS SHOWN ON SHEET 15. ALL UNSOUND CONCRETE SHALL BE REMOVED AND PATCHED PRIOR TO APPLYING CORROSION INHIBITOR AND CARBON FIBER-REINFORCED POLYMER WRAP. UNSOUND CONCRETE SHALL BE PATCHED WITH PNEUMATICALLY PLACED MORTAR AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE IN ACCORDANCE WITH SPECIAL PROVISION 524-3.

THE REMOVAL SHALL BE IN ACCORDANCE WITH SECTION 619.04(B)2 OF THE SPECIFICATIONS AND IN A MANNER APPROVED BY THE ENGINEER. REMOVED MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

- 15. ITEM "CORROSION INHIBITOR (SURFACE APPLIED)" CONSISTS OF APPLYING A SURFACE APPLIED CORROSION INHIBITOR TO THE DAMAGED AREAS PRIOR TO PATCHING WITH PNEUMATICALLY PLACED MORTAR AND COLUMNS OF PIERS 1 AND 3 PRIOR TO PLACING CARBON FIBER-REINFORCED POLYMER WRAP, APPLY TO ALL SURFACE AREAS WITHIN ONE FOOT OF THE REPAIR AREA. INCLUDES APPLICATION TO SURFACES ON ABUTMENT NO. 1 THAT ARE TO BE ENCASED WITH CLASS A CONCRETE.
- 16. ITEM "(PL) REPAIR BRIDGE ITEM (TYPE A)" SHALL CONSIST OF REMOVING THE EXISTING PORTION OF THE ABUTMENT NO. 2 WINGS AS SHOWN ON SHEET 12, INSTALLING NEW REINFORCING AS DETAILED, AND REPOURING CONCRETE TO MATCH THE EXISTING WING.

THE COSTS INCLUDING REMOVAL, CLEANING EXPOSED REINFORCEMENT, EPOXY COATED REINFORCING, ANCHORING REINFORCING BARS, CLASS A CONCRETE, WATERSTOPS, FORMING, LABOR, EQUIPMENT, MATERIAL AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHOWN IN THE PLANS SHALL BE INCLUDED IN THE PRICE BID PER LUMP SUM OF "(PL) REPAIR BRIDGE ITEM (TYPE A)". THERE IS AN ESTIMATED 0.6 CY OF CLASS A CONCRETE AND 300 LBS OF EPOXY COATED REINFORCING INCLUDED IN ITEM "(PL) REPAIR BRIDGE ITEM (TYPE A)".

17. ITEM "(PL) REPAIR BRIDGE ITEM (TYPE B)" IS FOR THE REPLACEMENT OF THE TOP MEMBER OF THE CROSS FRAMES AS SHOWN ON SHEET 23. THE ESTIMATED QUANTITY IS FOR EACH TYPE "B" CROSS FRAME AT EACH ABUTMENT AND PIER AND 12 ADDITIONAL CROSS FRAMES TO BE REPAIRED AS DETERMINED BY THE ENGINEER.

ALL COSTS INCLUDING REMOVAL OF TOP MEMBER OF CROSS FRAME, NEW STEEL TOP MEMBER OF CROSS FRAME, INSTALLATION INCLUDING ALL WELDING, LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SHOWN IN THE PLANS SHALL BE INCLUDED IN THE PRICE BID PER EACH OF "(PL) REPAIR BRIDGE ITEM (TYPE B)". ESTIMATED COST INCLUDES 8390 TOTAL POUNDS OF STRUCTURAL STEEL FOR 24 REPAIR LOCATIONS.

REPLACEMENT STRUCTURAL STEEL SHALL CONFORM TO AASHTO M270 (ASTM A709), GRADE 50.

- 18. ALL COST OF PIPE UNDERDRAIN COVER MATERIAL, BOTH FINE AND COARSE, FILTER FABRIC, EQUIPMENT AND LABOR NEEDED FOR INSTALLATION OF 6" PERFORATED PIPE UNDERDRAIN AS SHOWN ON THE PLANS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE OF "6" PERFORATED PIPE UNDERDRAIN ROUND". ALL COSTS OF EXCAVATION FOR THE PURPOSE OF INSTALLING 6" PERFORATED PIPE UNDERDRAIN ROUND AS SHOWN ON SHEETS 8 & 9 SHALL BE INCLUDED IN THE BID PRICE FOR "6" PERFORATED PIPE UNDERDRAIN ROUND".
- 19. ITEM "6" NON-PERF. PIPE UNDERDRAIN RND" IS FOR THE SECTIONS OF PIPE TO BE INSTALLED THROUGH THE EXISTING WINGS ON THE ABUTMENTS AS SHOWN IN THE PLANS. COSTS FOR ALL LABOR AND EQUIPMENT NECESSARY FOR DRILLING THROUGH ABUTMENT NO. 1 WING FOR THE INSTALLATION OF THE 6" NON-PERFORATED PIPE AS SHOWN ON SHEET 12, INCLUDING SEALANT, SHALL BE INCLUDED IN THE PRICE BID PER LINEAR FEET OF "6" NON-PERF. PIPE UNDERDRAIN RND.".
- 20. ITEM "REMOVAL OF BRIDGE ITEM (TYPE A)" INCLUDES THE REMOVAL AND DISPOSAL OF THE PIER CAP AND COLUMNS OF PIER NO. 2 TO THE ELEVATION SHOWN ON SHEET 16. PRIOR TO REMOVAL PIER NO. 2, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A PLAN FOR REMOVING THE PIER. THE CONTRACTOR SHALL NOT REMOVE ANY PORTION OF THE PIER UNTIL THE PLAN HAS BEEN APPROVED BY THE ENGINEER. THE PLAN SHALL INCLUDE APPROVED FALSEWORK DRAWINGS FOR THE TEMPORARY SUPPORT OF THE SUPERSTRUCTURE, EQUIPMENT THAT WILL BE USED TO MAKE THE REMOVAL, 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 THE REMOVAL.
- 21. ITEM "REMOVAL OF BRIDGE ITEM (TYPE B)" INCLUDES REMOVAL AND DISPOSAL OF CONCRETE DECK SLAB, BRIDGE APPROACH SLABS, CONCRETE TRAFFIC RAILS ON DECK SLAB AND APPROACH SLAB, GUARDRAIL ON BRIDGE OR APPROACH SLAB, EXISTING ASPHALT OVERLAY, CURBS, SIDEWALKS, EXPANSION JOINTS OR OTHER INCIDENTAL ITEMS TO THE ABOVE. THIS ITEM ALSO INCLUDES PORTIONS OF ABUTMENT WINGWALLS AS SHOWN IN THE PLANS.

 WHEN REMOVING THE EXISTING DECK SLAB, THE CONTRACTOR SHALL TAKE EVERY PRECAUTION NECESSARY TO PREVENT DAMAGING THE EXISTING BEAMS, DIAPHRAGMS OR OTHER STRUCTURAL STEEL COMPRISING THE SUPERSTRUCTURE. ANY DAMAGE CAUSED BY THE CONTRACTOR TO EXISTING BEAMS, DIAPHRAGMS OR OTHER STRUCTURAL STEEL COMPRISING THE SUPERSTRUCTURE INCLUDING CUTTING OR NICKING THE STRUCTURAL STEEL WITH A SAW OR OTHER EQUIPMENT 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.

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 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 THE REMOVALS.

ALL HANDRAIL REMOVED FROM THE EXISTING BRIDGE SHALL BECOME PROPERTY OF CITY OF TULSA AND SHALL BE DELIVERED TO WEST MAINTENANCE YARD AT 23RD S. JACKSON AVENUE, TULSA, OK. ALL OTHER ITEMS REMOVED SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL 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 MATERIAL, LABOR, EQUIPMENT AND INCIDENTALS SHALL BE INCLUDED IN THE UNIT PRICE BID PER LUMP SUM OF "REMOVAL OF BRIDGE ITEM (TYPE B)".

22. ITEM "SEALED EXPANSION JOINTS" ARE TO BE PLACED AT THE ABUTMENTS AND AT PIER 2 AND SHALL BE CONSTRUCTED AS SHOWN IN THE PLANS AND IN ACCORDANCE WITH STANDARDS EJ-SK AND EJ-DTL AND 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 MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS SHALL BE INCLUDED IN THE UNIT PRICE BID PER LINEAR FOOT OF "SEALED EXPANSION JOINT".

REVISIONS DATE

- 23. ITEM "CLASS AA CONCRETE" INCLUDES 4.0 CUBIC YARDS FOR HAUNCHES OVER THE STEEL BEAMS. NO PAYMENT WILL BE MADE FOR DIFFERENCE BETWEEN PLAN QUANTITY AND THE ACTUAL QUANTITY OF HAUNCH CONCRETE.
- 24. ITEM "CONSTRUCTION STAKING LEVEL II". SHALL INCLUDE ALL SURVEYING AND CONSTRUCTION STAKING NECESSARY FOR COMPLETION OF THE PURPOSE AS SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE ENGINEER, THE SURVEYING, AND CONSTRUCTION STAKING REQUIRED FOR THE PROJECT WILL INCLUDE BUT MAY NOT BE 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 AND EDGES OF DECK SLAB AND AT EACH BEAM LINE.
 - 4. MEASURING THE ELEVATIONS ALONG THE EXISTING APPROACH ROADWAY AT CENTERLINE, EDGES OF DRIVING LANES AND EDGES OF SHOULDERS.
 - MEASURING THE EXISTING TOP OF BEAM ELEVATIONS FOR DETERMINING DECK SLAB HAUNCH AND FORMING DATA.
 - 6. MEASURING AND SETTING CONSTRUCTION STAKES AS NECESSARY FOR CONDUCTING THE GRADING AND SURFACING WORK ON THE APPROACH ROADWAY.

ALL COSTS 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 "CONSTRUCTION STAKING LEVEL II".

DESIGN	JSH	3/14	OKLAHOMA DEPARTMENT OF TRANSPORTATION		
DRAWN	MRM	3/14	BRIDGE A	TULSA COUNTY	
HECKED	JWB	3/16	CHMMADY OF DAY OHAN	TITICO	
PROVED			SUMMARY OF PAY QUANTITIES (BRIDGE) (SHEET 2 OF 2)		
SQUAD	TT		STATE JOB NO. 28880(04)	SHEET NO5_	