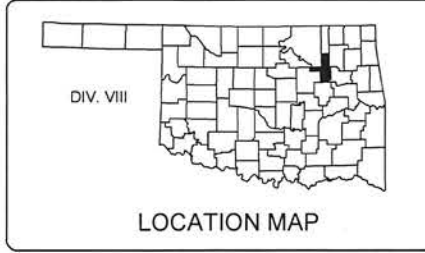


Sub: June 6, 2016

STATIONING BASED ON "AS BUILT" PLANS
FEDERAL AID PROJECT NO. I-224-2(115)096



DESIGN DATA
US 75 RAMP

AADT 2016 =	41,740
AADT 2036 =	62,970
D =	55%
T (% of ADT) =	8%
V =	40 MPH

STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED
UNITED STATES HIGHWAY
BRIDGE REHABILITATION
US 75 RAMP NORTH TO NORTHEAST OVER E - 1ST AND 2ND STREET AND US 75
TULSA COUNTY

CONTROL SECTION NO. 75-72-93
PROJECT NO. ACNHPP-272N(149)SS
JOB PIECE NO. 28880(04)
LOCATION 7293-0000-XR
NBI NO. 18132

DESCRIPTION	REVISIONS	DATE

INDEX OF SHEETS

- 1 TITLE SHEET
- 2 SUMMARY OF PAY QUANTITIES (ROAD)
- 3 GENERAL NOTES (BRIDGE)
- 4-5 SUMMARY OF PAY QUANTITIES (BRIDGE)
- 6 SUMMARY OF QUANTITIES AND NOTES (TRAFFIC)
- 7 BRIDGE PLAN AND ELEVATION
- 8-9 SUBSTRUCTURE EXCAVATION AND PIPE UNDERDRAIN ASSEMBLY DETAILS
- 10-13 SUBSTRUCTURE REPAIR DETAILS
- 14 DETAILS OF WING REPAIR
- 15 PIER 1 AND 3 REPAIR DETAILS
- 16-17 PIER 2 REPAIR DETAILS
- 18-22 DETAILS OF SUPERSTRUCTURE
- 23 REPAIR BRIDGE ITEM (TYPE B) DETAILS
- 24 SLOPED FACE PARAPET DETAILS
- 25 DETAILS OF LIGHT POLE (SLOPED FACE PARAPET)
- 26-27 BEARING DETAILS
- 28-29 DETAILS OF APPROACH SLABS
- 30-33 TRAFFIC CONTROL

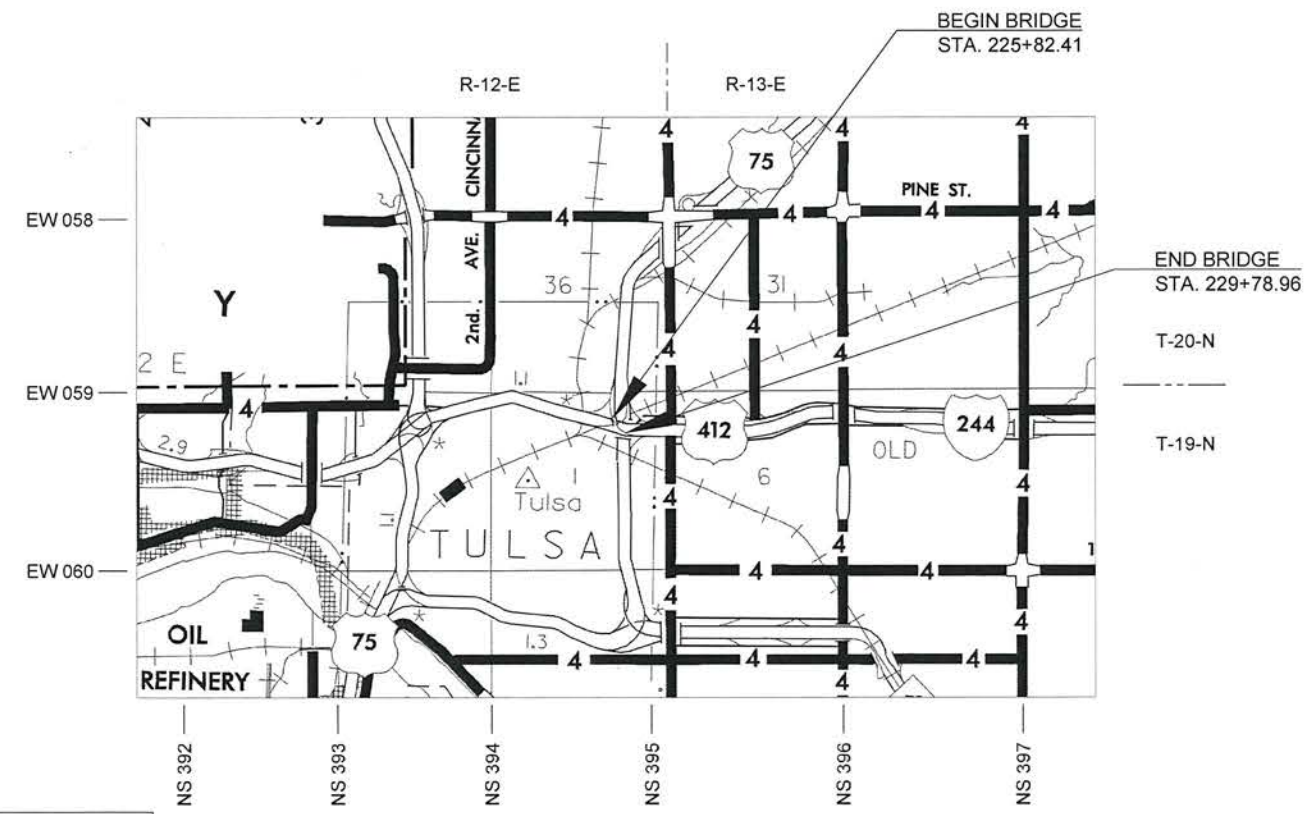
THE FOLLOWING STANDARD DRAWINGS SHALL
BE REQUIRED FOR THIS PROJECT

BRIDGE	ROADWAY	TRAFFIC
SFP1-2-00E	LECS-4-1	TCS1-1-01 TCS14-1-00 GMS1-1-00
EJ-SK-03E	PUD-3-2	TCS2-1-00 TCS18-1-01 CCD2-1-00
EJ-DTL-01E		TCS3-1-01 TCS19-1-01 PBD1-1-00
B40-STL-BM-BRACING-00E		TCS4-1-01 TCS20-1-00 HLG1-1-00
B40-C-ABUT-MISC-01E		TCS5-1-00 TCS21-1-02 HLP1-1-00
		TCS6-1-02 PM4-1-01 HLD1-2-00
		TCS7-1-02 MSD1-1-00 HLD2-2-00
		TCS8-1-00 MSD2-1-00 UPD1-1-00
		TCS9-1-01 MSD3-1-01 UPD2-1-00
		TCS10-1-00 MSD4-1-00 SCD1-1-00
		TCS11-1-01 MSD5-1-00 TEWD1-2-01

CONVENTIONAL SYMBOLS

- RAILROADS
- SECTION LINES
- QUARTER SECTION LINES
- FENCES
- EXISTING ROADS
- CENTERLINE OF SURVEY
- TELEPHONE & TELEGRAPH
- POWER LINES
- OIL WELLS
- BUILDINGS
- DRAINAGE STRUCTURES - IN PLACE
- DRAINAGE STRUCTURES - NEW
- RIGHT-OF-WAY LINES - EXISTING
- RIGHT-OF-WAY LINES - NEW
- RIGHT-OF-WAY MARKERS - EXISTING
- RIGHT-OF-WAY MARKERS - NEW
- CONTROLLED ACCESS
- RIGHT-OF-WAY FENCE
- PROPERTY LINE
- NEW TAKE AREA (VARIOUS PATTERNS)
- WATER LINE
- GAS LINE
- OIL LINE
- STORM SEWER
- SANITARY SEWER

MANDATORY TIE
THIS PROJECT SHALL BE MANDATORILY
TIED WITH TULSA COUNTY JOB PIECES:
28865(04), 28879(04), 28868(04) AND
SHALL BE BID ACCORDINGLY.



ROADWAY LENGTH ----- 0 FT ----- 0 MI.
BRIDGE LENGTH ----- 396.55 FT ----- 0.075 MI.
PROJECT LENGTH ----- 396.55 FT ----- 0.075 MI.

EQUATIONS: NONE
EXCEPTIONS: NONE

PREPARED BY:

John W. Barker

 JOHN W. BARKER, P.E.
 (SHEET NOS. 1 thru 13, 15 thru 17, 23, 24, 26, 27, 30 thru 33)

Stacy A. Loeffler

 STACY A. LOEFFLER, P.E.
 (SHEET NOS. 14, 18 thru 22, 25, 28, 29)

OKLAHOMA DEPARTMENT OF TRANSPORTATION	DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION
DATE APPROVED _____	DATE APPROVED _____
BY _____ CHIEF ENGINEER	BY _____ DIVISION ADMINISTRATOR
PROJECT NO. ACNHPP-272N(149)SS	SHEET NO. 1

5/27/2016 1:34:12 PM - M:\TETRA TECH\1399 ODOT\EC 1414\TASK ORDER 3\CAD\SHEET FILES\01 - TITLE SHEET.DWG - MARQUART, MATT

2009 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY
CONSTRUCTION ENGLISH GOVERN. APPROVED BY THE U.S. DEPARTMENT
OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION, JANUARY 4,
2010.

DESCRIPTION	REVISIONS	DATE

GENERAL CONSTRUCTION NOTES

ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE 2009 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. OKLAHOMA DEPARTMENT OF TRANSPORTATION, EXCEPT AS OTHERWISE NOTED ON THE DRAWINGS.

IN ACCORDANCE WITH THE OKLAHOMA UNDERGROUND FACILITIES DAMAGE PREVENTION ACT THE CONTRACTOR SHALL NOTIFY THE OKLAHOMA ONE-CALL SYSTEM, INC. 48 HOURS PRIOR TO BEGINNING EXCAVATION. OKLAHOMA ONE-CALL SYSTEM, INC. "CALL OKIE" 1-800-522-6543 OR 811.

THE CONTRACTOR IS TO MAKE EVERY EFFORT TO LOCATE AND PROTECT ALL UTILITIES AND STRUCTURES, WHETHER SHOWN OR NOT, PRIOR TO ANY CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL SO CARRY ON CONSTRUCTION WITHOUT CAUSING DAMAGE TO ANY UTILITIES OR STRUCTURES REMAINING IN PLACE.

ALL TREES, BRUSH, AND OTHER DEBRIS THAT MIGHT INTERFERE WITH THE FLOW OF WATER IS TO BE CLEANED OUT TO THE RIGHT-ON-WAY LINE AT EACH STRUCTURE AND BRIDGE, IN A MANNER APPROVED BY THE ENGINEER. ALL COST TO BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF WORK.

ANY SODDED AREAS DISTURBED OUTSIDE THE CONSTRUCTION LIMITS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

SPECIAL PAY ITEM NOTES

- ESTIMATED QUANTITY TO BE USED AS DIRECTED BY THE ENGINEER TO ADJUST PROFILE OF PAVEMENT ADJACENT TO NEW APPROACH SLAB.
- INCLUDES UNCLASSIFIED EXCAVATION AS NECESSARY TO PLACE NEW MATERIAL.

JP 28880(04)					
SUMMARY OF PAY QUANTITIES					
0100 ROADWAY					
ITEM NUMBER		DESCRIPTION	NOTES	UNIT	ESTIMATED QUANTITY
303(A)	2100	AGGREGATE BASE TYPE A	(1)	CY	92.0
307(K)	4300	STABILIZED SUBGRADE	(1)	SY	411.0
317	4270	CEMENT TREATMENT BASE	(1)	SY	411.0
325	5271	SEPARATOR FABRIC	(1)	SY	411.0
414(A)	0210	P.C. CONCRETE PAVEMENT (PLACEMENT)	(1)	SY	411.0
414(G)	5275	P.C. CONCRETE FOR PAVEMENT	(1)	CY	114.0
619(B)	4727	REMOVAL OF CONCRETE PAVEMENT	(1, 2)	SY	411.0

3/19/2016 3:43:43 PM - MATETRA TECH11399 ODOTREC 1414TASK ORDER 3\CAD\SHEETFILES\02 - PAY QUANTITIES (ROAD).DWG - MARQUART, MATT

DESIGN	JSH	3/16	OKLAHOMA DEPARTMENT OF TRANSPORTATION BRIDGE A TULSA COUNTY SUMMARY OF PAY QUANTITIES (ROAD) STATE JOB NO. <u>28880(04)</u> SHEET NO. <u>2</u>
DRAWN	MRM	3/16	
CHECKED	JWB	3/16	
APPROVED			
SQUAD	TT		

GENERAL NOTES

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.

DESCRIPTION	REVISIONS	DATE

3/21/2016 8:53:32 AM - MATETRA TECH11399 ODOTTEC 1414FTASK ORDER 3\CADISHSHEETFILES\03 - GENERAL NOTES.DWG - MARQUART, MATT

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

PNEUMATICALLY PLACED MORTAR:

ITEM "PNEUMATICALLY PLACED MORTAR" CONSISTS OF REPAIRING THE EXISTING BRIDGE SUBSTRUCTURE IN AREAS AS DETERMINED BY THE ENGINEER AND IN ACCORDANCE WITH SECTION 521 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. SHOULD POWER TOOLS BE NECESSARY FOR REMOVAL OF LOOSE CONCRETE, POWER TOOLS SHALL BE OF SUCH SIZE THAT THEIR USE DOES NOT CAUSE DAMAGE TO THE SOUND CONCRETE. 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 50%, 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 MATCH THE ORIGINAL LINES AND GRADES OF THE PIER CAP OR ABUTMENT.

REPAIR MATERIALS:

AFTER EXISTING CONCRETE HAS BEEN REMOVED AND REINFORCING AS BEEN BLASTED CLEAN, IF 50% OR MORE OF THE CIRCUMFERENCE OF THE PRIMARY REINFORCEMENT IS EXPOSED, AS DETERMINED BY THE ENGINEER, THE REMOVED CONCRETE WILL BE REPLACED WITH CLASS AA CONCRETE. ALL OTHER AREAS MAY BE REPAIRED WITH PNEUMATICALLY PLACED MORTAR.

CLASS AA CONCRETE REPAIRS MAY BE CAST-IN-PLACE CONCRETE OR FORMED AND PUMPED CONCRETE. USE MORTAR FOR THE PATCHING MATERIAL. THE CONTRACTOR MAY SUBSTITUTE CLASS AA CONCRETE FOR ANY REPAIR THAT ONLY REQUIRES PNEUMATICALLY PLACED MORTAR AT NO ADDITIONAL EXPENSE TO THE DEPARTMENT.

PHASED CONSTRUCTION:

CONCRETE REMOVAL AND REPLACEMENT IN REGIONS OF PRIMARY REINFORCING WILL BE COMPLETED IN PHASES FOR EACH ABUTMENT SEAT AND PIER CAP. THE PURPOSE OF THE CONSTRUCTION PHASES IS TO PREVENT LOSS OF DEVELOPMENT OF PRIMARY REINFORCING DURING REPAIR PROCEDURES.

PHASING IS SHOWN FOR INDIVIDUAL ABUTMENT SEATS OR PIER CAPS. THE PHASED REPAIR OF ONE SEAT OR CAP IS NOT RELATED TO ANY OTHER SEPARATE SEAT OR CAP.

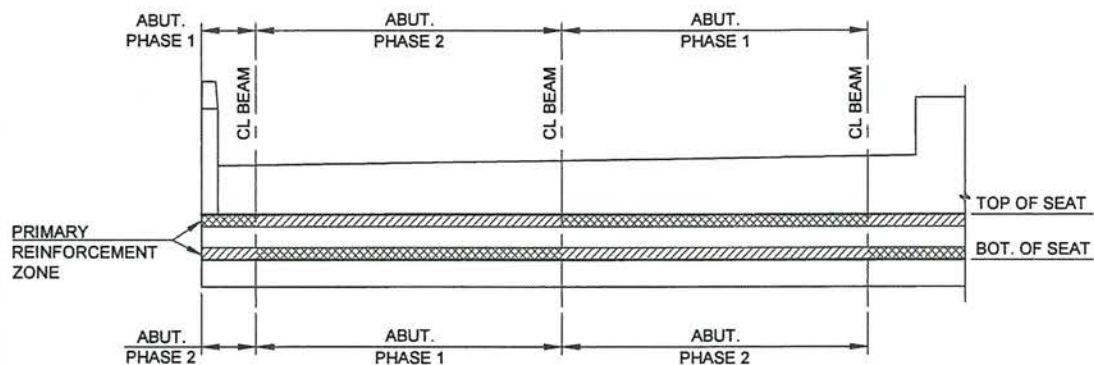
ALL PRIMARY REINFORCEMENT ZONE REPAIR AREAS IN THE SAME PHASE WILL BE COMPLETED AT THE SAME TIME INCLUDING REMOVAL OF DETERIORATED CONCRETE AND PLACEMENT OF NEW PNEUMATICALLY PLACED MORTAR OR CLASS AA CONCRETE. THE REMOVAL OF DETERIORATED CONCRETE FOR THE NEXT PHASE WILL NOT BEGIN UNTIL NEW MORTAR OR CONCRETE FROM THE PREVIOUS PHASE HAS BEEN IN PLACE FOR A MINIMUM OF 10 DAYS OR AT THE DISCRETION OF THE ENGINEER.

ALL OTHER REPAIR AREAS INCLUDING ABUTMENT WINGS, BACK WALL, CURTAIN WALL, AND FRONT FACE OF SEAT NOT IN THE PRIMARY REINFORCEMENT ZONE AS APPROVED BY THE ENGINEER, AND PIER COLUMNS AND CAP SIDE FACES NOT IN THE PRIMARY REINFORCEMENT ZONE, MAY BE REPAIRED AT ANY TIME.

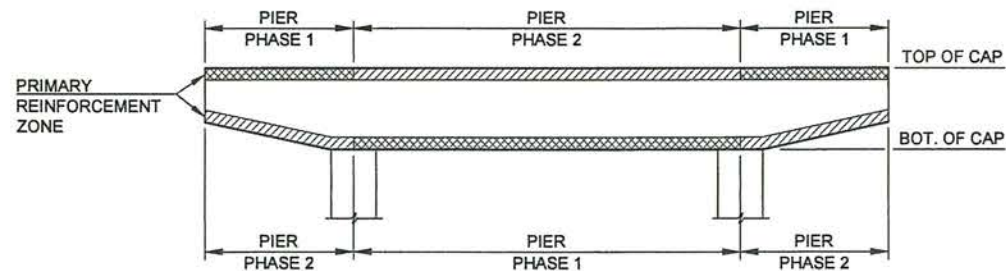
PAYMENT FOR REPAIRS:

INCLUDE ALL COSTS OF THE REPAIRS, INCLUDING PATCHING MATERIAL, SUPPLEMENTAL REINFORCING, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK, IN THE CONTRACT UNIT PRICE OF "PNEUMATICALLY PLACED MORTAR".

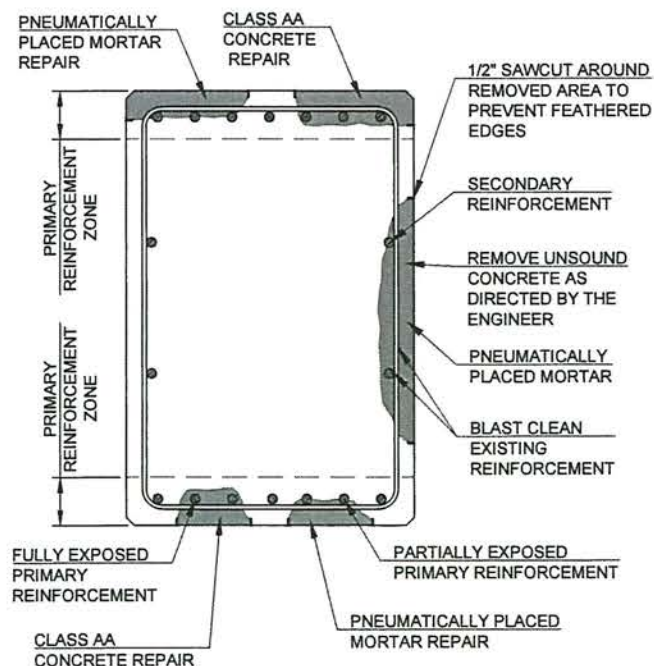
THIS PROJECT IS MANDATORILY TIED WITH TULSA COUNTY JOB PIECES: 28865(04), 28879(04) AND 28868(04). THE COSTS FOR "MOBILIZATION" AND "STAKING" FOR THIS PROJECT SHALL BE INCLUDED WITH STATE JOB PIECE 28865(04).



ABUTMENT SEAT ELEVATION
PEDESTALS OMITTED FOR CLARITY



PIER CAP ELEVATION
PEDESTALS OMITTED FOR CLARITY



SECTION THROUGH PIER CAP
ABUTMENT SEAT SIMILAR

JP 28880(04)		SUMMARY OF PAY QUANTITIES			NBI 18132 396.6' LONG FOUR SPAN STR. WITH 3 STEEL GIRDERS
ITEM NUMBER		DESCRIPTION	NOTES	UNIT	ESTIMATED QUANTITY
501(A)	1306	STRUCTURAL EXCAVATION UNCLASSIFIED		CY	22.0
501(B)	1307	SUBSTRUCTURE EXCAVATION COMMON	(1)	CY	210.0
501(G)	6309	CLSM BACKFILL	(2)	CY	294.0
502(C)	6116	(PL) FALSEWORK JACKING	(3)	LSUM	1.0
504(A)	1304	APPROACH SLAB	(BR-1)	SY	138.0
504(B)	1305	SAW-CUT GROOVING	(BR-1)	SY	907.00
504(C)	6250	SEALED EXPANSION JOINT	(BR-1)(22)	LF	111.0
504(E)	1381	CONCRETE PARAPET	(BR-1)	LF	800.0
507(A)	6172	WEATHERING STEEL FIXED BEARING ASSEMBLY	(BR-1)(4)	EA	6.0
507(B)	6176	WEATHERING STEEL EXPANSION BEARING ASSEMBLY	(BR-1)(5)	EA	12.0
509	6153	SPECIAL CONCRETE FINISH	(6)	LSUM	1
509	6386	SILICONE CONSTRUCTION JOINT	(7)	LF	90.0
509(A)	1326	CLASS AA CONCRETE	(BR-1)(23)	CY	200.0
509(B)	1328	CLASS A CONCRETE	(8)	CY	49.0
510(C)	6137	SLOPE WALL (4')	(9)	SY	35.0
511(B)	6010	EPOXY COATED REINFORCING STEEL	(BR-1)	LB	74,093.0
512(A)	1323	PAINTING EXISTING STRUCTURES	(10)	LSUM	1.0
512(B)	6303	COLLECTION AND HANDLING OF WASTE	(11)	LSUM	1.0
515(A)	6013	WATER REPELLENT (VISUALLY INSPECTED)	(12)	SY	1,236.0
520(A)	6058	PREPARATION OF CRACKS, ABOVE WATER	(13)	LF	85.0
520(C)	6060	EPOXY RESIN, ABOVE WATER	(13)	GAL	2.0
521(A)	6210	PNEUMATICALLY PLACED MORTAR	(13)	SY	65.0
523(A)	6550	SEALER CRACK PREPARATION		LF	114.0
523(B)	6560	SEALER RESIN		GAL	2.0
524(A)	6610	(SP) CARBON FIBER-REINFORCED POLYMER	(14)	SF	910.0
535	6130	(SP) CORROSION INHIBITOR (SURFACE APPLIED)	(15)	SY	265.0
540	4510	(PL) REPAIR BRIDGE ITEM (TYPE A)	(16)	LSUM	1.0
540	4525	(PL) REPAIR BRIDGE ITEM (TYPE B)	(17)	EA	24
613(H)	6204	6" PERFORATED PIPE UNDERDRAIN ROUND	(BR-1)(18)	LF	137.0
613(I)	6207	6" NON-PERF. PIPE UNDERDRAIN RND.	(19)	LF	6.0
619(B)	2510	REMOVAL OF BRIDGE ITEM (TYPE A)	(20)	LSUM	1.0
619(B)	2520	REMOVAL OF BRIDGE ITEM (TYPE B)	(21)	LSUM	1.0

BR-1: PAYMENT FOR THIS ITEM WILL BE BASED ON THE PLAN QUANTITIES ONLY. SEE SECTION 109.01(b) OF THE STANDARD SPECIFICATIONS.

JP 28880(04)		SUMMARY OF PAY QUANTITIES			
ITEM NUMBER		DESCRIPTION	NOTES	UNIT	ESTIMATED QUANTITY
642(B)	0096	CONSTRUCTION STAKING LEVEL II	(24)	LSUM	1.0



NOTE: SEE SHEET 5 FOR PAY ITEM NOTES.

DESIGN	JSH	3/14	OKLAHOMA DEPARTMENT OF TRANSPORTATION	
DRAWN	MRM	3/14	BRIDGE A	TULSA COUNTY
CHECKED	JWB	3/16	SUMMARY OF PAY QUANTITIES (BRIDGE) (SHEET 1 OF 2)	
APPROVED				
SQUAD	TT			
STATE JOB NO. 28880(04)			SHEET NO. 4	

7/27/2016 2:33:46 PM - MATETRA TECH11399 ODOT/EC 1414/TASK ORDER 31CAD/SHEETFILES04 - PAY QUANTITIES.1 (BRIDGE) - REV. 1.DWG - MARQUART, MATT

PAY ITEM NOTES

DESCRIPTION	REVISIONS	DATE
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- ITEM "SUBSTRUCTURE EXCAVATION COMMON" INCLUDES DESIGN AND CONSTRUCTION OF ALL TEMPORARY SHEETING REQUIRED FOR CONSTRUCTION. DESIGN AND PLANS OF THE TEMPORARY SHEETING SHALL BE PREPARED BY A PROFESSIONAL ENGINEER LICENSED IN OKLAHOMA AND SUBMITTED TO THE ENGINEER. THE TEMPORARY SHEETING SHALL BE REMOVED OR CUT OFF AT AN ELEVATION APPROVED BY THE ENGINEER.
- CLSM BACKFILL IS TO BE USED FOR BACKFILL BEHIND ABUTMENTS AFTER PIPE UNDERDRAIN IS INSTALLED AND FOR PLACEMENT OF 2 FEET THICKNESS UNDER APPROACH SLABS.
- (PL) FALSEWORK JACKING IS FOR REMOVAL AND REPLACEMENT OF BEARING ASSEMBLIES AND RECONSTRUCTION OF PIER NO. 2.
- 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".
- 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 ABUTMENTS AND AN ESTIMATED 150 POUNDS OF STRUCTURAL STEEL FOR EXPANSION BEARINGS LOCATED AT PIER NO. 2 TOTALING 1620 POUNDS FOR SIX ABUTMENT 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 "WEATHERING STEEL EXPANSION BEARING ASSEMBLY".
- 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
- 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".
- 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 UNSOUND 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.
- 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.
- 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.
- A PENETRATING WATER REPELLENT SURFACE TREATMENT SHALL BE APPLIED TO THE FOLLOWING CONCRETE SURFACES OF THE BRIDGE:
 - ROADWAY FACE AND TOP OF CONCRETE PARAPET.
 - EDGE OF BRIDGE DECK AND BOTTOM OF SLAB OVERHANG.
 - TOP, SIDE AND ENDS OF PIER CAP.
 - EXPOSED SURFACES OF THE PIER COLUMNS.
 - EXPOSED SURFACES OF THE ABUTMENTS
- TO BE USED AS DIRECTED BY THE ENGINEER.
- 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.

- 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.
- 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)".
- 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.
- 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".
- 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".
- 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.
- 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)".
- 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".

- 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.
- 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:
 - ESTABLISHING HORIZONTAL CONTROL INCLUDING THE STAKING OF CENTERLINE BRIDGE AND APPROACH ROADWAY AND ASSIGNING STATIONING AS DIRECTED BY THE ENGINEER.
 - ESTABLISHING VERTICAL CONTROL INCLUDING THE SETTING OF BENCHMARKS.
 - MEASURING THE ELEVATIONS ALONG THE EXISTING BRIDGE DECK SLAB AT CENTERLINE AND EDGES OF DECK SLAB AND AT EACH BEAM LINE.
 - 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.
 - 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".

3/21/2015 9:14:44 AM - MATETRA TECH\1399 ODOT\EC 1414\TASK ORDER 3\CAD\SHSHEETFILES\05-PAY QUANTITIES.2 (BRIDGE).DWG - MARQUART, MATT

DESIGN	JSH	3/14	OKLAHOMA DEPARTMENT OF TRANSPORTATION	
DRAWN	MRM	3/14	BRIDGE A	TULSA COUNTY
CHECKED	JWB	3/16	SUMMARY OF PAY QUANTITIES (BRIDGE) (SHEET 2 OF 2)	
APPROVED				
SQUAD	TT			
			STATE JOB NO. 28880(04)	SHEET NO. 5

GENERAL CONSTRUCTION NOTES

ANY SIGNS AND/OR DELINEATORS WHICH ARE TO BE REMOVED DURING THIS PROJECT WILL BE STORED IN A PROTECTED AREA DESIGNATED BY THE RESIDENT ENGINEER, UNTIL SUCH A TIME THAT THEY ARE TO BE RESET BY THE CONTRACTOR. COST OF THIS WORK TO BE INCLUDED IN OTHER ITEMS OF WORK.

THE CONTRACTOR IS RESPONSIBLE FOR PROPER BARRICADES, LIGHTS, SIGNING, AND DEVICES WITHIN THE LIMITS OF CONSTRUCTION AND DETOUR ROUTE(S). ALL CONSTRUCTION SIGNING WILL BE DONE ACCORDING TO STANDARDS SET FORTH IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION", AND AS SHOWN ON TCS STANDARD DRAWINGS.

ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL MEET ODOT'S "QUALITY STANDARDS FOR TEMPORARY TRAFFIC DEVICES".

ANY DAMAGE CAUSED BY THE CONTRACTOR TO ANY STRUCTURES, ROADWAY SURFACES, STRIPING, RAISED PAVEMENT MARKERS, GUARDRAIL, SLOPES, AND SIGNS SHALL BE REPLACED OR REPAIRED AT CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE ENGINEER.

THE ITEMS TO BE REMOVED AND/OR RESET SHALL BE HANDLED WITH CARE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DURING THESE OPERATIONS.

THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE AREAS UNDER THE BRIDGES FROM FALLING DEBRIS AND BE SOLELY RESPONSIBLE FOR SAFEGUARDING THESE AREAS.

THE CONTRACTOR MUST NOTIFY THE RESIDENT ENGINEER 14 DAYS PRIOR TO ANY LANE CLOSURE.

THE CONTRACTOR SHALL PROVIDE A PERSON TO BE ON 24 HOUR CALL AS NEEDED AS DETERMINED BY THE ENGINEER. THIS PERSON SHALL HOLD A CURRENT CERTIFICATION FROM THE AMERICAN TRAFFIC SAFETY SERVICE ASSOCIATION (ATSSA) OR THE OKLAHOMA TRAFFIC ENGINEER ASSOCIATION (OTEA) AS A TRAFFIC CONTROL TECHNICIAN OR TRAFFIC CONTROL SUPERVISOR.

(C-158) THE CONTRACTOR SHALL CONTACT THE BRIDGE DIVISION OF THE OKLAHOMA DEPARTMENT OF TRANSPORTATION FOR QUESTIONS CONCERNING COMPLIANCE AND INTERPRETATIONS TO THE A.A.S.H.T.O. "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS".

(C-161) THE ITEMS THAT ARE TO BE REMOVED AND/OR RESET SHALL BE HANDLED WITH CARE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE OCCURRING DURING THESE OPERATIONS.

TRAFFIC CONSTRUCTION PAY QUANTITY NOTES

(TC-14) SEE STANDARD DRAWING PM1-1, PM2-1, PM3-1, PM4-1, PM5-1, PM6-1, PM7-1, PM8-1 (LATEST REVISION). A PART, OR ALL, OF THE QUANTITY SHOWN IS TO BE USED AS FINAL PAVEMENT MARKING.

(TC-21) INCLUDED IN THE COST OF THIS ITEM SHALL BE INSTALLATION, MAINTENANCE, AND REMOVAL. THIS ITEM SHALL BE BID ACCORDINGLY.

(TC-22) AMOUNT SHOWN IS AN APPROXIMATION AND THE ACTUAL AMOUNT OF REMOVAL, IF NECESSARY, SHALL BE DETERMINED BY THE ENGINEER. PRICE BID FOR PAVEMENT MARKING REMOVAL SHALL INCLUDE THE COST OF REMOVING STRIPE, ARROWS, WORDS AND SYMBOLS, AS SHOWN IN THE PLANS. THESE ITEMS MAY CONSIST OF PLASTIC, PAINT OR NON-REMOVABLE MARKING TAPE.

(TC-23) QUANTITY SHOWN FOR THIS ITEM INCLUDES THOSE SIGNS WHICH COMPRISE THE ROUTE MARKER ASSEMBLIES USED TO INDICATE THE DETOUR ROUTE.

(TC-26) ALL CONSTRUCTION TRAFFIC CONTROL WILL BE IMPLEMENTED ACCORDING TO CONSTRUCTION PLANS, AND INSTALLED IN A MANNER APPROVED BY THE ENGINEER, IN ACCORDANCE WITH CHAPTER VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (CURRENT EDITION), AND COMPLIANT WITH APPLICABLE O.D.O.T. STANDARD DRAWINGS. PRICE BID FOR THIS ITEM SHALL BE PAYMENT IN FULL FOR THE INSTALLATION, MAINTENANCE AND SUBSEQUENT REMOVAL OF ALL NECESSARY CONSTRUCTION TRAFFIC CONTROL DEVICES REQUIRED FOR COMPLETION OF THE PROJECT.

ALL SIGNS AND BARRICADES WHICH ARE SHOWN WITH TYPE 'A' LIGHTS IN THE STANDARD DRAWINGS SHALL HAVE THE CORRESPONDING LIGHT ATTACHED DURING NON-DAYLIGHT HOURS.

(TC-30) INCLUDED IN THIS ITEM ARE ALL S.C.S. (SPECIAL CONSTRUCTION SIGNING) SIGNS WHICH ARE BETWEEN 16.00 S.F. AND 32.99 S.F. ALSO INCLUDED IN THIS ITEM SHALL BE THE COST OF INSTALLATION, MAINTENANCE, AND REMOVAL OF THESE SIGNS.

(TC-33) ALL CONSTRUCTION WORK ZONE SIGNS SHALL HAVE FLUORESCENT SHEETING. THE FLUORESCENT SHEETING SHALL MEET THE REQUIREMENTS OF ASTM D 4956 (LATEST REVISION).

THE MANUFACTURER SHALL FURNISH A TYPE 'D' CERTIFICATION IN ACCORDANCE WITH ODOT STANDARD SPECIFICATIONS (CURRENT EDITION) SUBSECTION 106.04. THE CERTIFICATION SHALL INCLUDE TEST RESULTS ON MATERIAL SUBMITTED FOR APPROVAL.

(TC-52) ANY USED TRUCK MOUNTED ATTENUATOR OR CHANGEABLE MESSAGE SIGN TO BE PLACED ON THIS PROJECT SHALL BE SUBJECT TO INSPECTION AND APPROVAL, BY THE OKLAHOMA DEPARTMENT OF TRANSPORTATION, TO ASSURE THAT THEY ARE IN GOOD WORKING CONDITION, PRIOR TO PLACEMENT ON THE PROJECT.

TRAFFIC SIGNING PAY QUANTITY NOTE

(TS-25) QUANTITY SHOWN INCLUDES 579 L.F. TRAFFIC STRIPE (MULTI-POLYMER)(WHITE) AND 621 L.F. TRAFFIC STRIPE (MULTI-POLYMER)(YELLOW) AND WILL BE MEASURED BY THE LINEAR FOOT OF FOUR INCH (6") WIDE TRAFFIC STRIPE.

PAY ITEM NOTES

1. INCLUDES ALL NEW WIRING CONNECTED TO AN EXISTING CIRCUIT. NEW WIRING SHALL BE ALUMINUM AND IN ACCORDANCE WITH THE SPECIAL PROVISIONS. CONTACT MICHAEL WHITLATCH, 918-597-2091, AT CITY OF TULSA FOR SPECIAL DECALS AND AND FURTHER INFORMATION.
2. POLE, MAST ARM AND LUMINAIRE TO RECEIVE SPECIAL AESTHETIC TREATMENT. SEE SPECIAL PROVISIONS FOR POWDER-COATING REQUIREMENTS. EXISTING POLE AND MAST ARM MAY BE USED, IF APPROVED BY ENGINEER, OR NEW MATERIAL.

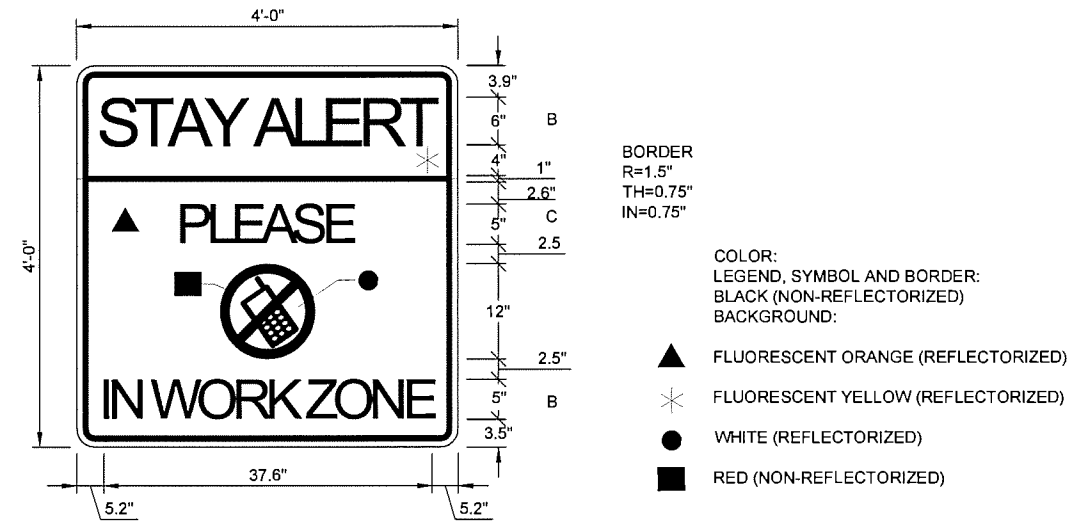
SPECIAL NOTE

(P-1) PULL BOXES SHALL BE PLASTIC (POLYMER CONCRETE) MEETING REQUIREMENTS OF THE WESTERN UNDERGROUND COMMITTEE AND ANSI/SCTE 77 2002, TIER 15, WITH MINIMUM VERTICAL TEST LOAD OF 20K LBS.

DESCRIPTION	REVISIONS	DATE
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SUMMARY OF QUANTITIES			
DESCRIPTION	NOTES	UNIT	ESTIMATED QUANTITY
0300 TRAFFIC			
2" GALV. STEEL ELECTRICAL CONDUIT EXPOSED	(1)	LF	380
JUNCTION BOX (6"x6"x4")	(1)	EA	2
PULL BOX (SIZE I)	(1)(P-1)	EA	2
(PL)REMOVAL OF LIGHT POLE	(2)	EA	2
(PL)RESET OF LIGHT POLE	(2)	EA	2
(PL)REMOVE & RESET EXISTING SIGNS		EA	1
ROADWAY LUMINAIRE		EA	2
TRAFFIC STRIPE (MULTI-POLYMER)(6" WIDE)	(TC-14)(TS-25)	LF	1200
REMOVABLE PAVEMENT MARKING TAPE (4" WIDE)	(TC-61,70,75)	LF	3000
PAVEMENT MARKING REMOVAL (TRAFFIC STRIPE)	(TC-22,70,75)	LF	3000
(PL) CONSTRUCTION ZONE PAVEMENT MARKERS (FLEX TAB) TYPE 2-1	(TC-21,61,70,73,75)	EA	600
(PL)TRUCK MOUNTED ATTENUATOR	(TC-52,70,76,77)	SD	28
ARROW DISPLAY (TYPE C)	(TC-84)	SD	10
CONSTRUCTION SIGNS 0 SF TO 6.25 SF	(TC-23,26,33,84)	SD	3640
CONSTRUCTION SIGNS 6.26 SF TO 15.99 SF	(TC-23,26,33,84)	SD	1760
CONSTRUCTION SIGNS 16.0 SF TO 32.99 SF	(TC-26,30,33,84)	SD	250
CONSTRUCTION BARRICADES (TYPE III)	(TC-26,84)	SD	270
WING BARRICADES	(TC-26,84)	EA	20
WARNING LIGHTS (TYPE A)	(TC-26,84)	SD	540
DRUMS	(TC-26,84)	SD	400
PORT. CHANGEABLE MESSAGE SIGN	(TC-52,84,85)	SD	180

TRAFFIC PAY ITEMS:
THIS PROJECT IS MANDATORILY TIED WITH TULSA COUNTY JOB PIECES: 28865(04), 28879(04) AND 28868(04). THE COSTS FOR TRAFFIC ITEMS FOR JOB PIECE 28880(04) SHALL BE INCLUDED IN THE UNIT PRICES FOR TRAFFIC ITEMS LISTED ON THE PROJECT WITH STATE JOB PIECE 28865(04).



(TC-61) ANY DAMAGE TO A FINISHED OR EXISTING SURFACE RESULTING FROM THE CONTRACTOR'S NEGLIGENCE IN THE REMOVAL OF CONSTRUCTION ZONE PAVEMENT MARKERS OR CHANNELIZING DEVICES AND THE BITUMINOUS ADHESIVE USED IN THEIR INSTALLATION, SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE ENGINEER.

(TC-70) THIS ITEM IS AN ESTIMATED QUANTITY TO BE USED AS DEEMED NECESSARY BY THE ENGINEER.

(TC-73) QUANTITY SHOWN INCLUDES 300 EA. (WHITE) AND 300 EA. (YELLOW) CONSTRUCTION ZONE PAVEMENT MARKERS (FLEX TABS). THESE CONSTRUCTION ZONE PAVEMENT MARKERS SHALL BE EITHER "DAVIDSON PLASTICS: MODEL TOM", OR AN APPROVED EQUAL. PRICE BID FOR THIS ITEM SHALL INCLUDE THE INITIAL PLACEMENT, SUBSEQUENT REPLACEMENT, AND REMOVAL. THE CONSTRUCTION ZONE PAVEMENT MARKERS (FLEX TABS) SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND AS SHOWN ON STANDARD DRAWING TCS21-1-(LATEST REVISION).

(TC-75) TEMPORARY PAVEMENT MARKINGS SHALL BE IN PLACE THE SAME DAY THAT EXISTING PAVEMENT MARKINGS ARE REMOVED FROM ANY ROADWAY OPEN TO TRAFFIC. ALSO, ALL TEMPORARY PAVEMENT MARKINGS SHALL BE REMOVED PRIOR TO THE INSTALLATION OF FINAL STRIPING.

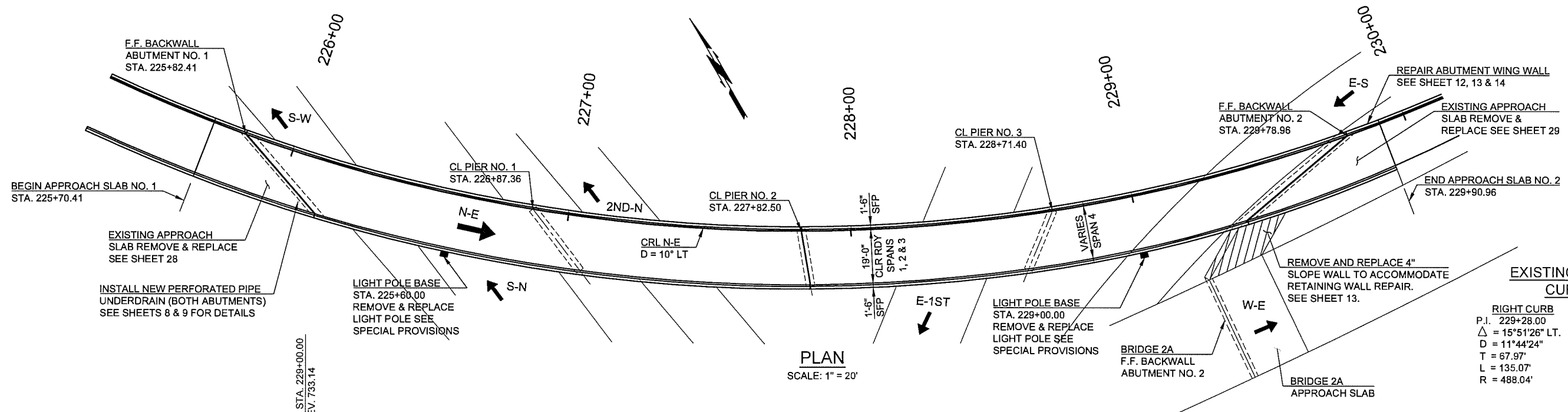
(TC-84) 90 CONSTRUCTION CALENDAR DAYS WERE USED TO COMPUTE THE SIGN DAY PAY ITEMS. THE AMOUNT OF CALENDAR DAYS USED TO COMPUTE THE SIGN DAY PAY ITEMS IS AN ESTIMATED QUANTITY ONLY, BASED ON THE CURRENT O.D.O.T STANDARDS AND SUGGESTED CONSTRUCTION SEQUENCE FOR THIS PROJECT. THESE ESTIMATED SIGN DAY QUANTITIES MAY CHANGE AS THE PROJECT'S CONSTRUCTION TRAFFIC CONTROL IS MODIFIED DURING CONSTRUCTION.

(TC-85) THESE SIGNS MUST BE ON THE OKLAHOMA DEPARTMENT OF TRANSPORTATION LIST OF APPROVED CHANGEABLE MESSAGE SIGNS. FOR A LIST OF THE APPROVED SIGNS GO TO THE OKLAHOMA DEPARTMENT OF TRANSPORTATION WEBSITE AT: [HTTP://WWW.OKLADOT.STATE.OK.US/TRAFFIC/QPL/INDEX.PHP.](http://www.okladot.state.ok.us/traffic/qpl/index.php)

DESIGN	JWB	9/15	OKLAHOMA DEPARTMENT OF TRANSPORTATION TULSA COUNTY
DRAWN	MRM	9/15	
CHECKED	JLC	3/16	
APPROVED			
SQUAD	TT		
SUMMARY OF QUANTITIES AND NOTES (TRAFFIC)			STATE JOB NO. 28880(04) SHEET NO. 6

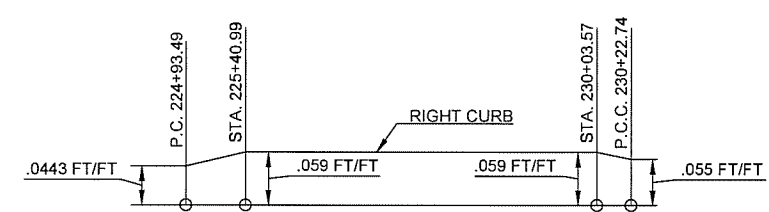
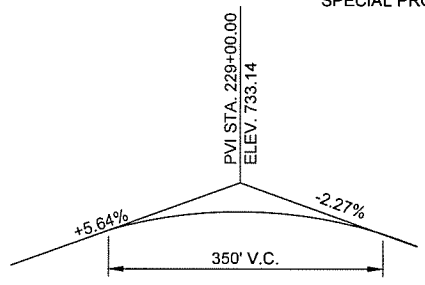
5/12/2016 3:29:52 PM - MATETRA TECH11399 ODOT/EC-1414/TASK ORDER 3/CAD/SHEETFILES/06 - PAY QUANTITIES (TRAFFIC).DWG - MARQUART, MAT

DESCRIPTION	REVISIONS	DATE



EXISTING HORIZONTAL CURVE DATA

RIGHT CURB	C.R.L.
P.I. 229+28.00	P.I. 227+78.69
$\Delta = 15^{\circ}51'26"$ LT.	$\Delta = 52^{\circ}55'30"$ LT.
$D = 11^{\circ}44'24"$	$D = 10^{\circ}00'00"$
$T = 67.97'$	$T = 285.20'$
$L = 135.07'$	$L = 529.25'$
$R = 488.04'$	$R = 572.96'$
	$V = 40$ M.P.H
	$S = 0.059$ FT/FT.



REHABILITATION DESIGN DATA

AASHTO SEVENTEENTH EDITION
STRENGTH DESIGN METHOD (LOAD FACTOR DESIGN)
CONCRETE CLASS "A" $F'_c = 3,000$ P.S.I
CONCRETE CLASS "AA" $F'_c = 4,000$ P.S.I
STRUCTURAL STEEL M270 (GRADE 50W) $F_y = 50,000$ P.S.I
REINFORCING STEEL (GRADE 60) $F_y = 60,000$ P.S.I

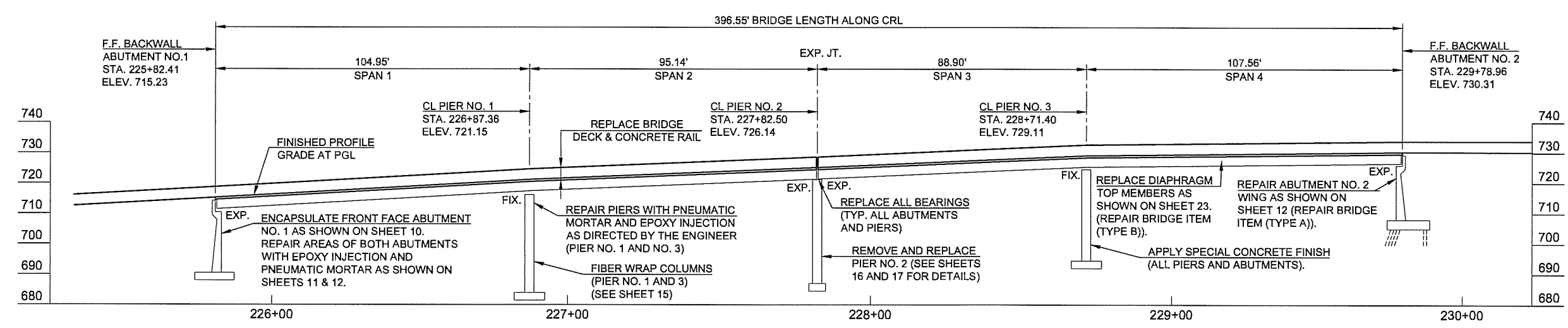
LOADING: HS20-44 PLUS 20 PSF FUTURE WEARING SURFACE

ORIGINAL DESIGN DATA (FOR INFORMATION ONLY)

SERVICE LOAD DESIGN (ALLOWABLE STRESS DESIGN)
LOADING: H20-44 WITH 20 PSF FOR FUTURE WEARING SURFACE & PPM 20-4

CLASS "A" CONCRETE: 1,000 P.S.I
CLASS "AA" (AE) CONCRETE: 1,200 P.S.I
STRUCTURAL STEEL: 20,000 P.S.I
REINFORCING STEEL: 20,000 P.S.I

MAX. FOUNDATION PRESSURE
ABUTMENT NO. 1: 3.2 TONS/S.F.
ABUTMENT NO. 2: 37 TONS/PILE
PIERS: 7.2 TONS/S.F.



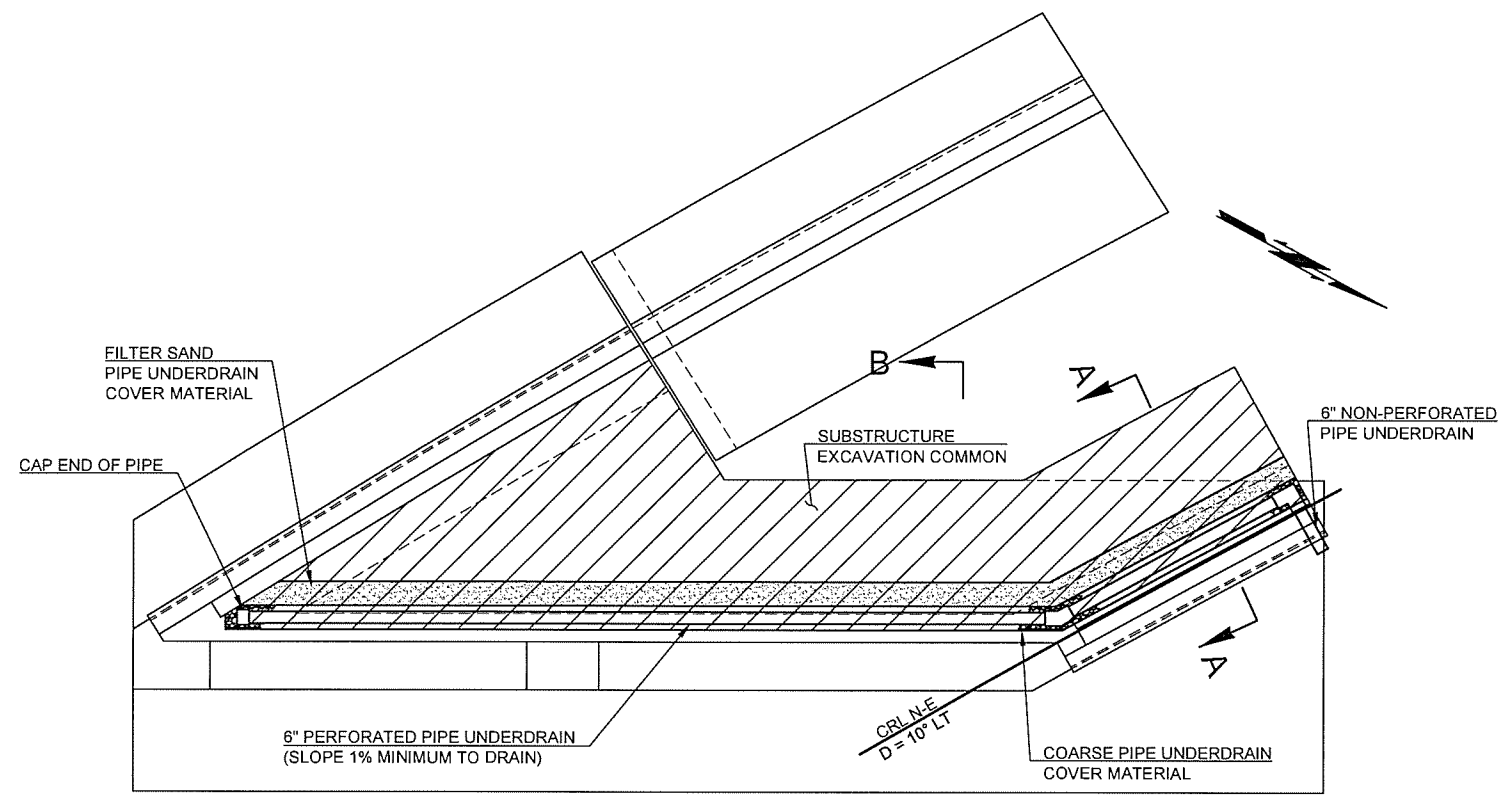
NOTE:
STATIONS, VERTICAL AND HORIZONTAL CURVE DATA, ELEVATIONS SUPERELEVATION DATA AND DIMENSIONS SHOWN ARE FOR INFORMATIONAL PURPOSES ONLY AND ARE TAKEN FROM EXISTING PLANS, PROJECT NO. I-244-2(115)096.

EXISTING BRIDGE DESCRIPTION
396.6' LONG CURVED FOUR SPAN STRUCTURE. CONSISTING OF 3 STEEL GIRDERS, (SPANS 104.95'-95.14'-88.90'-107.56') WITH VARYING SKEW HAVING A CLEAR ROADWAY WIDTH OF 19'-0".

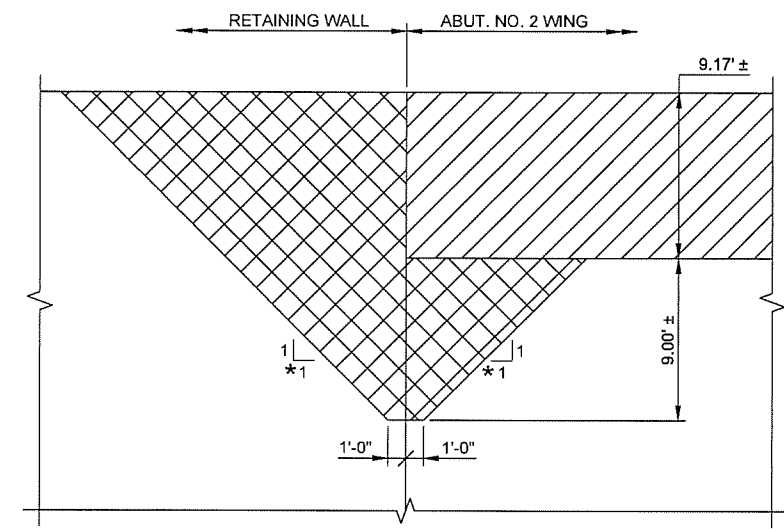
DESIGN	JSH	12/13	OKLAHOMA DEPARTMENT OF TRANSPORTATION	
DRAWN	MRM	12/13	BRIDGE A	TULSA COUNTY
CHECKED	JWB	3/16	BRIDGE PLAN AND ELEVATION	
APPROVED				
SQUAD	TT			
			STATE JOB NO. 28880(04)	SHEET NO. 7

3/21/2016 9:44:04 AM - M:\TETRA TECH\11399\ODOT\EC 1414\TASK ORDER 3\CAD\SHSHEETFILES\07 - P&E BRIDGE.DWG - MARQUART, MATT

DESCRIPTION	REVISIONS	DATE



ABUTMENT NO. 1 PIPE UNDERDRAIN PLAN

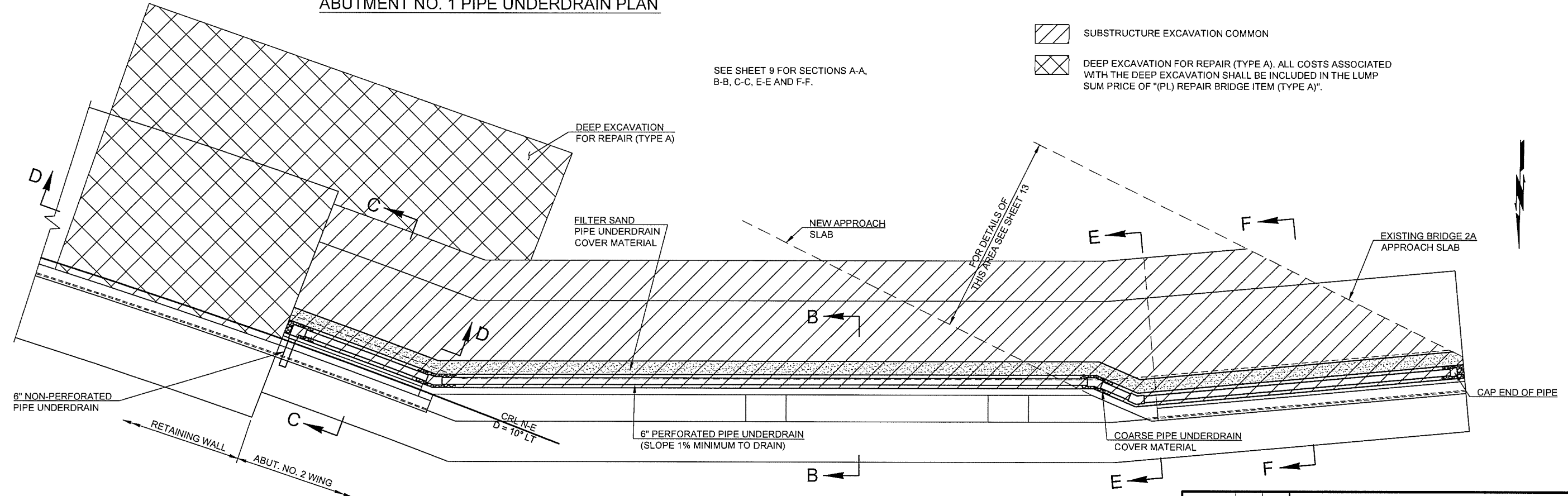


SECTION D-D

* OR AS REQUIRED BY OSHA

-  SUBSTRUCTURE EXCAVATION COMMON
-  DEEP EXCAVATION FOR REPAIR (TYPE A). ALL COSTS ASSOCIATED WITH THE DEEP EXCAVATION SHALL BE INCLUDED IN THE LUMP SUM PRICE OF "(PL) REPAIR BRIDGE ITEM (TYPE A)".

SEE SHEET 9 FOR SECTIONS A-A, B-B, C-C, E-E AND F-F.

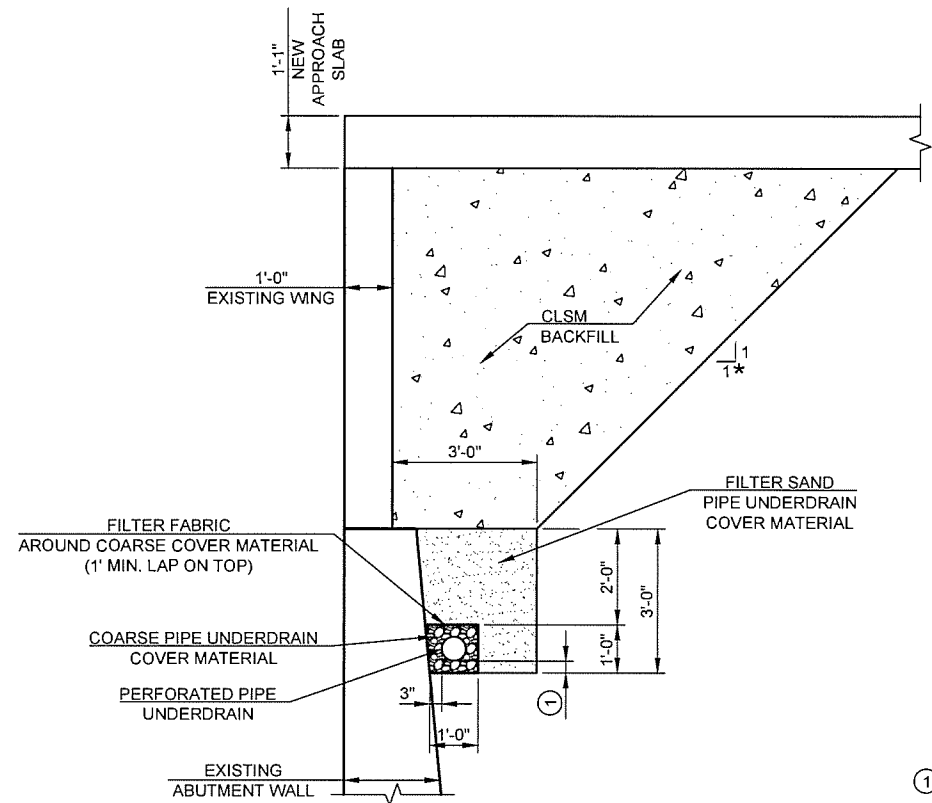


ABUTMENT NO. 2 PIPE UNDERDRAIN PLAN

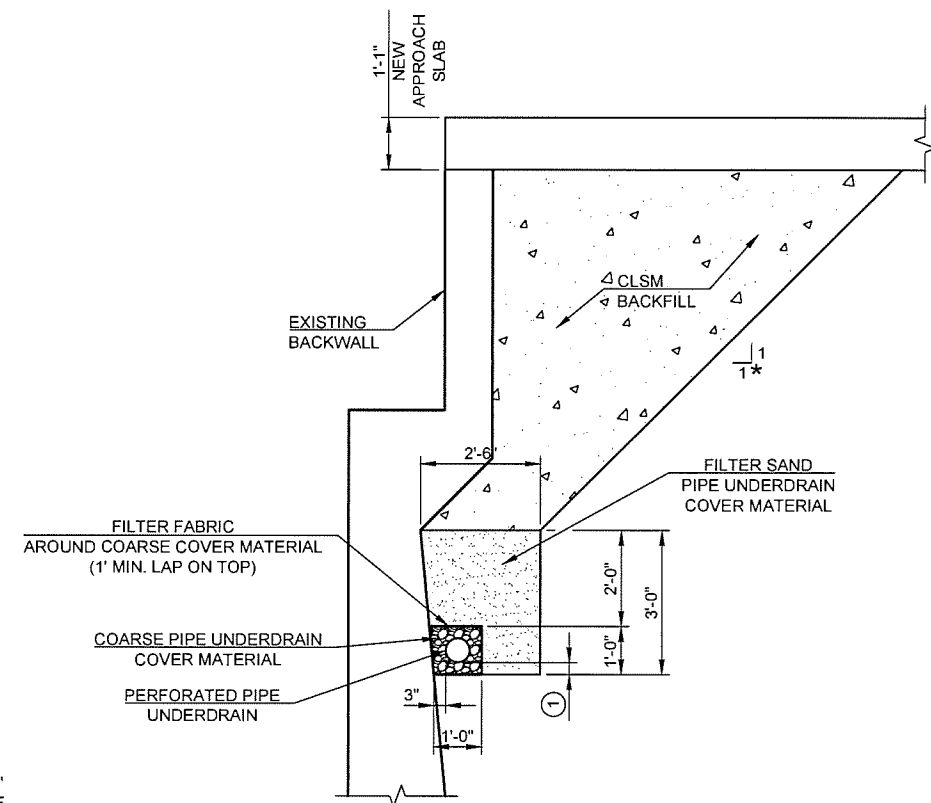
DESIGN	JSH	12/13	OKLAHOMA DEPARTMENT OF TRANSPORTATION BRIDGE A TULSA COUNTY SUBSTRUCTURE EXCAVATION AND PIPE UNDERDRAIN ASSEMBLY DETAILS (SHEET 1 OF 2) STATE JOB NO. 28880(04)
DRAWN	MRM	12/13	
CHECKED	JWB	3/16	
APPROVED			
SQUAD	TT		
			SHEET NO. 8

3/21/2016 9:47:26 AM - M:\TETRA TECH\11395\ODOT\EC 1414\FY14\TASK ORDER 3\CAD\3\SUBSTRUCTURE EXCAV.1.DWG - MARQUART, MATT

DESCRIPTION	REVISIONS	DATE



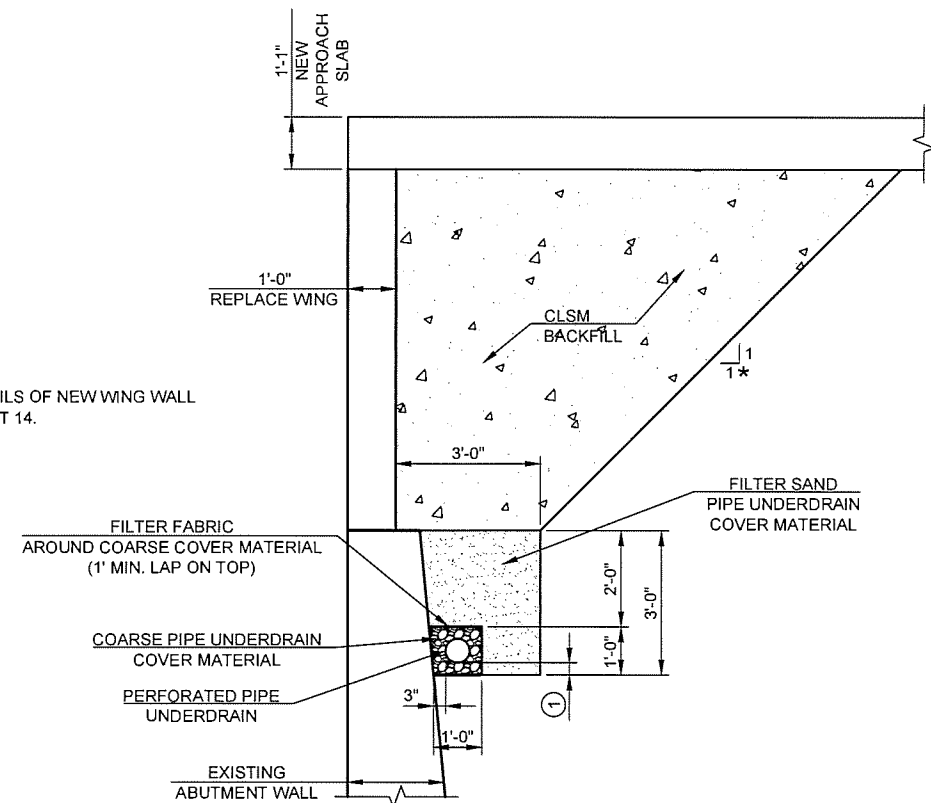
SECTION A-A



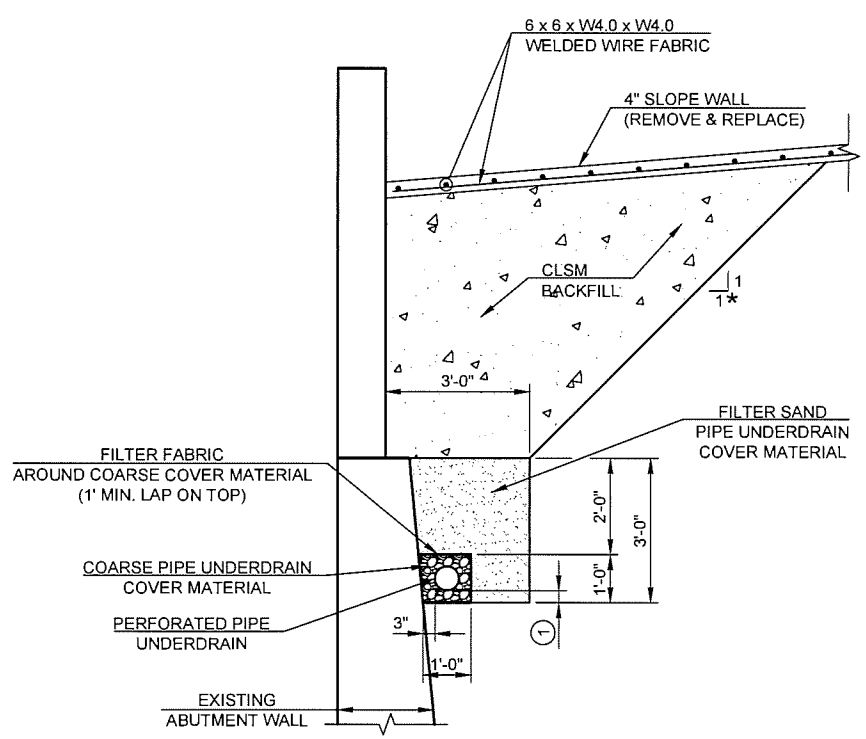
SECTION B-B

① SET BOTTOM OF PIPE 3" ABOVE THE BOTTOM OF THE ABUTMENT AT THE LOW END

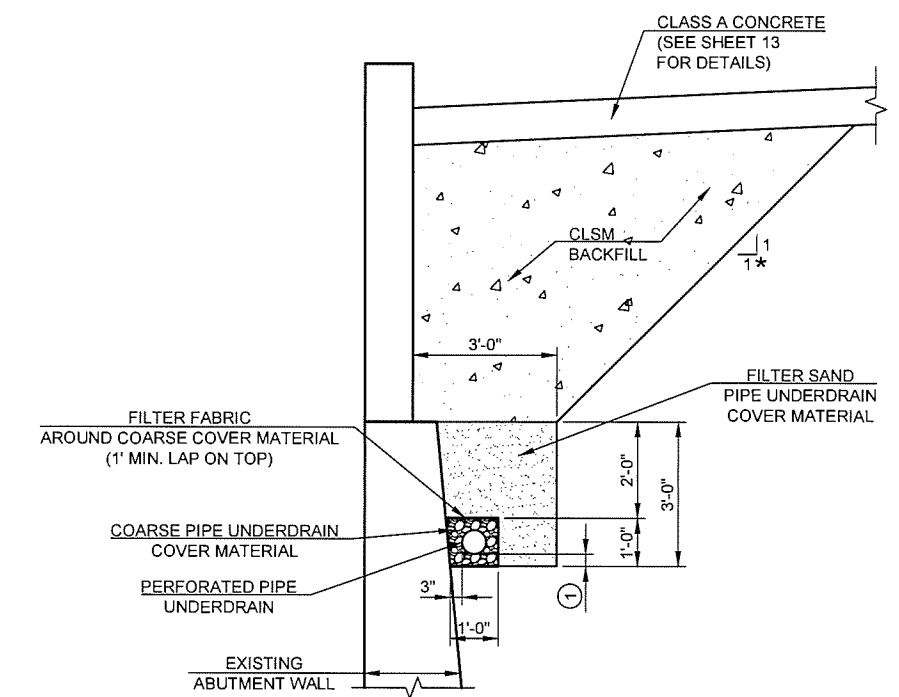
* OR AS REQUIRED BY OSHA



SECTION C-C



SECTION E-E



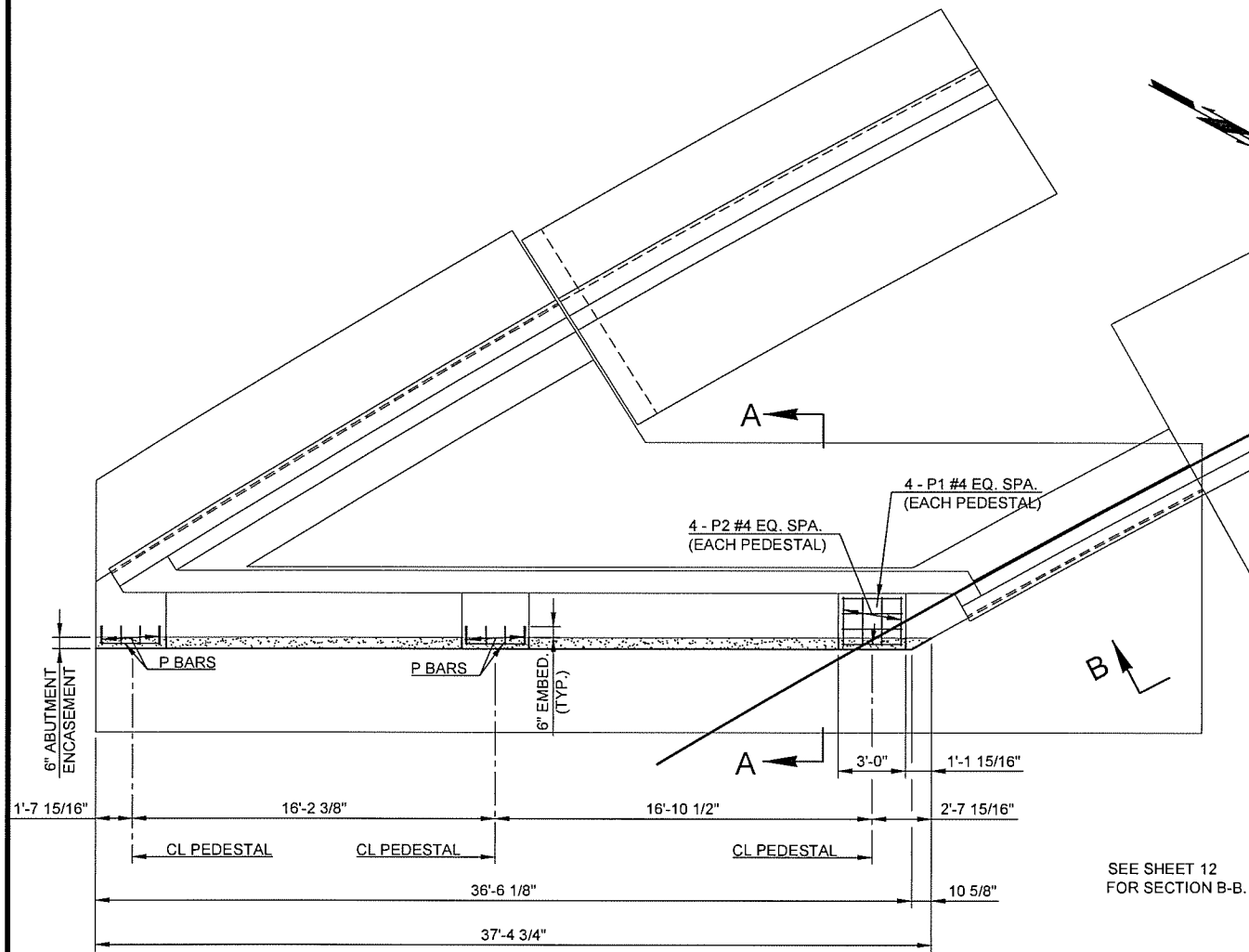
SECTION F-F

NOTE:
FOR DETAILS OF NEW WING WALL
SEE SHEET 14.

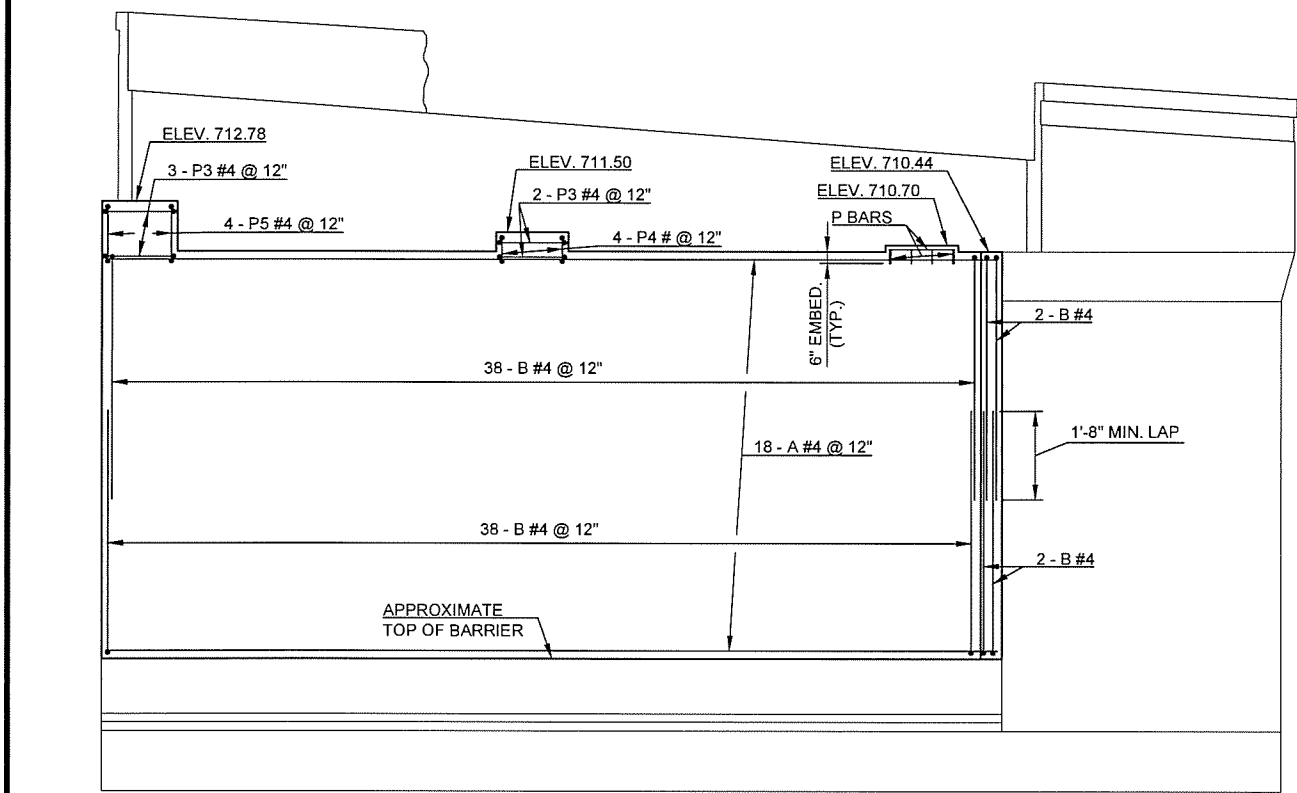
DESIGN	JSH	12/13	OKLAHOMA DEPARTMENT OF TRANSPORTATION BRIDGE A TULSA COUNTY SUBSTRUCTURE EXCAVATION AND PIPE UNDERDRAIN ASSEMBLY DETAILS (SHEET 2 OF 2) STATE JOB NO. 28880(04)
DRAWN	MRM	12/13	
CHECKED	JWB	3/16	
APPROVED			
SQUAD	TT		

3/21/2016 10:02:57 AM - MATETRA TECH111399 ODOT/EC 1414/TASK ORDER 3/CAD/SHEETFILES/009-SUBSTRUCTURE EXCAV.2.DWG - MARQUART, MATT

DESCRIPTION	REVISIONS	DATE



ABUTMENT NO. 1 PLAN



ABUTMENT NO. 1 ELEVATION

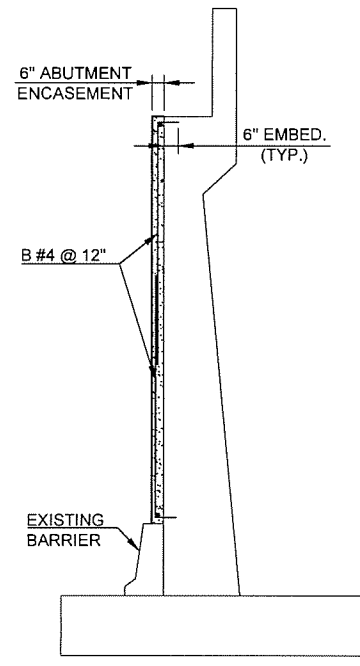
3/21/2016 10:06:24 AM - MATETRA TECH11399 DDDTEC 1414TASK ORDER 3\CAD\SHEETFILES\10 - SUBSTRUCREPAIR.DWG - MARQUART, MAT

SEE SHEET 12 FOR SECTION B-B.

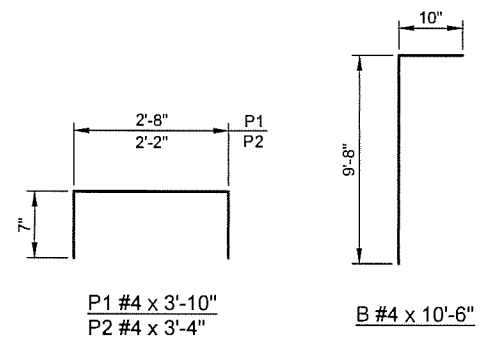
NOTE:
 BEFORE ENCASING THE EXISTING ABUTMENT WITH NEW CONCRETE, THE CONTRACTOR SHALL REMOVE ALL UNSOUND CONCRETE FROM THE ABUTMENT. AFTER REMOVAL OF UNSOUND CONCRETE, EXPOSED REINFORCING STEEL SHALL BE CLEANED, AND CORROSION INHIBITOR SHALL BE APPLIED TO EXISTING CONCRETE SURFACES AND ALLOWED TO DRY BEFORE ENCASING WITH NEW CONCRETE. ONLY THE SURFACES TO BE ENCASED SHALL BE TREATED WITH THE CORROSION INHIBITOR. ALL COST FOR THE REMOVAL OF UNSOUND CONCRETE AND CLEANING EXPOSED REBAR SHALL BE INCLUDED IN THE PRICE BID PER CUBIC YARD OF "CLASS A CONCRETE".

A SPECIAL CONCRETE FINISH SHALL BE APPLIED TO THE EXPOSED SURFACES OF THE ABUTMENTS AFTER ALL REPAIRS ARE COMPLETE.

ANCHORAGE SYSTEM:
 THE CONTRACTOR SHALL USE AN ANCHORAGE SYSTEM THAT HAS BEEN APPROVED BY ODOT'S MATERIALS DIVISION. FOR EMBEDMENT OF REINFORCING STEEL THE ANCHORAGE SYSTEM SHALL BE CAPABLE OF DEVELOPING THE FULL STRENGTH OF THE REINFORCING STEEL THAT IS TO BE ANCHORED. THE EMBEDMENT DEPTH SHOWN IS TO BE ADJUSTED TO MEET THE REQUIREMENTS. ANCHORAGE SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURE'S SPECIFICATIONS FOR THE SYSTEM USED.
 ALL COSTS OF THE ANCHORAGE SYSTEM INCLUDING LABOR, MATERIALS, TOOLS, DRILLING, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHOWN IN THE PLANS SHALL BE INCLUDED IN THE PRICE BID PER POUND OF "EPOXY COATED REINFORCING STEEL".



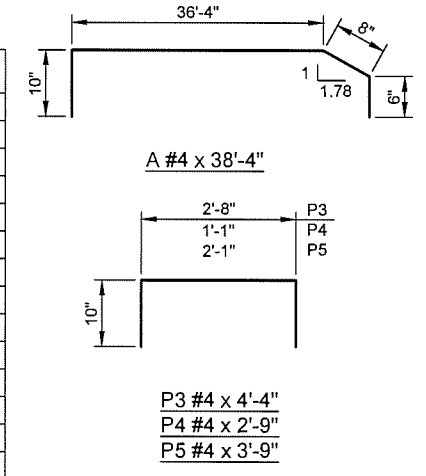
SECTION A-A



ABUTMENT NO. 1 ENCAPSULATION BAR LIST				
MARK	SIZE	NO.	FORM	LENGTH
EPOXY COATED REINFORCING				
A	#4	18	BNT	38'-4"
B	#4	80	BNT	10'-6"
P1	#4	12	BNT	3'-10"
P2	#4	12	BNT	3'-4"
P3	#4	5	BNT	4'-4"
P4	#4	4	BNT	2'-9"
P5	#4	4	BNT	3'-9"

① INCLUDES ONE MIN. LAP OF 1'-8"

ABUTMENT QUANTITIES				
ITEM	UNIT	ABUT. NO. 1	ABUT. NO. 2	TOTAL
SUBSTRUCTURE EXCAVATION COMMON	CY	50.0	160.0	210.0
CLSM BACKFILL	CY	40.0	140.0	180.0
SPECIAL CONCRETE FINISH	LSUM	1.0	1.0	1.0
CLASS A CONCRETE	CY	12.0	8.0	20.0
SLOPEWALL (4")	SY	0.0	3.0	3.0
EPOXY COATED REINFORCING STEEL	LB	1112.0	720.0	1832.0
WATER REPELLENT (VISUALLY INSPECTED)	SY	155.0	230.0	385.0
PREPARATION OF CRACKS, ABOVE WATER	LF	0.0	85.0	85.0
EPOXY RESIN, ABOVE WATER	GAL	0.0	2.0	2.0
PNEUMATICALLY PLACED MORTAR	SY	15.0	30.0	45.0
(SP) CORROSION INHIBITOR (SURFACE APPLIED)	SY	110.0	52.0	162.0
6" NON-PERF. PIPE UNDERDRAIN RND.	LF	3.0	3.0	6.0
6" PERFORATED PIPE UNDERDRAIN ROUND	LF	46.0	91.0	137.0



DESIGN	JSH	12/13	OKLAHOMA DEPARTMENT OF TRANSPORTATION	
DRAWN	MRM	12/13	BRIDGE A TULSA COUNTY	
CHECKED	JWB	3/16	SUBSTRUCTURE REPAIR DETAILS (SHEET 1 OF 4)	
APPROVED				
SQUAD	TT			
STATE JOB NO. 28880(04)			SHEET NO. 10	

DESCRIPTION	REVISIONS	DATE

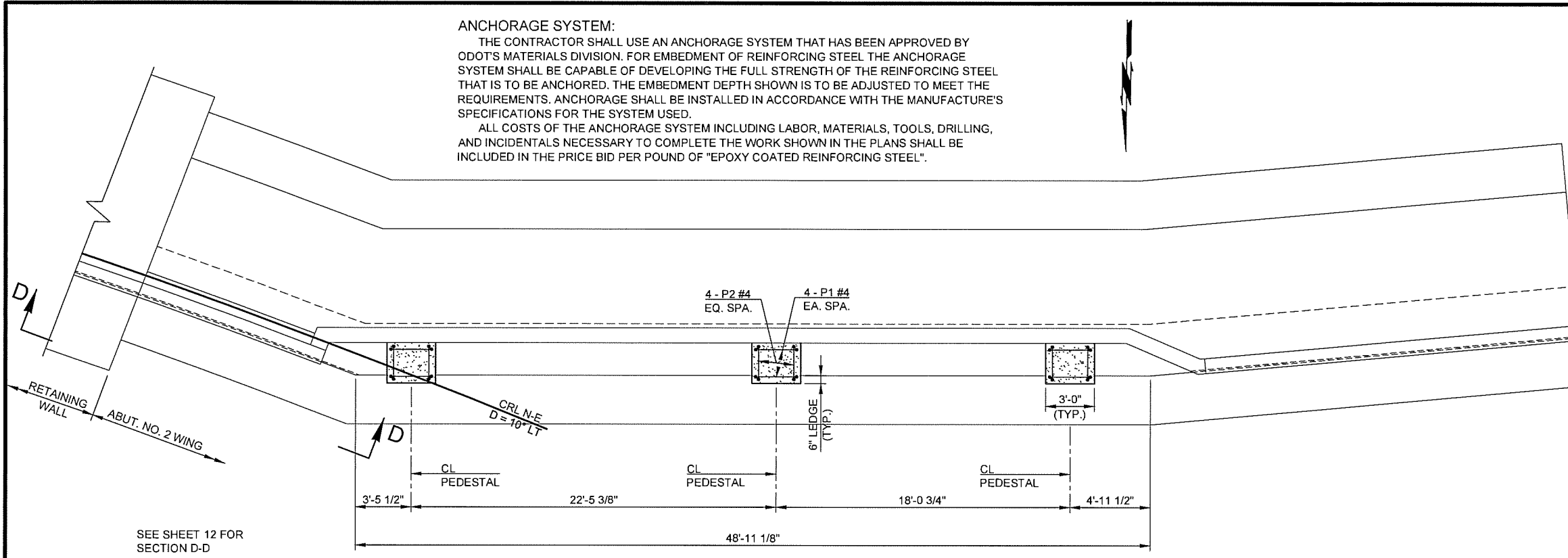
ANCHORAGE SYSTEM:

THE CONTRACTOR SHALL USE AN ANCHORAGE SYSTEM THAT HAS BEEN APPROVED BY ODOT'S MATERIALS DIVISION. FOR EMBEDMENT OF REINFORCING STEEL THE ANCHORAGE SYSTEM SHALL BE CAPABLE OF DEVELOPING THE FULL STRENGTH OF THE REINFORCING STEEL THAT IS TO BE ANCHORED. THE EMBEDMENT DEPTH SHOWN IS TO BE ADJUSTED TO MEET THE REQUIREMENTS. ANCHORAGE SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURE'S SPECIFICATIONS FOR THE SYSTEM USED.

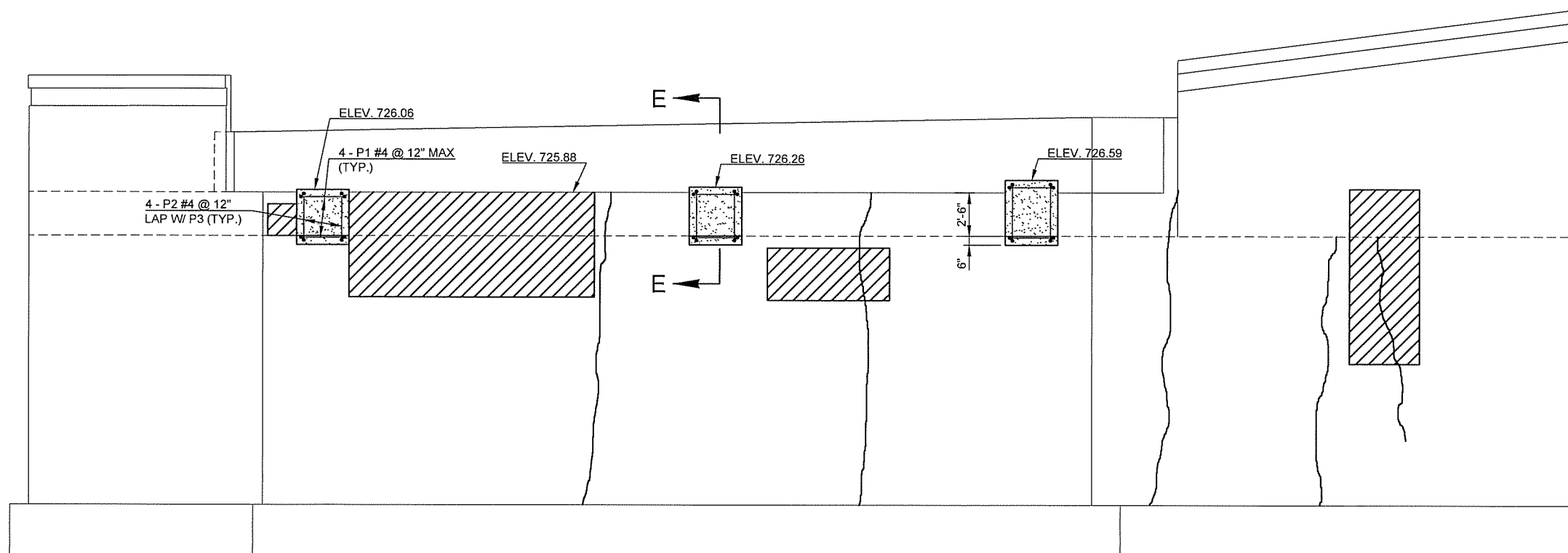
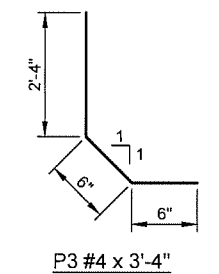
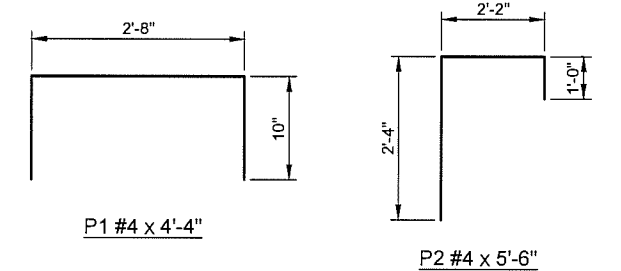
ALL COSTS OF THE ANCHORAGE SYSTEM INCLUDING LABOR, MATERIALS, TOOLS, DRILLING, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHOWN IN THE PLANS SHALL BE INCLUDED IN THE PRICE BID PER POUND OF "EPOXY COATED REINFORCING STEEL".

ABUTMENT NO. 2 BAR LIST

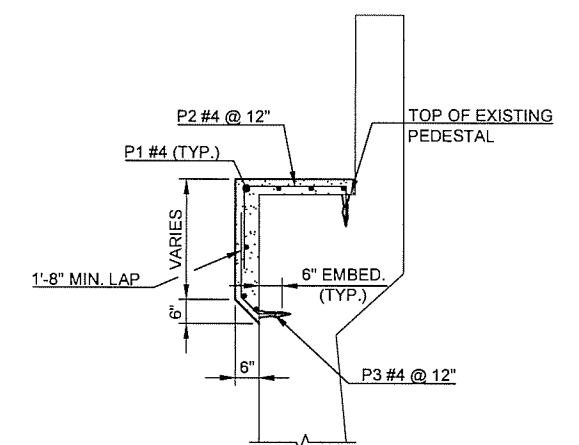
MARK	SIZE	NO.	FORM	LENGTH
EPOXY COATED REINFORCING BARS				
P1	#4	12	BNT	4'-4"
P2	#4	12	BNT	5'-6"
P3	#4	12	BNT	3'-3"



ABUTMENT NO. 2 PLAN



ABUTMENT NO. 2 ELEVATION



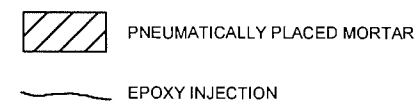
SECTION E-E

NOTES:

REPAIRS ARE NOT LIMITED TO THE DESIGNATED AREAS AS SHOWN, THE SPECIFIC REPAIR LOCATION, CLASSIFICATION AND EXTENT OF REPAIR SHALL BE DETERMINED BY THE ENGINEER.

EPOXY INJECTION TO BE PAID UNDER ITEMS "PREPARATION OF CRACKS ABOVE WATER" AND "EPOXY RESIN, ABOVE WATER".

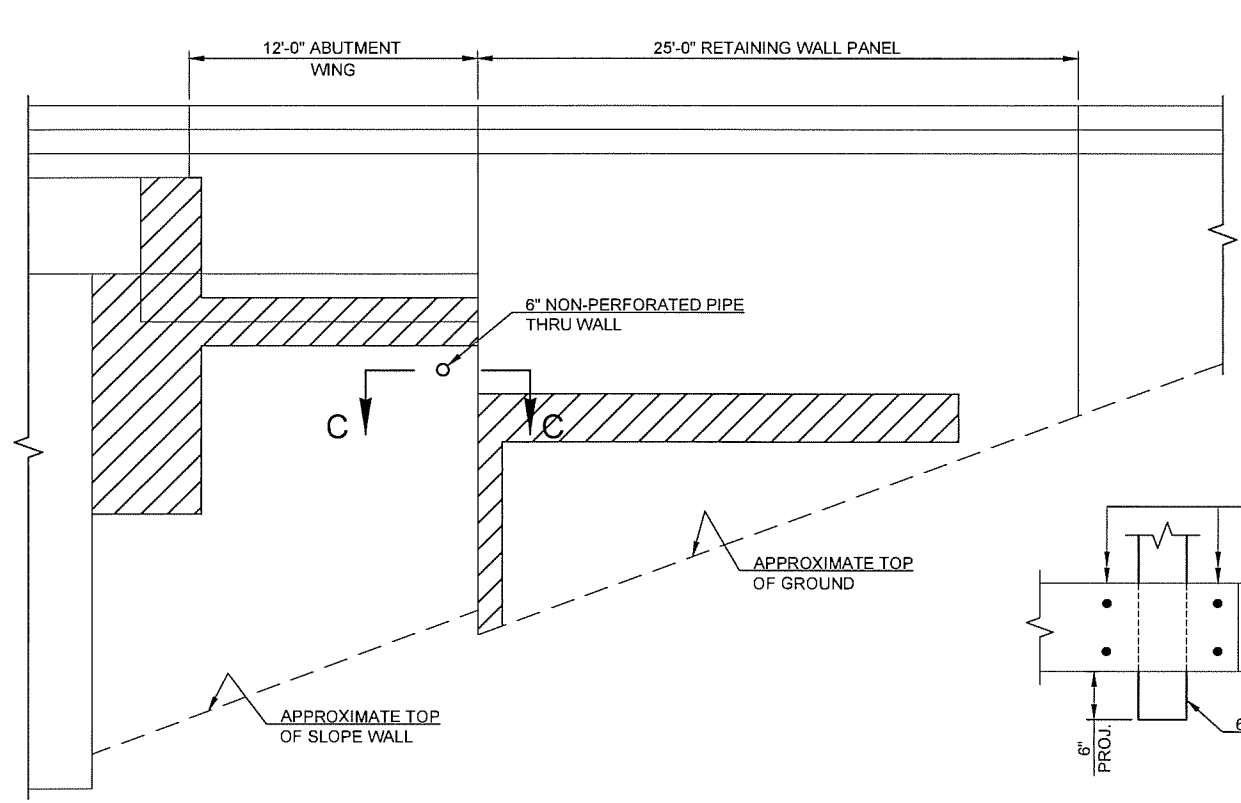
A SPECIAL CONCRETE FINISH SHALL BE APPLIED TO THE EXPOSED SURFACES OF THE ABUTMENTS AFTER ALL REPAIRS ARE COMPLETE.



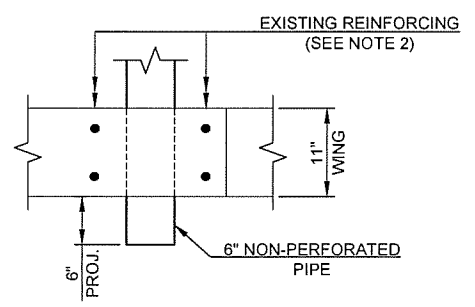
DESIGN	JSH	12/13	OKLAHOMA DEPARTMENT OF TRANSPORTATION	
DRAWN	MRM	12/13	BRIDGE A	TULSA COUNTY
CHECKED	JWB	3/16	SUBSTRUCTURE REPAIR DETAILS (SHEET 2 OF 4)	
APPROVED				
SQUAD	TT		STATE JOB NO. 28880(04)	SHEET NO. 11

3/21/2016 10:08:14 AM - MATETRA TECH11399 ODOT/EC 1414/TASK ORDER 3/CAD/SHEETFILES/11 - SUBSTR REPAIR.2.DWG - MARQUART, MATT

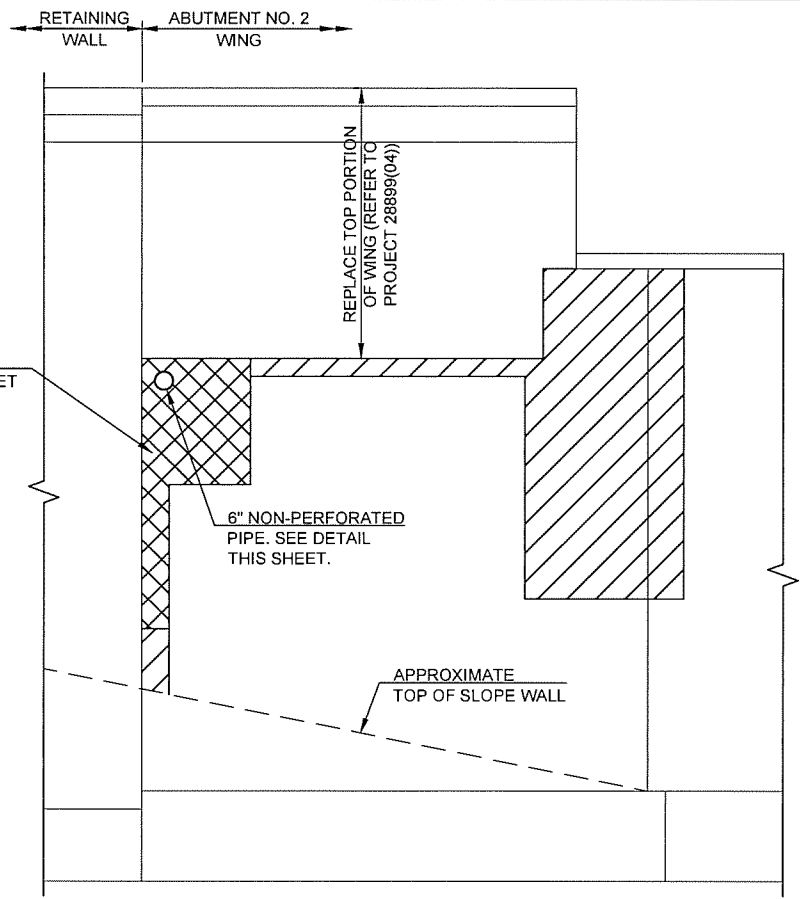
DESCRIPTION	REVISIONS	DATE



SECTION B-B
(ABUTMENT NO. 1, SHEET 10)



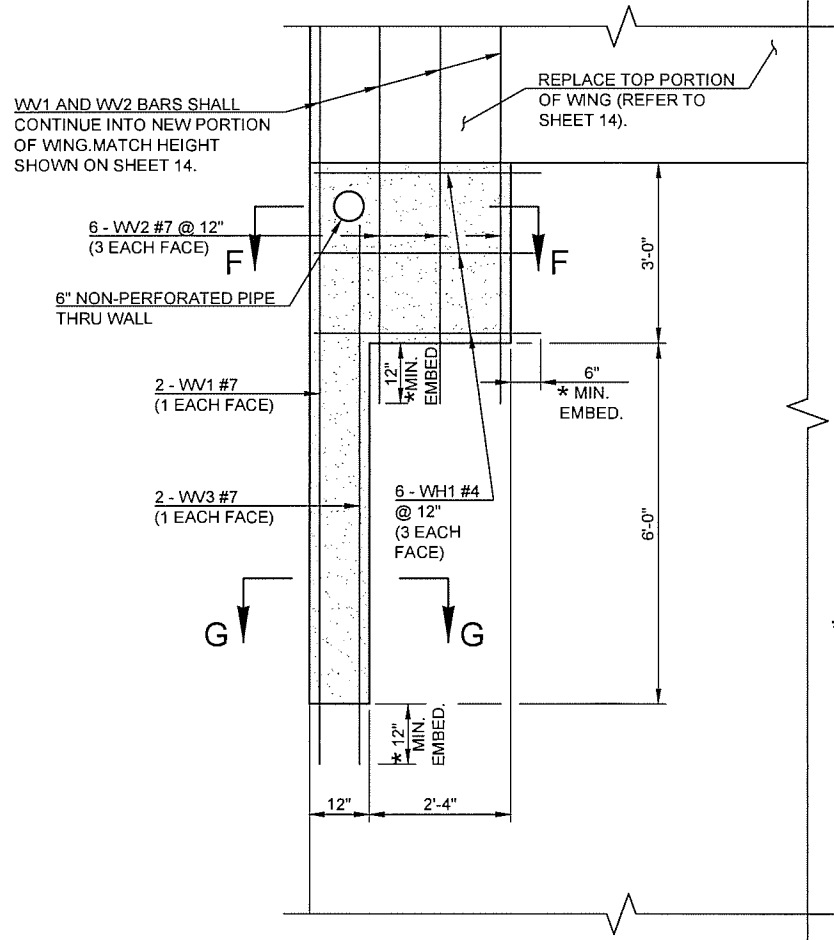
SECTION C-C



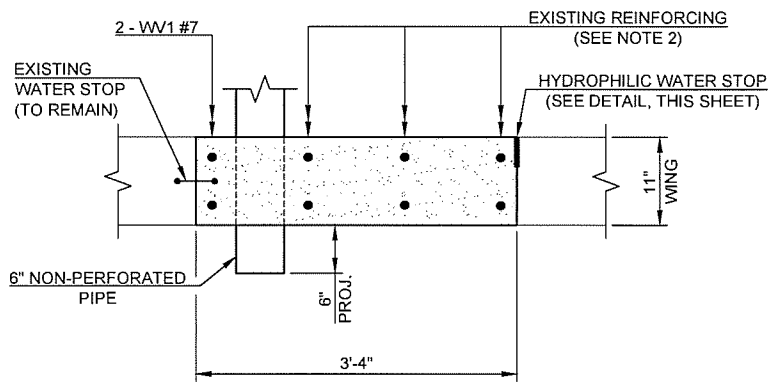
SECTION D-D
(ABUTMENT NO. 2, SHEET 11)

- PNEUMATICALLY PLACED MORTAR
- REPAIR BRIDGE ITEM (TYPE A). SEE DETAIL THIS SHEET.

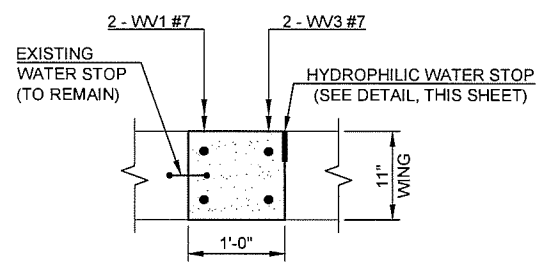
- NOTES:**
- REPAIRS ARE NOT LIMITED TO THE DESIGNATED AREAS SHOWN. THE SPECIFIC REPAIR LOCATIONS, CLASSIFICATION AND EXTENT OF THE REPAIR SHALL BE DETERMINED BY THE ENGINEER.
 - THE CONTRACTOR SHALL TAKE EXTRA CARE WHEN INSTALLING THE 6" NON-PERFORATED PIPE THRU THE EXISTING WING IN ORDER TO PRESERVE THE EXISTING REINFORCING STEEL. DAMAGED REINFORCING STEEL SHALL BE REPLACED AT NO ADDITIONAL COST TO THE PROJECT.
 - REPAIR ITEM (TYPE A) CONSISTS OF REMOVING AND REPLACING THE PORTION OF THE ABUTMENT NO. 2 WING AS SHOWN ON THE PLANS, INCLUDING CLASS 'A' CONCRETE, EPOXY COATED REINFORCING, HYDROPHILIC WATER STOP, BACKER ROD AND JOINT SEALANT.



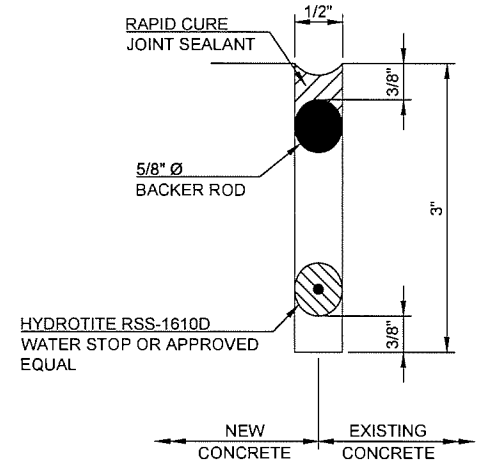
REPAIR ITEM (TYPE A) ELEVATION
(ABUTMENT NO. 2)



SECTION F-F



SECTION G-G



HYDROPHILIC WATER STOP DETAIL

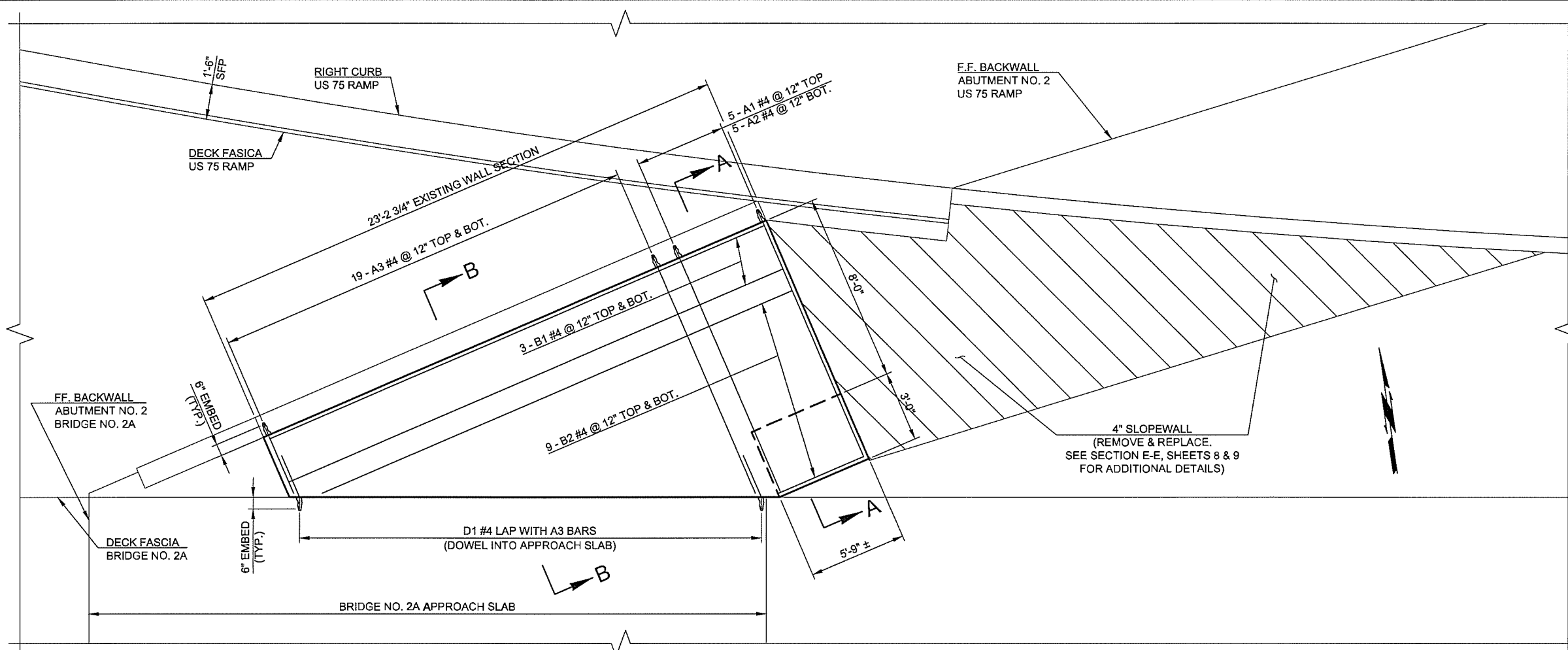
REPAIR TYPE A BAR LIST			
(FOR INFORMATION ONLY)			
(NOT SHOWN IN QUANTITIES)			
MARK	SIZE	NO.	LENGTH
STRAIGHT EPOXY COATED REINFORCING			
① WH1	#4	6	3'-4"
② WV1	#7	2	19'-7"
② WV2	#7	6	25'-7"
③ WV3	#7	2	8'-10"

- LENGTH SHOWN IS FOR 6" EMBEDMENT. ADJUST LENGTH AS NECESSARY FOR ANCHORAGE REQUIREMENTS.
- LENGTH SHOWN IS FOR 12" EMBEDMENT.
- LENGTH SHOWN IS FOR 12" EMBEDMENT. ADJUST LENGTH AS NECESSARY FOR ANCHORAGE REQUIREMENTS.

DESIGN	JSH	12/13	OKLAHOMA DEPARTMENT OF TRANSPORTATION	
DRAWN	MRM	12/13	BRIDGE A	TULSA COUNTY
CHECKED	JWB	3/16	SUBSTRUCTURE REPAIR DETAILS (SHEET 3 OF 4)	
APPROVED				
SQUAD	TT		STATE JOB NO. 28880(04)	SHEET NO. 12

3/21/2016 10:20:57 AM - M:\METRA TECH\11399 ODOT\EC 141\FY14\TASK ORDER 3\CAD\SHEETFILES\12 - SUBSTR REPAIR 3.DWG - MARQUART, MATT

DESCRIPTION	REVISIONS	DATE



ABUTMENT NO. 2 WALL REPAIR BAR LIST

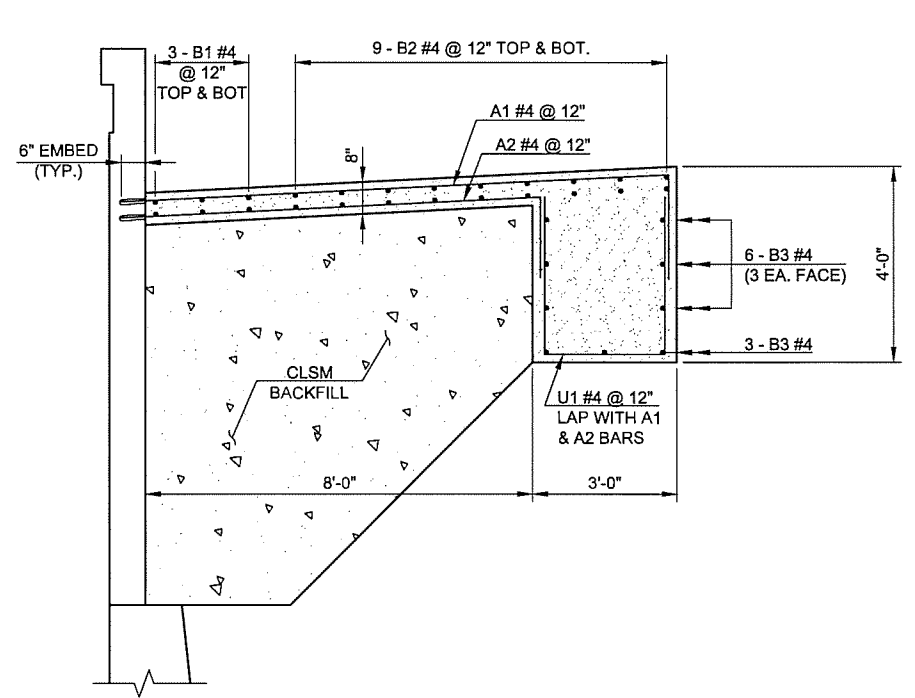
MARK	SIZE	NO.	FORM	LENGTH	LENGTH VARIATION
① A1	#4	5	BNT	13'-6"	
① A2	#4	5	BNT	10'-4"	
① ② A3	#4	38	STR	7'-1" AVG.	3'-2" TO 11'-0"
③ B1	#4	6	STR	22'-10"	
④ B2	#4	18	STR	12'-10" AVG.	3'-11" TO 21'-9"
B3	#4	9	STR	3'-8"	
① ② D1	#4	39	BNT	2'-2"	
U1	#4	5	BNT	9'-2"	

- ① LENGTH SHOWN IS FOR 6" EMBEDMENT. ADJUST AS NECESSARY FOR ANCHORAGE REQUIREMENTS
- ② 2 SETS OF 19
- ③ 2 SETS OF 3
- ④ 2 SETS OF 9

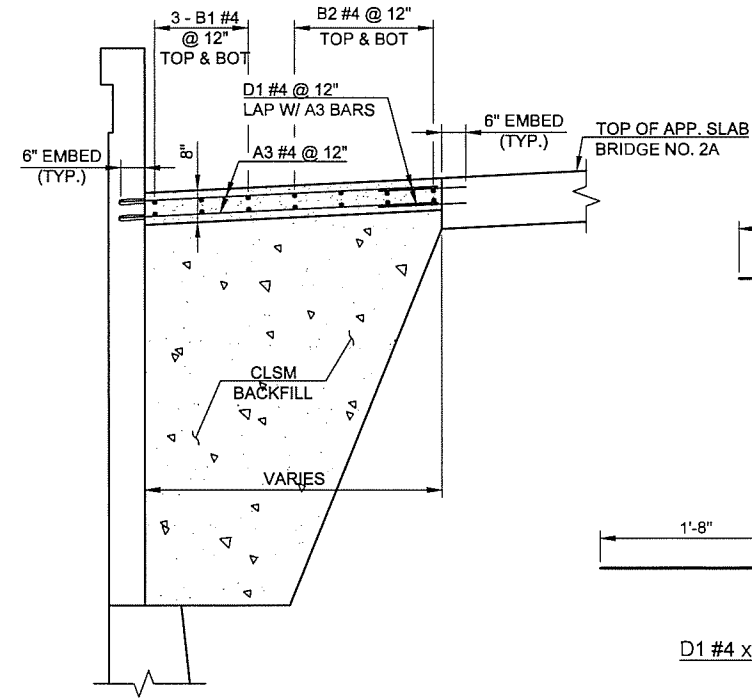
NOTE:
LAP LENGTH SHALL BE 1'-8" MINIMUM ON ALL BARS.

ABUTMENT NO. 2 WALL REPAIR PLAN

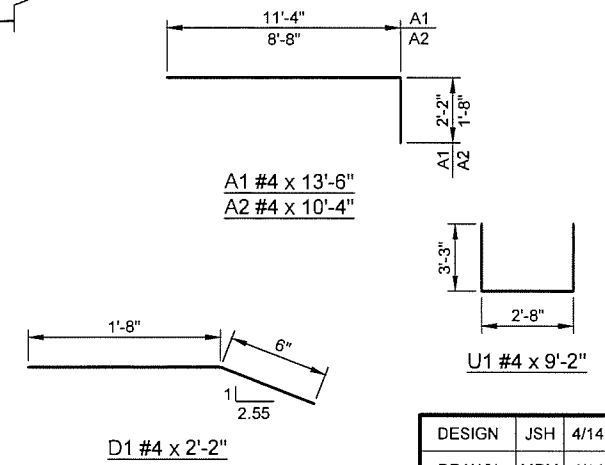
ANCHORAGE SYSTEM:
THE CONTRACTOR SHALL USE AN ANCHORAGE SYSTEM THAT HAS BEEN APPROVED BY ODOT'S MATERIALS DIVISION. FOR EMBEDMENT OF REINFORCING STEEL THE ANCHORAGE SYSTEM SHALL BE CAPABLE OF DEVELOPING THE FULL STRENGTH OF THE REINFORCING STEEL THAT IS TO BE ANCHORED. THE EMBEDMENT DEPTH SHOWN IS TO BE ADJUSTED TO MEET THE REQUIREMENTS. ANCHORAGE SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURE'S SPECIFICATIONS FOR THE SYSTEM USED.
ALL COSTS OF THE ANCHORAGE SYSTEM INCLUDING LABOR, MATERIALS, TOOLS, DRILLING, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHOWN IN THE PLANS SHALL BE INCLUDED IN THE PRICE BID PER POUND OF "EPOXY COATED REINFORCING STEEL".



SECTION A-A



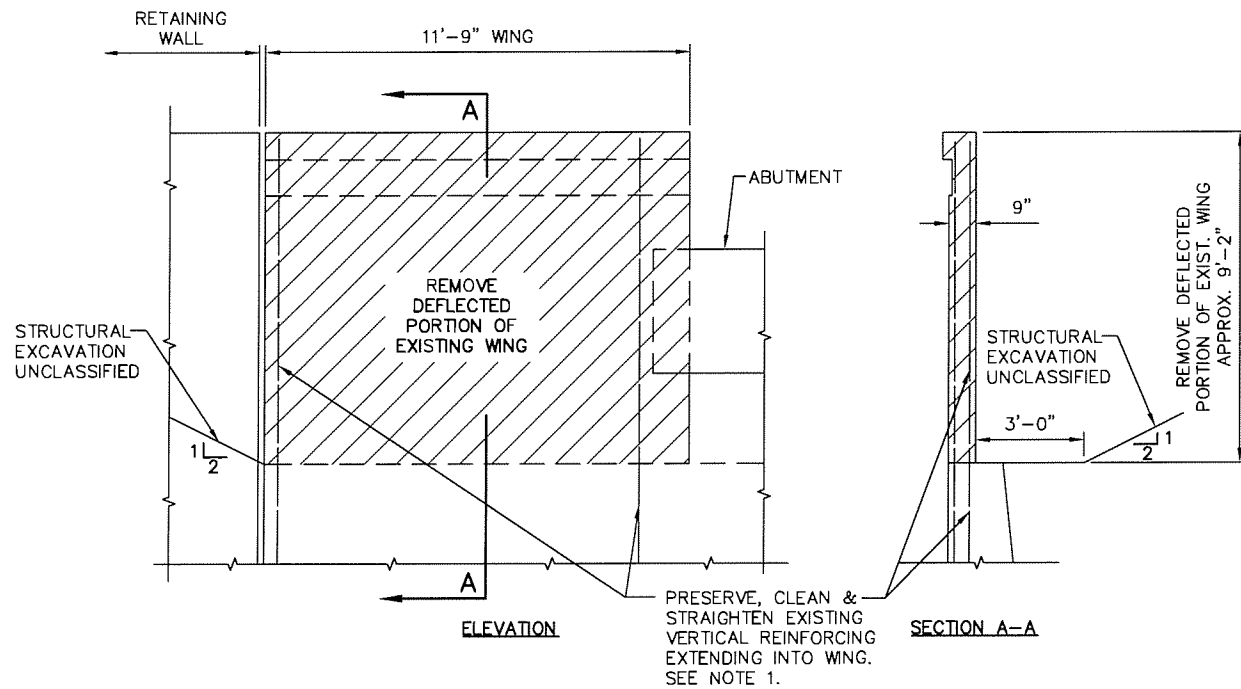
SECTION B-B



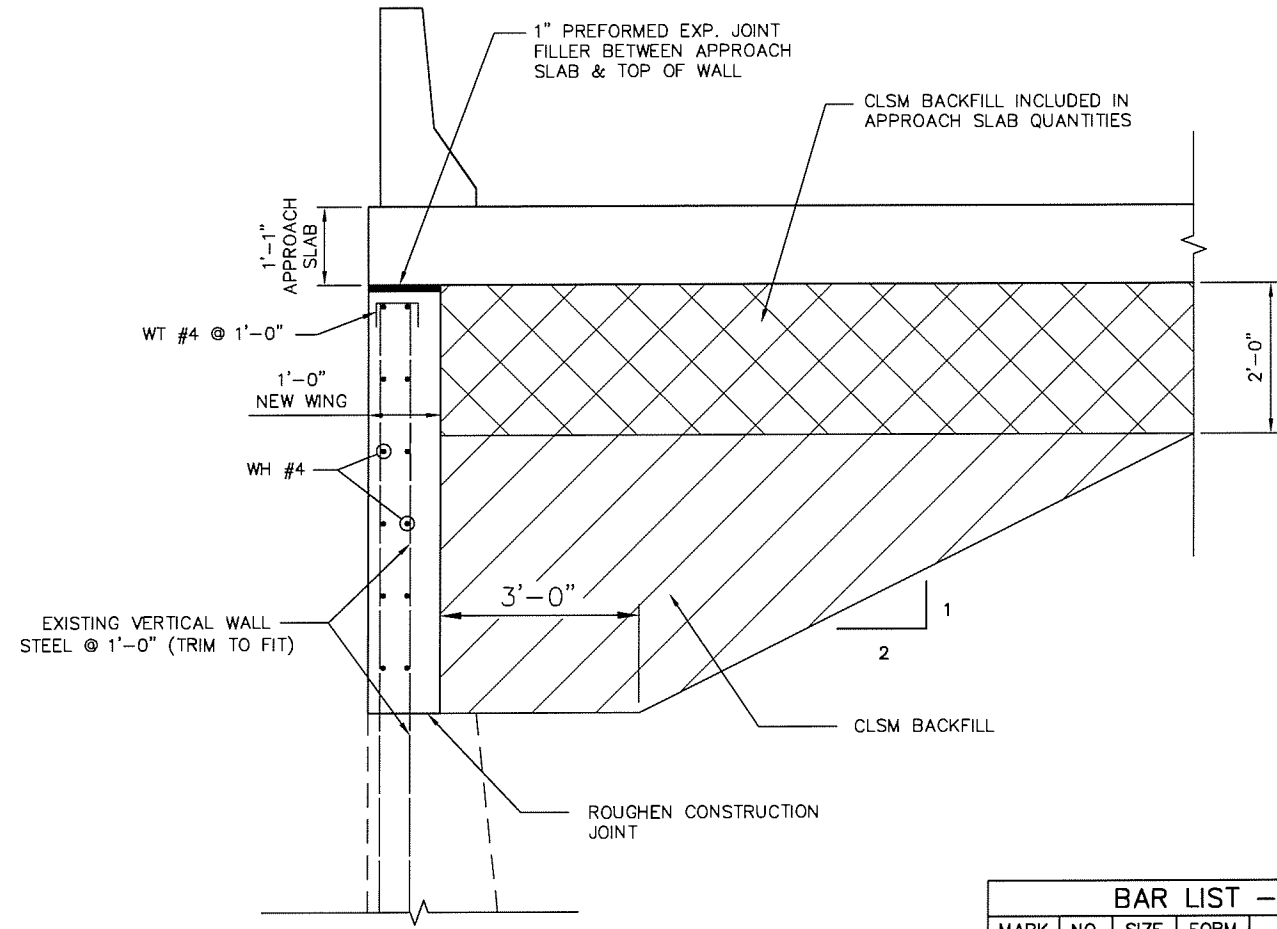
DESIGN	JSH	4/14	OKLAHOMA DEPARTMENT OF TRANSPORTATION
DRAWN	MRM	4/14	BRIDGE A TULSA COUNTY
CHECKED	JWB	3/16	SUBSTRUCTURE REPAIR DETAIL (SHEET 4 OF 4)
APPROVED			
SQUAD	TT		STATE JOB NO. 28880(04) SHEET NO. 13

3/21/2016 10:26:16 AM - M:\TETRA TECH\11399 ODOT\1414\TASK ORDER 3\CAD\3\FILES\13 - REPAIR\BRIDGE\ITEM C.DWG - MARQUART, MAIT

X:\Projects\611-ODOT-IDL North & South Bound Lanes\DWG\Sheets\611-BRIDGE_15A\SHEETS\611-SB-BR15A-WING REPAIR 01.dwg, 3/25/2016 8:18:01 AM, DEP



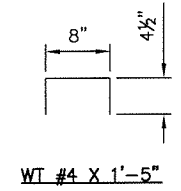
DETAILS OF EXISTING WING REMOVAL



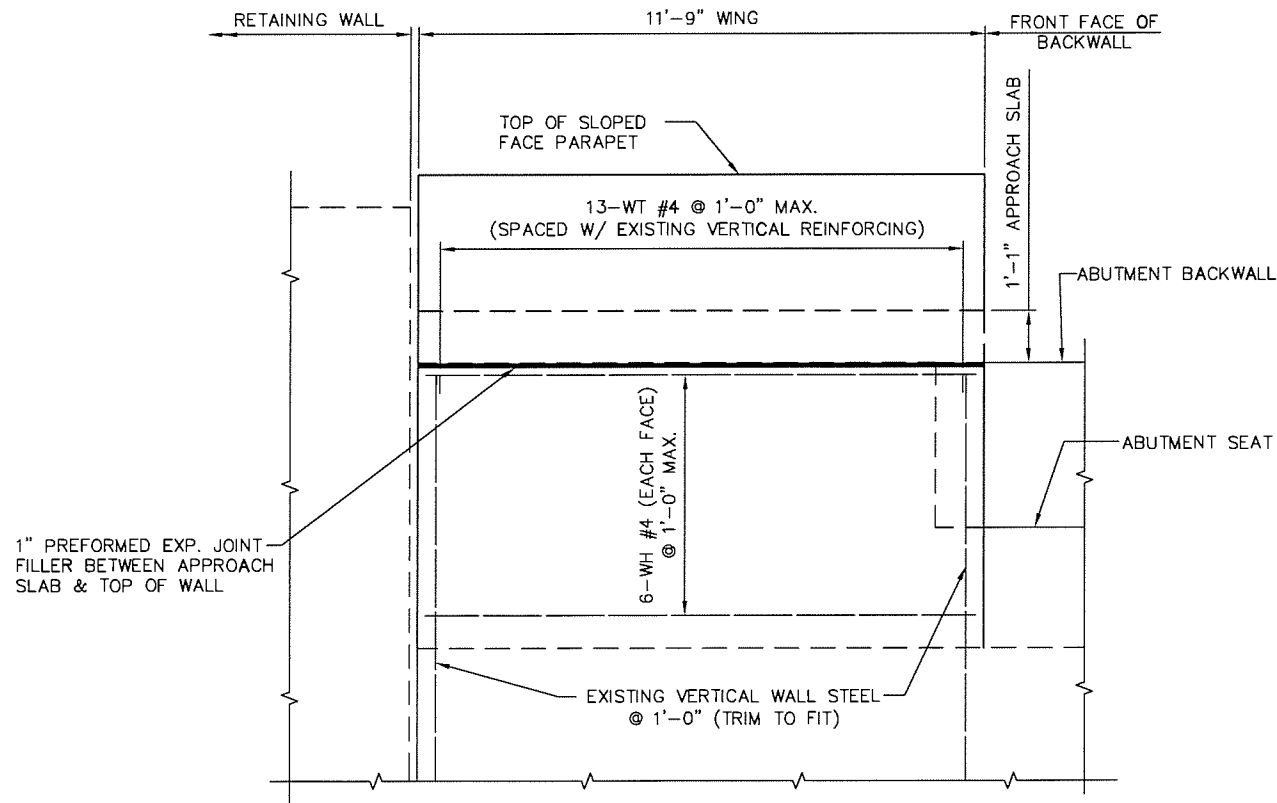
SECTION THROUGH WING

BAR LIST - WING REPAIR					
MARK	NO.	SIZE	FORM	LENGTH	LENGTH VARIATION
EPOXY COATED					
WH	12	#4	STR.	11'-5"	
WT	13	#4	BNT.	1'-5"	

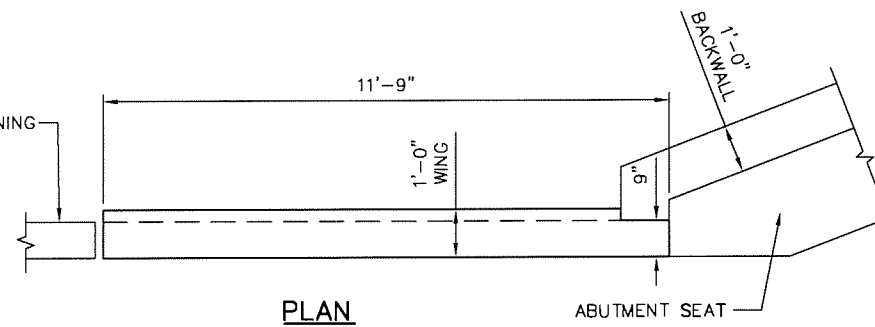
NOTE 1:
 ANY DAMAGE TO THE EXISTING REINFORCING STEEL SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE. ANY DETERIORATED REINFORCING STEEL WITH SECTION LOSS GREATER THAN 50% SHALL BE REPORTED TO THE BRIDGE ENGINEER FOR REMEDIAL ACTION.



DETAILS OF BENT REINFORCEMENT



ELEVATION

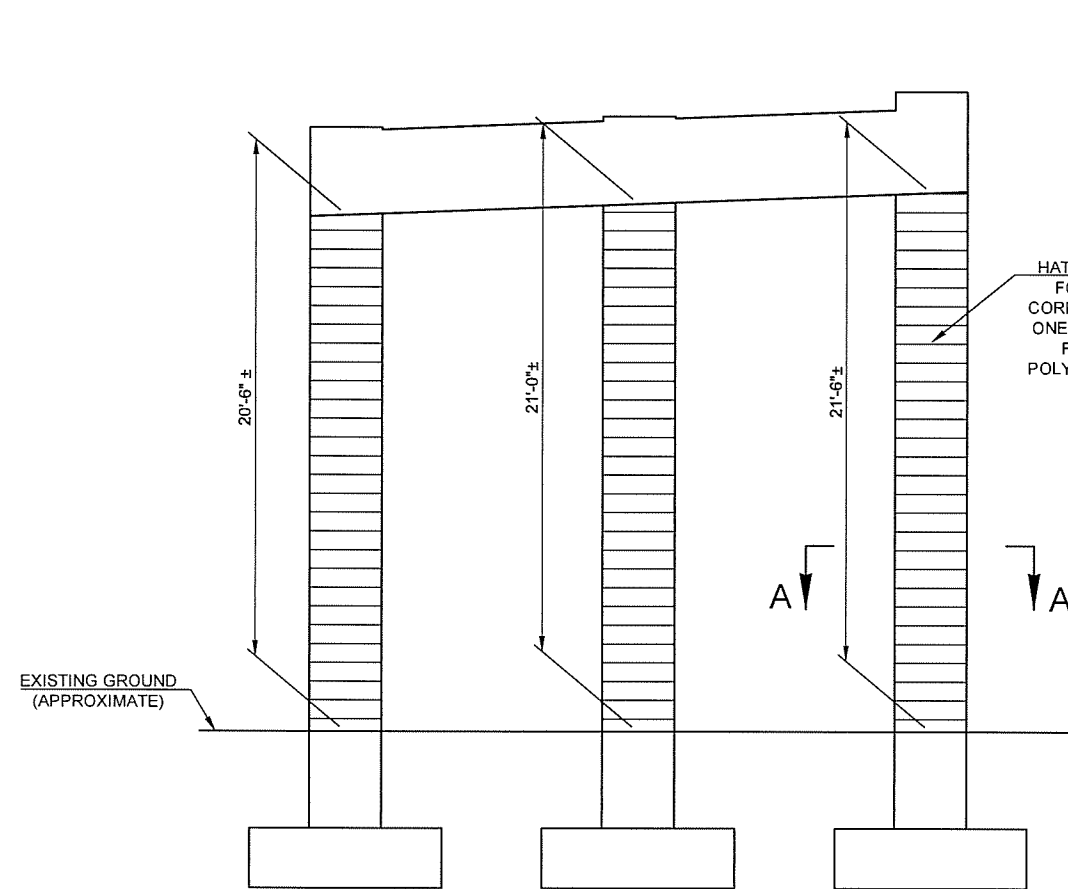


PLAN

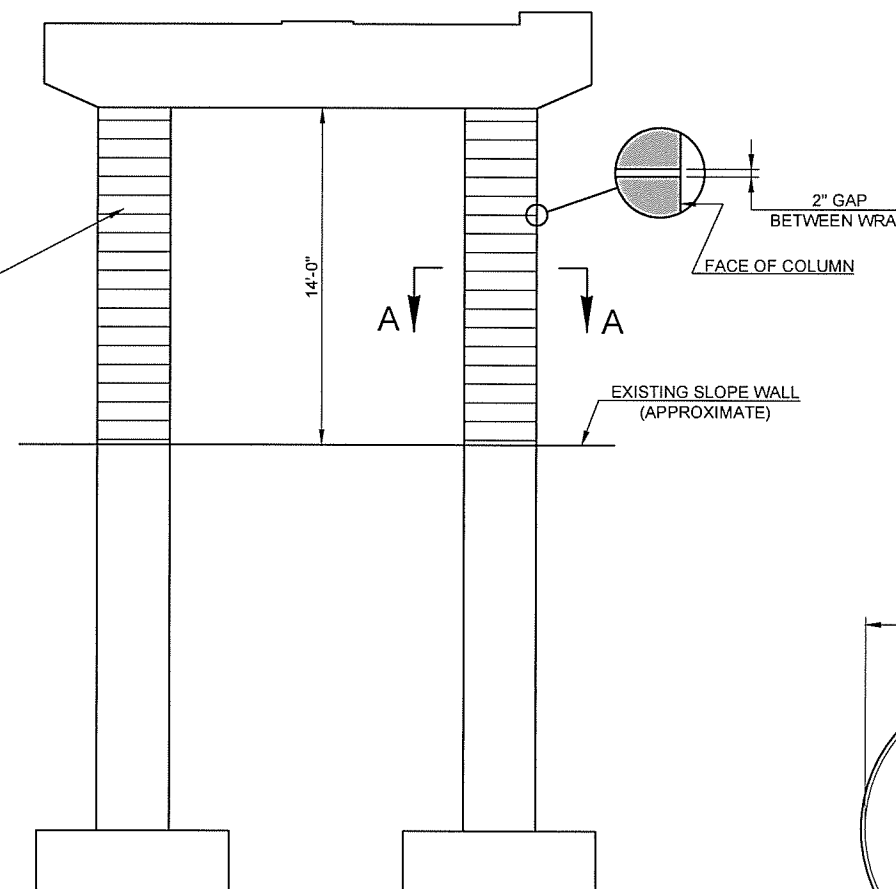
ESTIMATED QUANTITIES		
ITEM	UNIT	TOTAL
STRUCTURAL EXCAVATION UNCLASSIFIED	CY	22.00
CLSM BACKFILL	CY	22.00
CLASS A CONCRETE	CY	3.00
EPOXY COATED REINFORCING STEEL	LB	104.00

DESIGN	SJN	01/09	BRIDGE A	TULSA COUNTY
DRAWN	GMN	01/09	DETAILS OF WING REPAIR	
CHECKED	SAL	01/09		
APPROVED				
SQUAD	BKJ		STATE JOB PIECE NO. 28880(04)	SHEET NO. 14

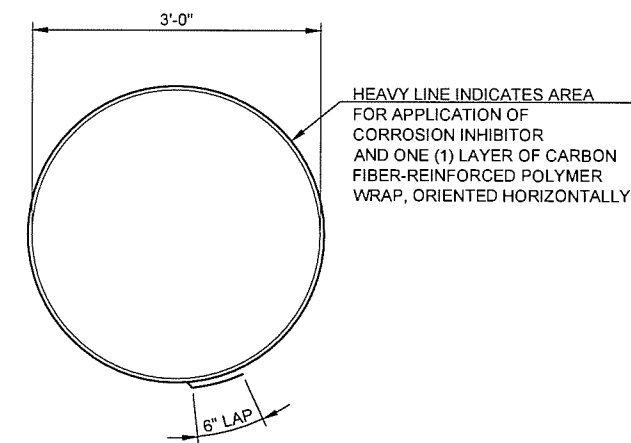
DESCRIPTION	REVISIONS	DATE



ELEVATION
(PIER 1)



ELEVATION
(PIER 3)



SECTION A-A

NOTE:

REPAIR PIER COLUMNS WITH PNEUMATICALLY PLACED MORTAR AS DIRECTED BY THE ENGINEER PRIOR TO APPLYING CORROSION INHIBITOR AND CARBON FIBER REINFORCED POLYMER WRAP.

ONE (1) LAYER OF CARBON FIBER REINFORCED POLYMER WRAP SHALL BE APPLIED TO THE COLUMNS AS SHOWN ORIENTED HORIZONTALLY.

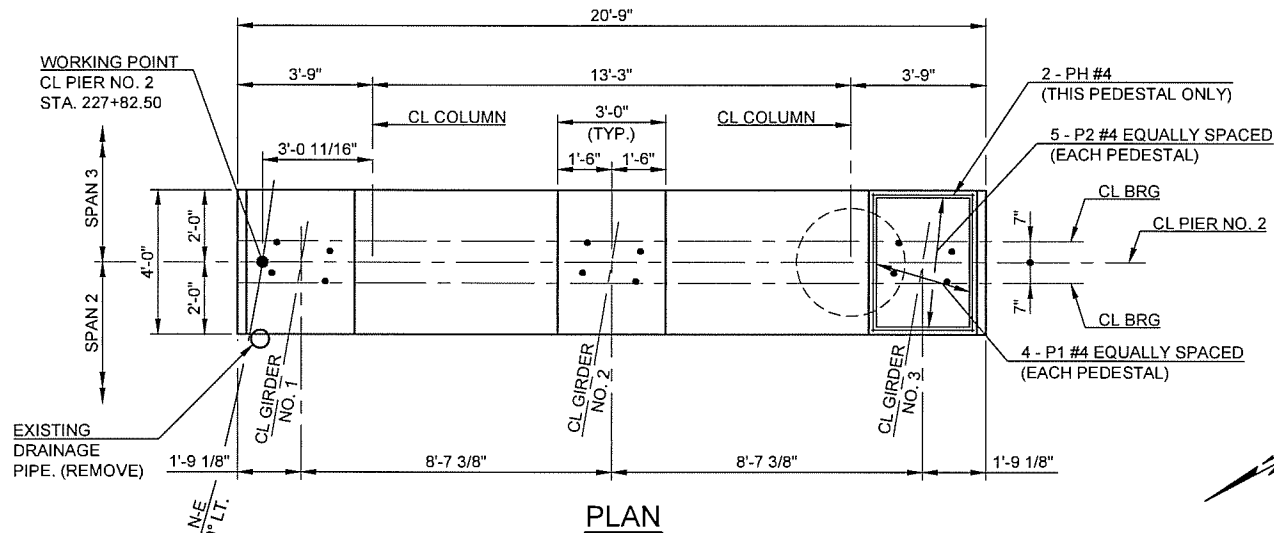
A SPECIAL CONCRETE FINISH SHALL BE APPLIED TO THE EXPOSED SURFACES OF THE PIER INCLUDING AREAS TREATED WITH CARBON FIBER-REINFORCED POLYMER AFTER ALL REPAIRS ARE COMPLETE.

PIER 1 AND 3 QUANTITIES				
ITEM	UNIT	PIER 1	PIER 3	TOTAL
WATER REPELLENT (VISUALLY INSPECTED)	SY	105.0	65.0	170.0
SPECIAL CONCRETE FINISH	LSUM	1.0	1.0	1.0
PNEUMATICALLY PLACED MORTAR	SY	10.0	10.0	20.0
(SP) CARBON FIBER-REINFORCED POLYMER	SF	630.0	280.0	910.0
(SP) CORROSION INHIBITOR (SURFACE APPLIED)	SY	70.0	32.0	102.0

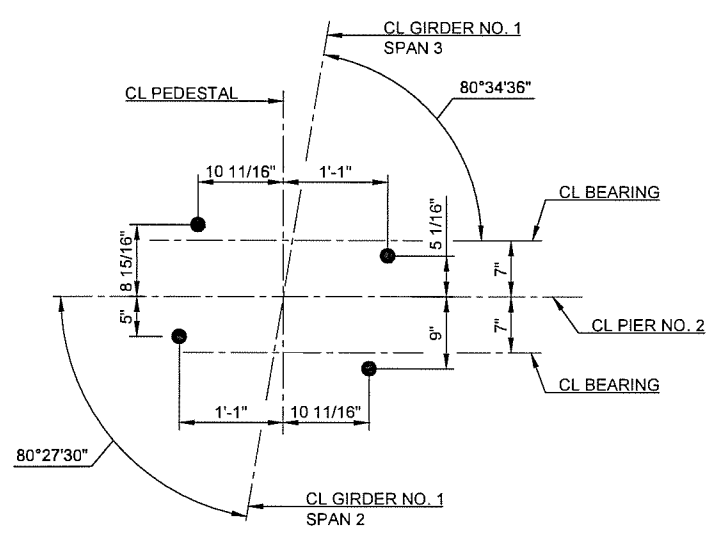
DESIGN	JSH	3/15	OKLAHOMA DEPARTMENT OF TRANSPORTATION	
DRAWN	MRM	3/15	BRIDGE A	TULSA COUNTY
CHECKED	JWB	3/16	PIERS 1 AND 3 REPAIR DETAILS	
APPROVED				
SQUAD	TT		STATE JOB NO. 28880(04)	SHEET NO. 15

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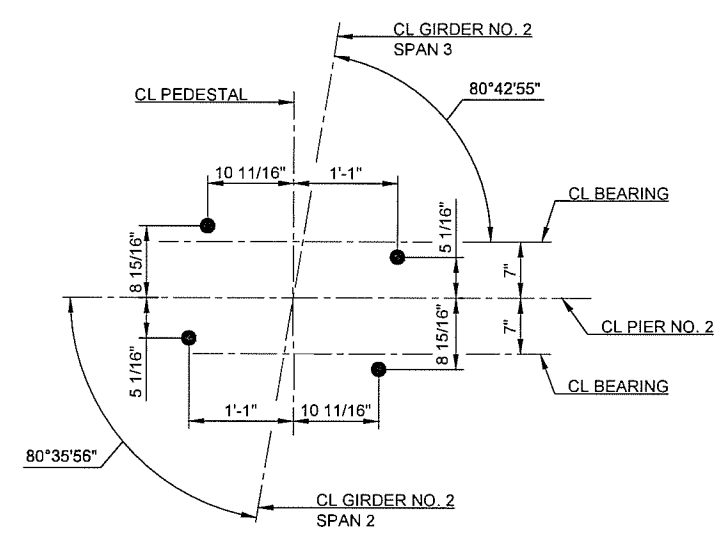
DESCRIPTION	REVISIONS	DATE



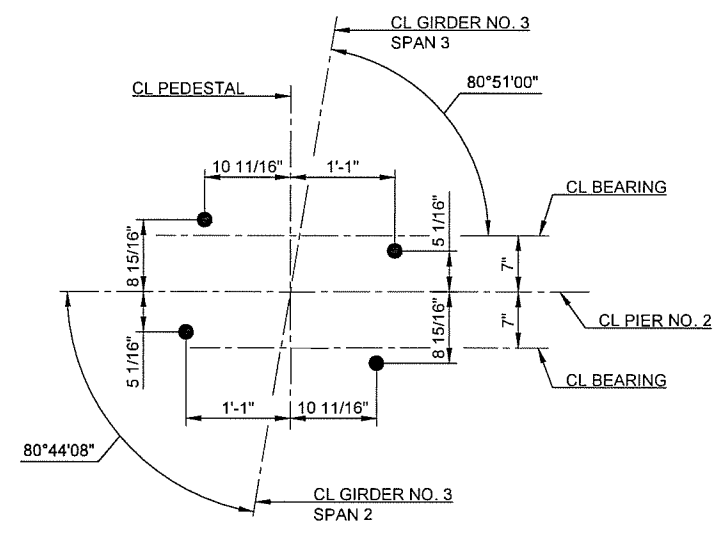
PLAN



GIRDER NO. 1

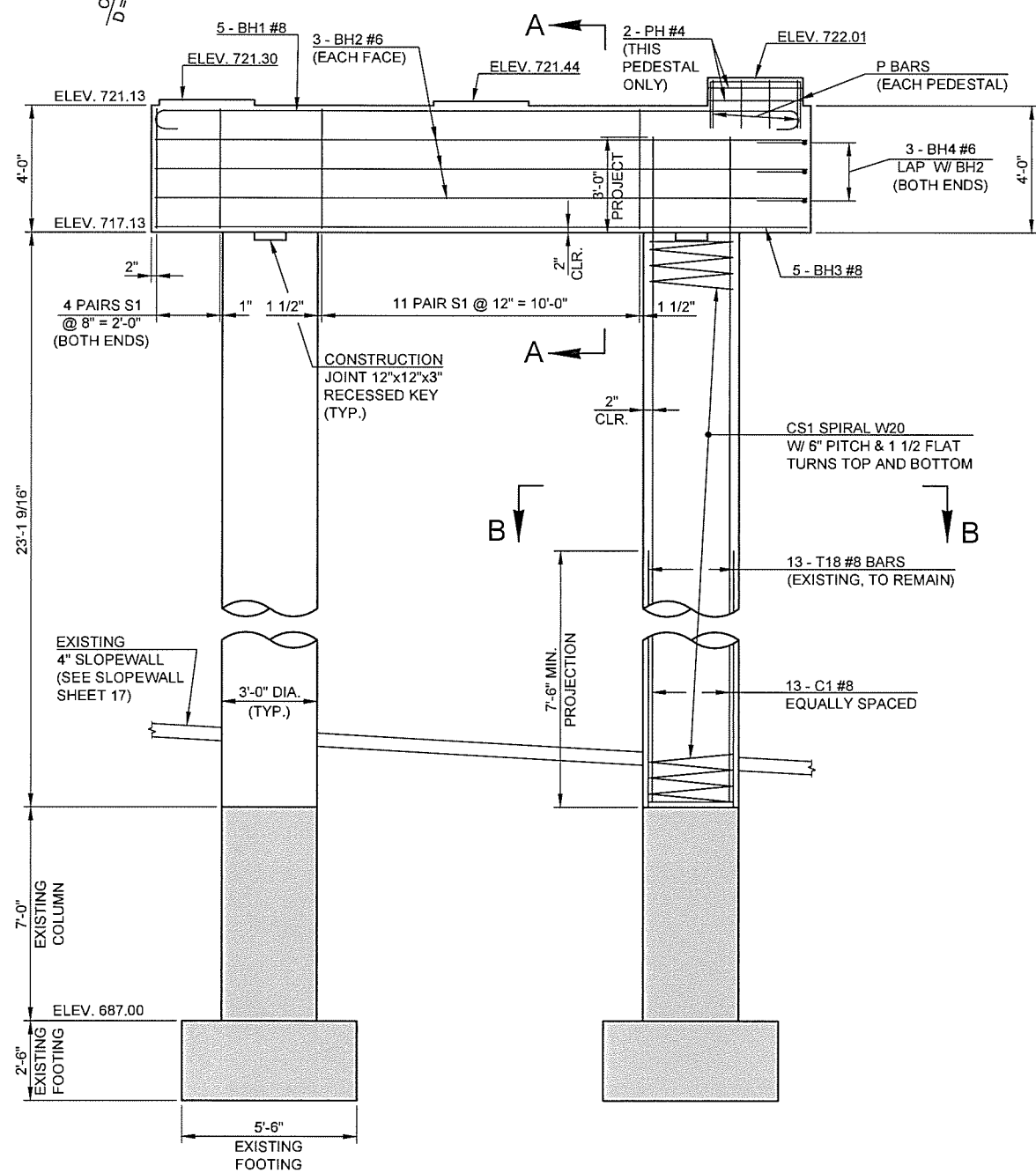


GIRDER NO. 2



GIRDER NO. 3

ANCHOR BOLT SETTING



ELEVATION

NOTE:
FOR SECTIONS A-A & B-B
SEE SHEET 17.

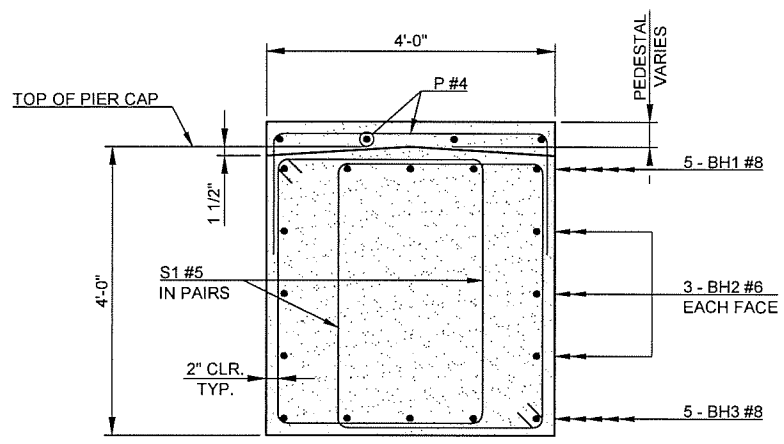
PIER NOTES:

- ALL EXPOSED PIER CAP EDGES SHALL HAVE 1 1/2" CHAMFER AND ALL PEDESTAL EXPOSED EDGES SHALL HAVE 3/4" CHAMFER UNLESS OTHERWISE SHOWN OR NOTED.
- THE CONTRACTOR SHALL TAKE EXTRA CARE WHEN REMOVING THE EXISTING COLUMNS AS SHOWN IN ORDER TO PRESERVE THE EXISTING REINFORCING STEEL. DAMAGED REINFORCING STEEL SHALL BE REPLACED AT NO ADDITIONAL COST TO THE PROJECT.
- A SPECIAL CONCRETE FINISH SHALL BE APPLIED TO THE EXPOSED SURFACES OF PIER NO. 2 AFTER ALL REPAIRS ARE COMPLETE.

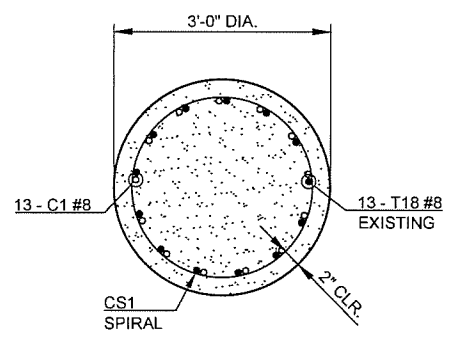
DESIGN	JSH	12/13	OKLAHOMA DEPARTMENT OF TRANSPORTATION BRIDGE A TULSA COUNTY
DRAWN	MRM	12/13	
CHECKED	JWB	3/16	
APPROVED			
SQUAD	TT		
STATE JOB NO. 28880(04)			PIER 2 REPAIR DETAILS (SHEET 1 OF 2)
			SHEET NO. 16

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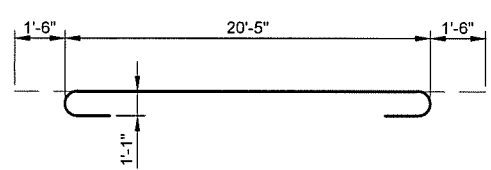
DESCRIPTION	REVISIONS	DATE



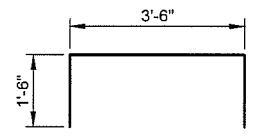
SECTION A-A



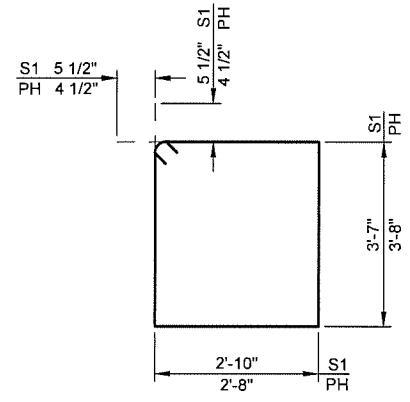
SECTION B-B



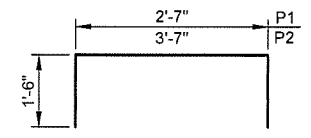
BH1 #10 x 23'-5"



BH4 #6 x 6'-6"

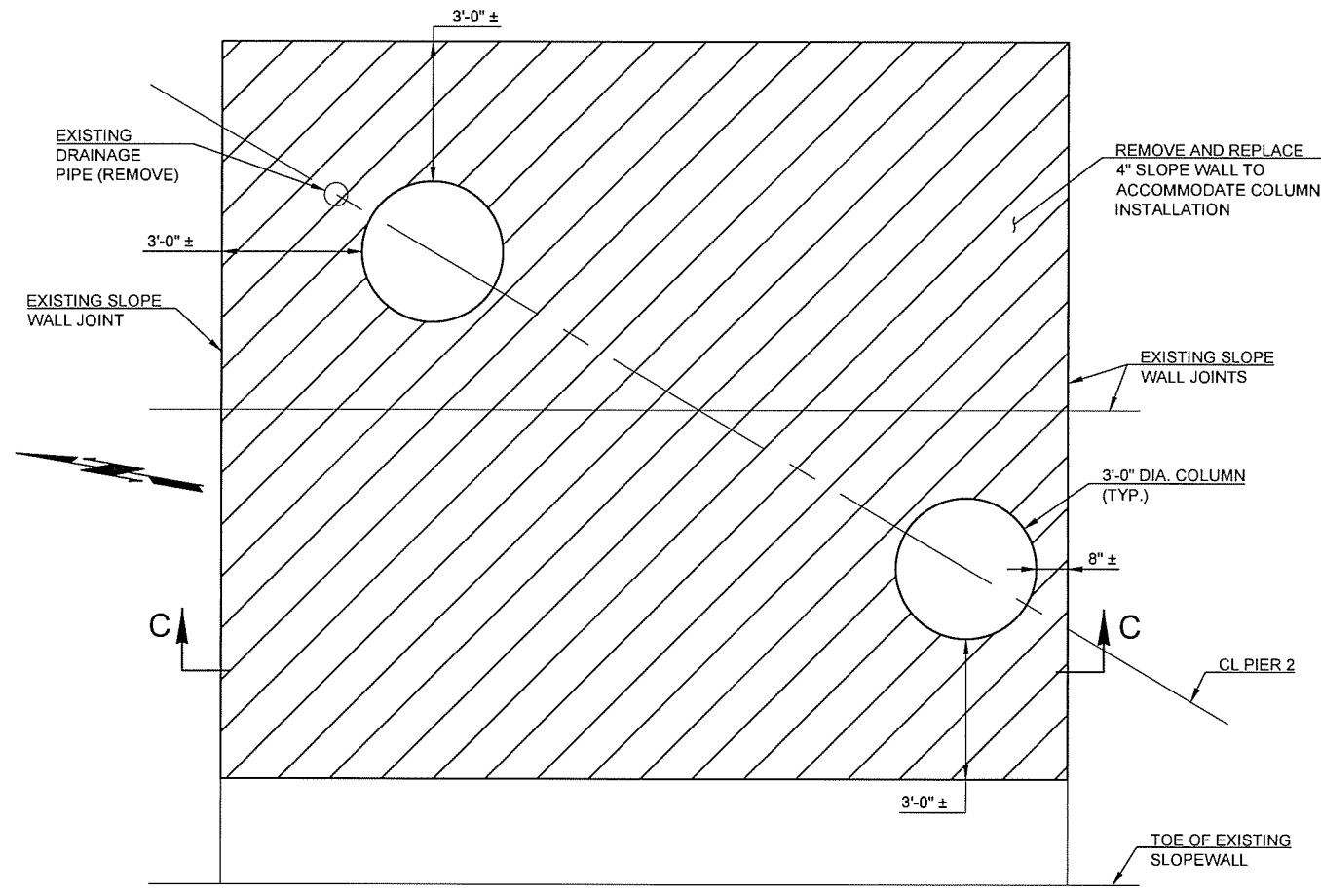


**S1 #5 x 13'-9"
PH #4 x 13'-5"**

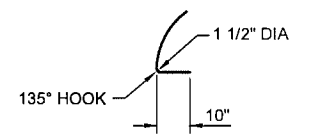


**P1 #4 x 5'-7"
P2 #4 x 6'-7"**

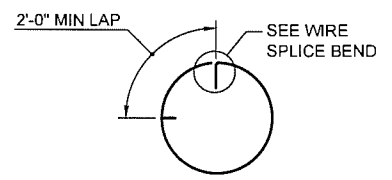
PIER NO. 2 BAR LIST				
MARK	SIZE	NO.	FORM	LENGTH
EPOXY COATED REINFORCING BARS				
BH1	#8	5	BNT.	23'-5"
BH2	#6	6	STR.	20'-5"
BH3	#8	5	STR.	20'-5"
BH4	#6	6	BNT.	6'-6"
S1	#5	38	BNT.	13'-9"
P1	#4	12	BNT.	5'-7"
P2	#4	15	BNT.	6'-7"
PH	#4	2	BNT.	13'-5"
C1	#8	26	STR.	26'-2"
CS1	W-20	2	BNT.	401'-9"



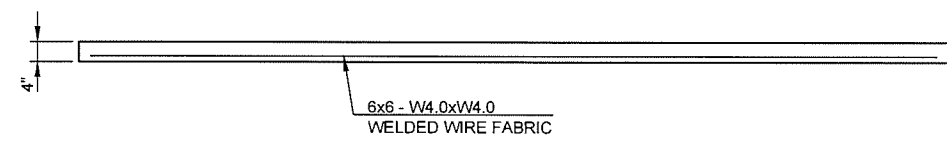
SLOPE WALL REMOVAL PLAN



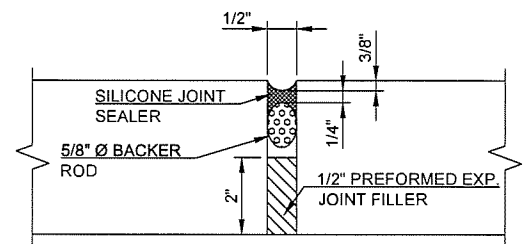
WIRE SPLICE BEND



WIRE SPLICE WHEN REQ'D



SECTION C-C



SILICONE CONSTRUCTION JOINT DETAIL

PIER NO. 2 QUANTITIES		
ITEM	UNIT	TOTAL
SPECIAL CONCRETE FINISH	LSUM	1.0
SILICONE CONSTRUCTION JOINT	LF	90.0
SLOPEWALL (4")	SY	32.0
CLASS A CONCRETE	CY	26.0
EPOXY COATED REINFORCING STEEL	LB	3870.0
WATER REPELLENT (VISUALLY INSPECTED)	SY	110.0

DESIGN	JSH	1/14	OKLAHOMA DEPARTMENT OF TRANSPORTATION BRIDGE A TULSA COUNTY
DRAWN	MRM	1/14	
CHECKED	JWB	3/16	
APPROVED			
SQUAD	TT		

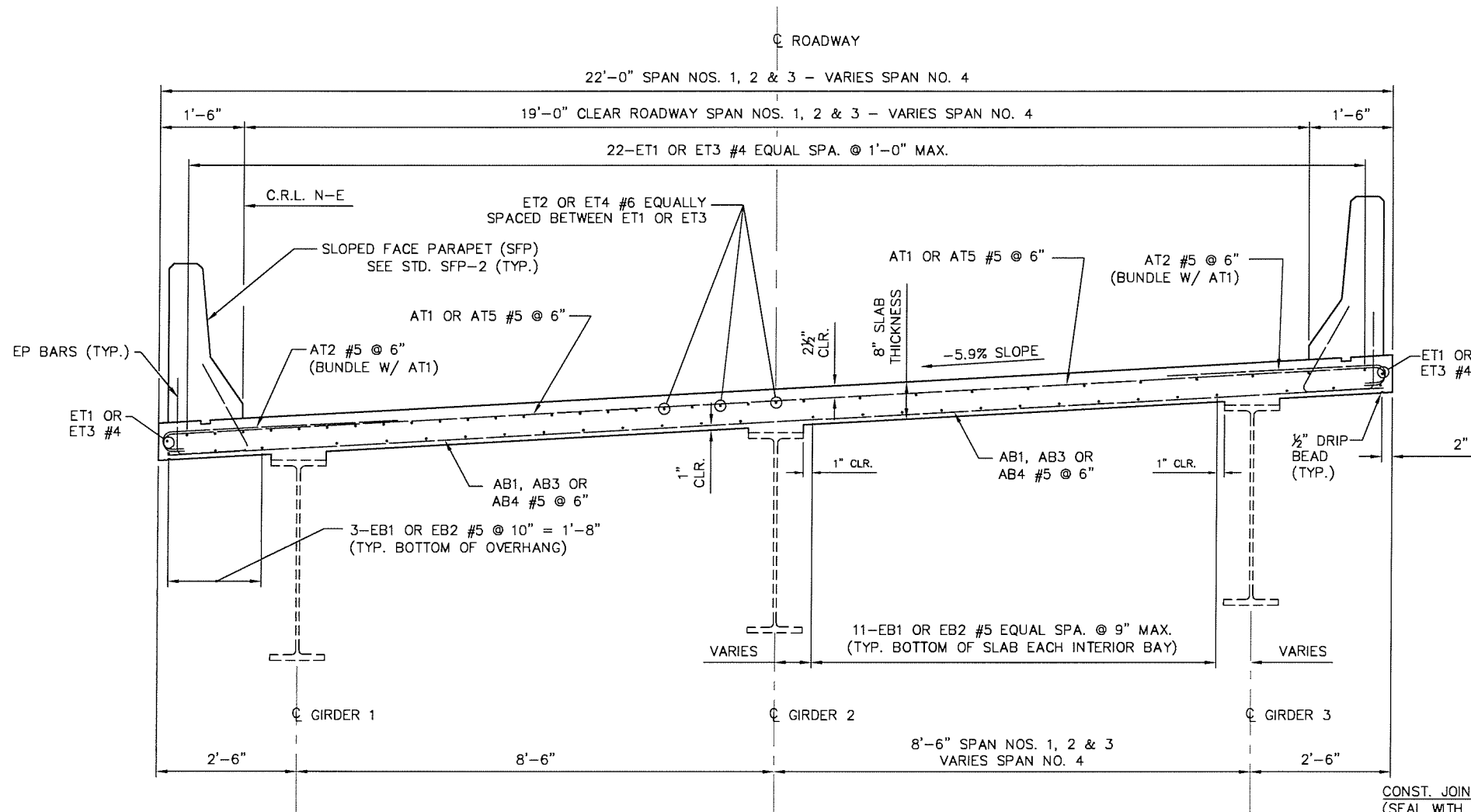
**PIER 2 REPAIR DETAILS
(SHEET 2 OF 2)**

STATE JOB NO. 28880(04)

SHEET NO. 17

3/21/2016 10:57:59 AM - MATETRA TECH\11399\ODOT\EC-1414\TASK ORDER 3\CAD\DWG\PIER 2.DWG - MARQUART, MATT

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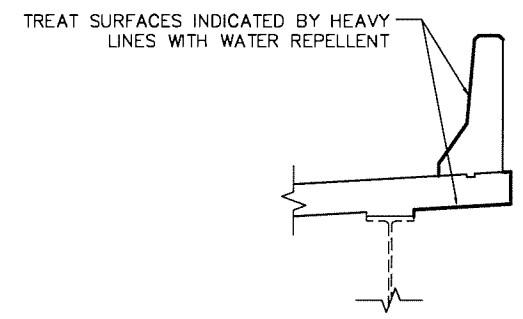


HALF SECTION NEAR PIER NOS. 1 & 3

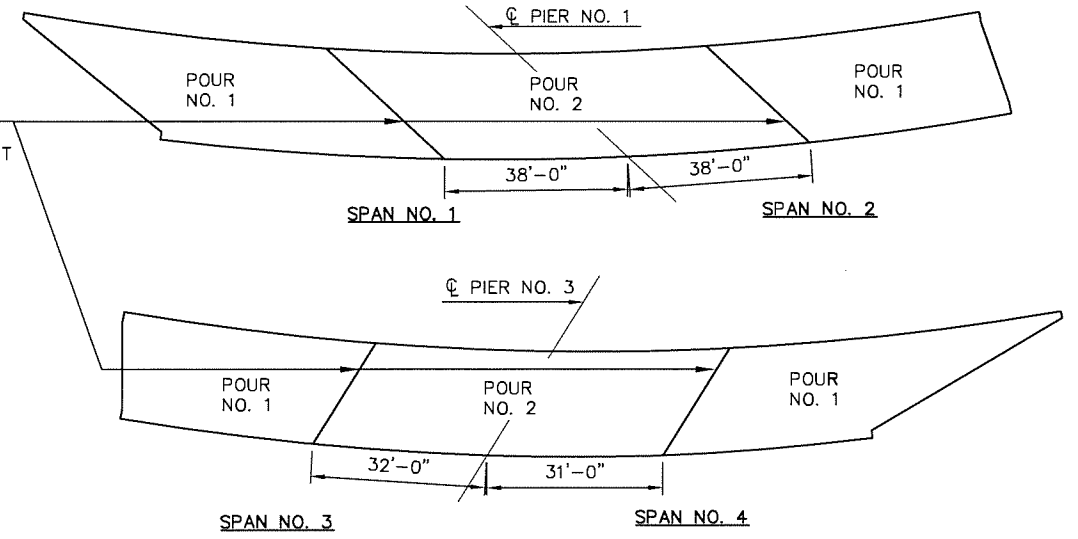
HALF SECTION NEAR MIDSPAN

TYPICAL SECTION

ROTATE HOOKS ON BARS TO MAINTAIN MINIMUM CLEARANCE

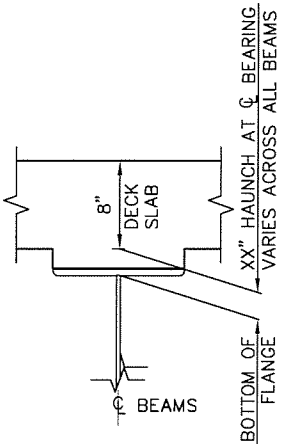


WATER REPELLENT TREATMENT DETAILS



LONGITUDINAL DECK SLAB POURING SEQUENCE

THE POURING OF THE DECK SLAB CONCRETE SHALL BE IN THE SEQUENCE INDICATED. ALL POURS WITH THE SAME NUMBER MAY BE POURED IN ANY SEQUENCE, BUT ALL POURS WITH THE SAME NUMBER SHALL BE COMPLETED BEFORE BEGINNING THE NEXT NUMBERED POUR. THERE SHALL BE A LAPSE OF AT LEAST 48 HOURS BETWEEN NUMBERED POURS. IN THE EVENT OF AN EMERGENCY SITUATION, A KEYED CONSTRUCTION JOINT SHALL BE MADE PERPENDICULAR TO THE DIRECTION OF TRAFFIC AS DIRECTED BY THE ENGINEER. UNTIL THE SLAB IS IN PLACE ON BOTH SIDES OF THE CONSTRUCTION JOINTS, THE SLAB IS UNSUPPORTED, AND NO HEAVY EQUIPMENT WILL BE PERMITTED ON THE FINISHED SLAB WITHIN 6 FEET OF THE CONSTRUCTION JOINTS.

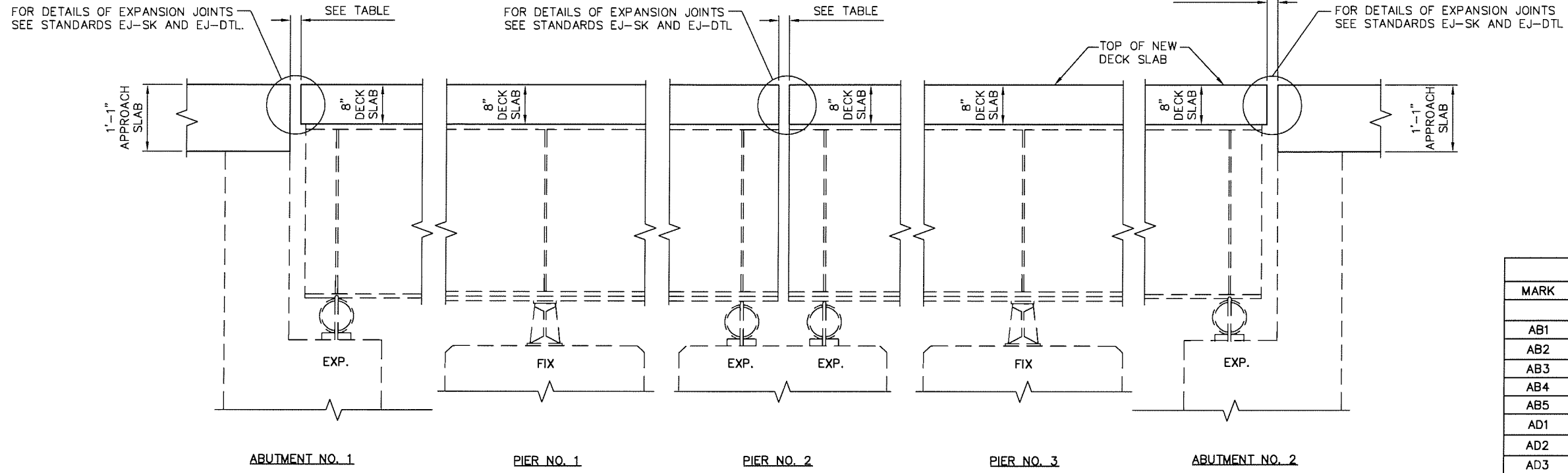


HAUNCH DETAIL

SUMMARY OF QUANTITIES - SUPERSTRUCTURE		
ITEM	UNIT	TOTAL
SEALED EXPANSION JOINT	LF	111.00
SAW CUT GROOVING	SY	787.00
CONCRETE PARAPET	LF	731.00
CLASS AA CONCRETE	CY	200.00
EPOXY COATED REINFORCING STEEL	LB	68287.00
WATER REPELLENT (VISUALLY INSPECTED)	SY	543.00
SEALER CRACK PREPERATION	LF	114.00
SEALER RESIN	GAL	2.00
(PL) RESET OF LIGHT POLES	EA	2.00

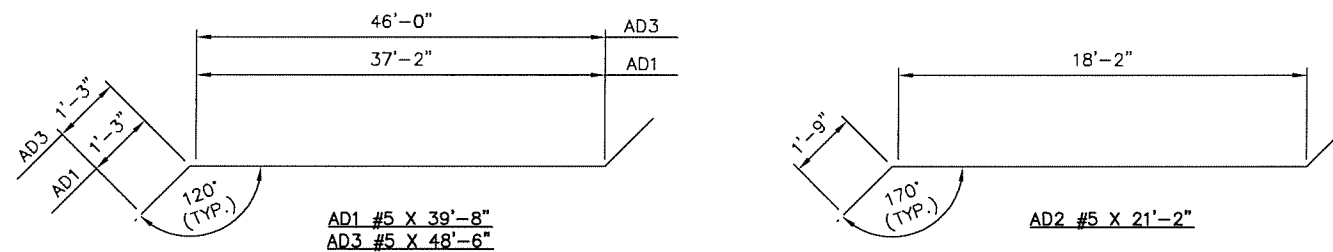
DESIGN	SJN	01/09	BRIDGE A	TULSA COUNTY
DRAWN	LCH	01/09	DETAILS OF SUPERSTRUCTURE (SHEET NO. 1 OF 5)	
CHECKED	SAL	01/09		
APPROVED				
SQUAD	BKD		STATE JOB PIECE NO. 28880(04)	SHEET NO. 18

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LONGITUDINAL SECTION AT ABUTMENTS AND PIERS

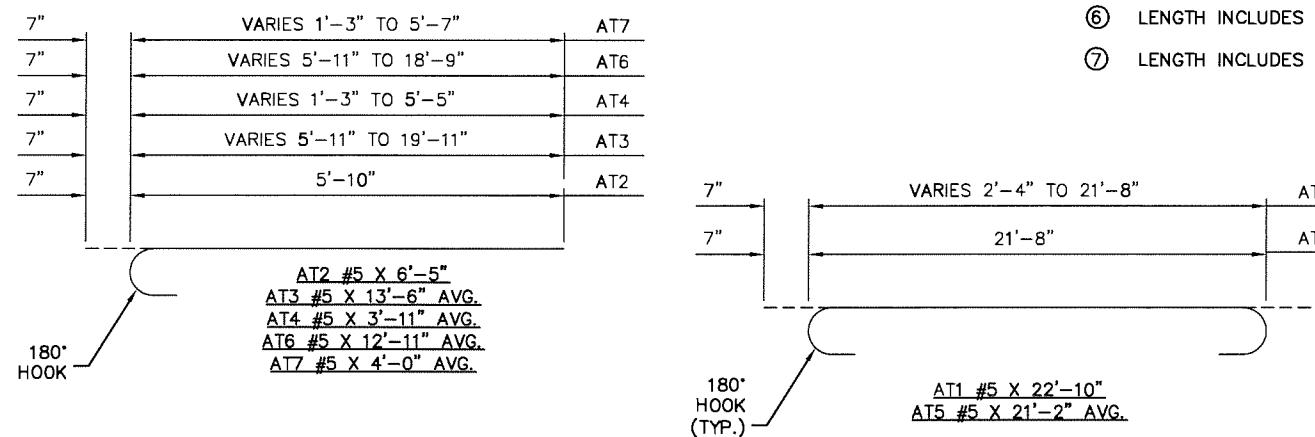
DO NOT TIE WITHIN 6" OF ALL CONSTRUCTION JOINTS.



EXPANSION JOINT OPENING ABUTMENT NO. 1	
JOINT OPENING	AMBIENT AIR TEMP (°F)
1 1/2"	120
1 5/8"	106
1 3/4"	91
1 7/8"	75
2"	60
2 1/8"	45
2 1/4"	29
2 3/8"	14
2 1/2"	0

EXPANSION JOINT OPENING PIER NO. 2	
JOINT OPENING	AMBIENT AIR TEMP (°F)
1 1/8"	120
1 1/4"	112
1 3/8"	104
1 1/2"	95
1 5/8"	86
1 3/4"	77
1 7/8"	69
2"	60
2 1/8"	51
2 1/4"	43
2 3/8"	34
2 1/2"	25
2 5/8"	16
2 3/4"	8
2 7/8"	0

EXPANSION JOINT OPENING ABUTMENT NO. 2	
JOINT OPENING	AMBIENT AIR TEMP (°F)
1 1/2"	120
1 5/8"	105
1 3/4"	90
1 7/8"	75
2"	60
2 1/8"	45
2 1/4"	30
2 3/8"	15
2 1/2"	0



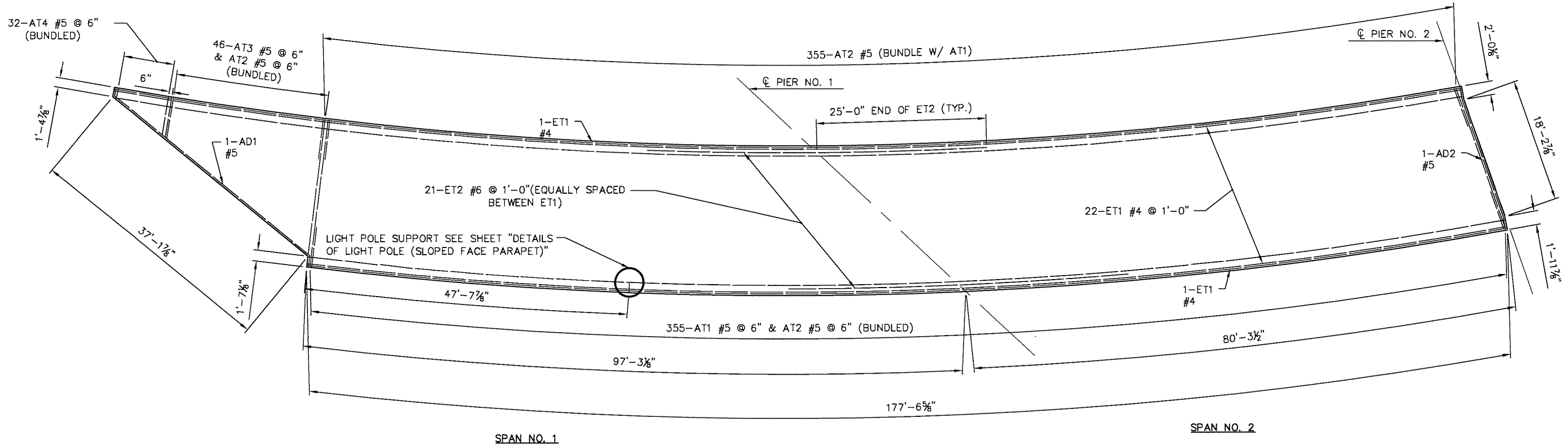
BAR LIST-SUPERSTRUCTURE					
MARK	NO.	SIZE	FORM	LENGTH	LENGTH VARIATION
EPOXY COATED					
AB1	355	#5	STR.	21'-8"	
AB2	61	#5	STR.	10'-7" AVG.	1'-3" TO 19'-11"
AB3	154	#5	STR.	21'-8"	
AB4	158	#5	STR.	21'-1" AVG.	20'-6" TO 21'-8"
AB5	81	#5	STR.	10'-0" AVG.	1'-2" TO 18'-10"
AD1	2	#5	BNT.	39'-8"	
AD2	4	#5	BNT.	21'-2"	
AD3	2	#5	BNT.	48'-6"	
AT1	509	#5	BNT.	22'-10"	
AT2	1438	#5	BNT.	6'-5"	
AT3	46	#5	BNT.	13'-6" AVG.	6'-6" TO 20'-6"
① AT4	32	#5	BNT.	4'-0" AVG.	1'-10" TO 6'-2"
AT5	158	#5	BNT.	22'-4" AVG.	21'-9" TO 22'-10"
AT6	59	#5	BNT.	12'-11" AVG.	6'-6" TO 19'-4"
② AT7	46	#5	BNT.	4'-0" AVG.	1'-10" TO 6'-2"
③ EB1	28	#5	STR.	198'-2" AVG.	187'-2" TO 209'-2"
④ EB2	28	#5	STR.	185'-10" AVG.	166'-4" TO 205'-4"
⑤ EP	719	#5	BNT.	5'-5"	
⑥ ET1	23	#4	STR.	196'-2" AVG.	185'-2" TO 207'-2"
⑦ ET2	21	#6	STR.	50'-0"	
ET3	23	#4	STR.	183'-10"	164'-4" TO 203'-4"
ET4	21	#6	STR.	50'-0"	
⑧ L	24	#4	BNT.	1'-4"	

- ① INCLUDES 2 SETS OF 16 BARS
- ② INCLUDES 2 SETS OF 23 BARS
- ③ LENGTH INCLUDES FOUR 2'-6" LAP SPLICES (LAP SPLICES SHALL BE STAGGERED)
- ④ LENGTH INCLUDES FOUR 2'-6" LAP SPLICES (LAP SPLICES SHALL BE STAGGERED)
- ⑤ FOR BAR BENDS SEE STD. SFP1-2
- ⑥ LENGTH INCLUDES FOUR 2'-0" LAP SPLICES (LAP SPLICES SHALL BE STAGGERED)
- ⑦ LENGTH INCLUDES FOUR 2'-0" LAP SPLICES (LAP SPLICES SHALL BE STAGGERED)

DESIGN	SJN	01/09	BRIDGE A	TULSA COUNTY
DRAWN	LCH	01/09	DETAILS OF SUPERSTRUCTURE (SHEET NO. 2 OF 5)	
CHECKED	SAL	01/09		
APPROVED				
SQUAD	BKJ		STATE JOB PIECE NO. 28880(04)	SHEET NO. 19

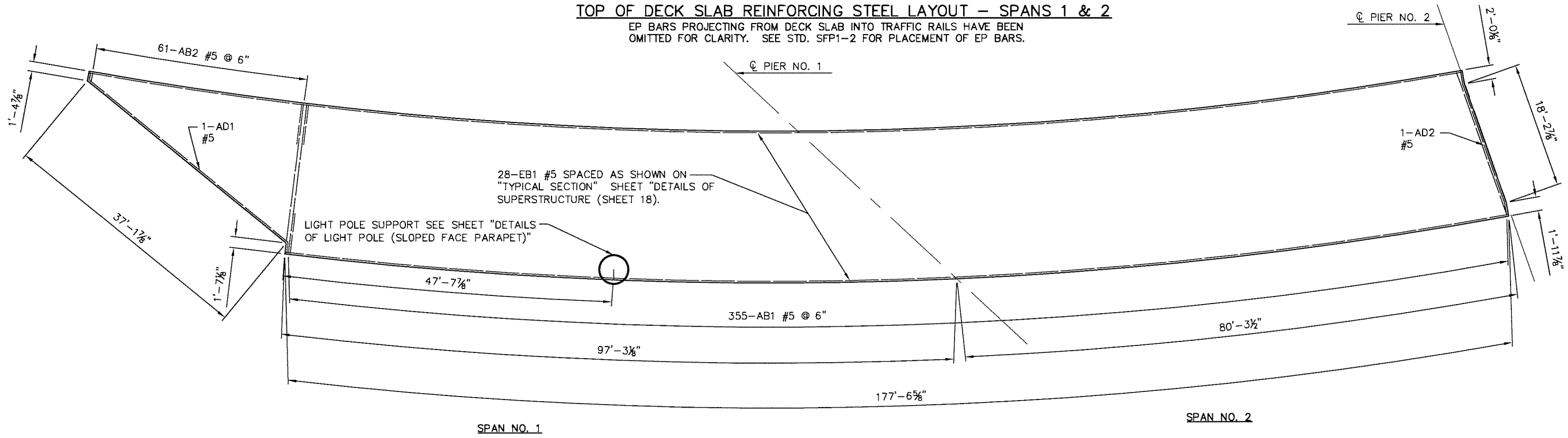
DETAILS OF BENT REINFORCEMENT

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TOP OF DECK SLAB REINFORCING STEEL LAYOUT - SPANS 1 & 2

EP BARS PROJECTING FROM DECK SLAB INTO TRAFFIC RAILS HAVE BEEN OMITTED FOR CLARITY. SEE STD. SFP1-2 FOR PLACEMENT OF EP BARS.

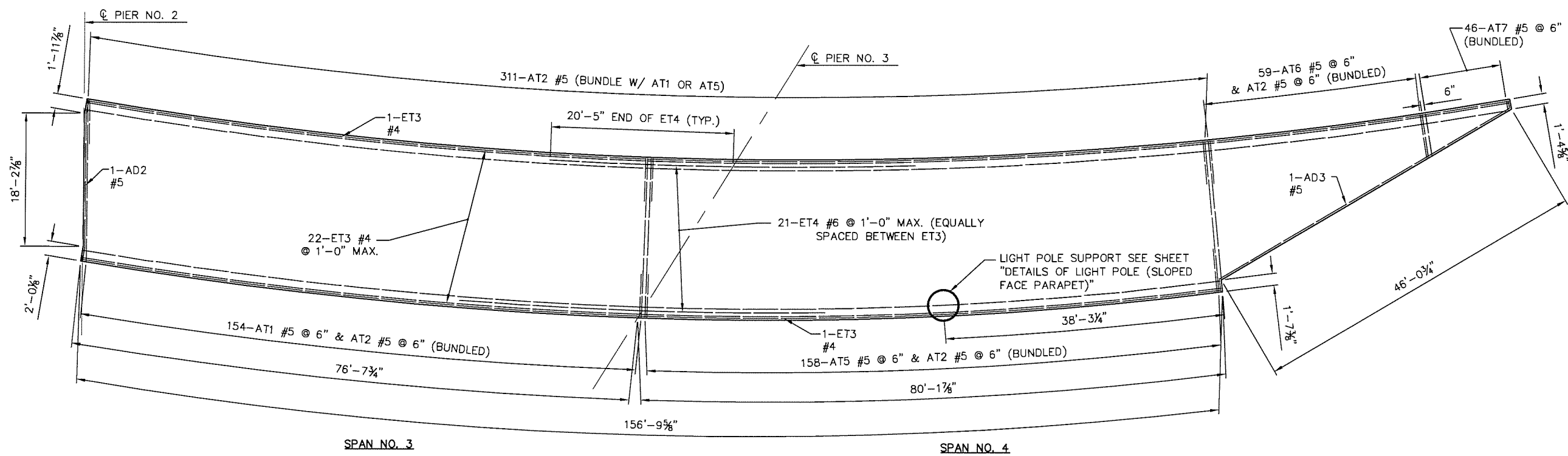


BOTTOM OF DECK SLAB REINFORCING STEEL LAYOUT - SPANS 1 & 2

EP BARS PROJECTING FROM DECK SLAB INTO TRAFFIC RAILS HAVE BEEN OMITTED FOR CLARITY. SEE STD. SFP1-2 FOR PLACEMENT OF EP BARS.

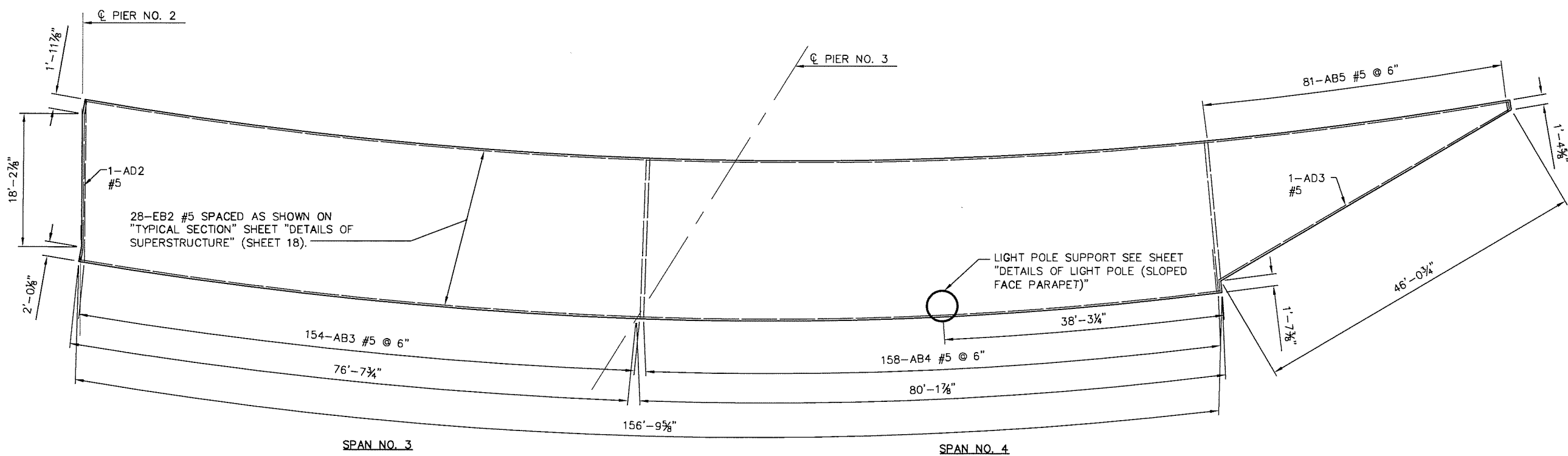
DESIGN	SJN	01/09	BRIDGE A	TULSA COUNTY
DRAWN	SJN	01/09	DETAILS OF SUPERSTRUCTURE (SHEET NO. 3 OF 5)	
CHECKED	SAL	01/09		
APPROVED				
SQUAD	BKD		STATE JOB PIECE NO. 28880(04)	SHEET NO. 20

X:\Projects\611-ODOT-IDL North & South Bound Lanes\DWG\Sheets\611-BRIDGE 15A\SHEETS\611-SB-BR15A-SS04.dwg, 3/25/2016 8:28:20 AM, DEP



TOP OF DECK SLAB REINFORCING STEEL LAYOUT - SPANS 3 & 4

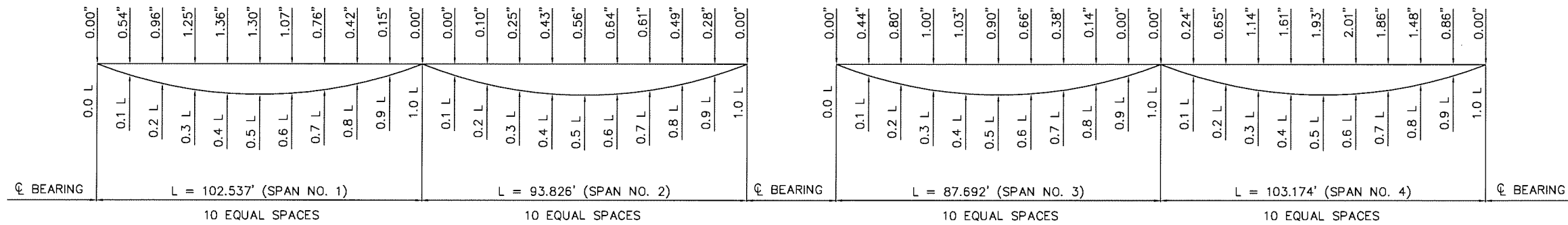
EP BARS PROJECTING FROM DECK SLAB INTO TRAFFIC RAILS HAVE BEEN OMITTED FOR CLARITY. SEE STD. SFP1-2 FOR PLACEMENT OF EP BARS.



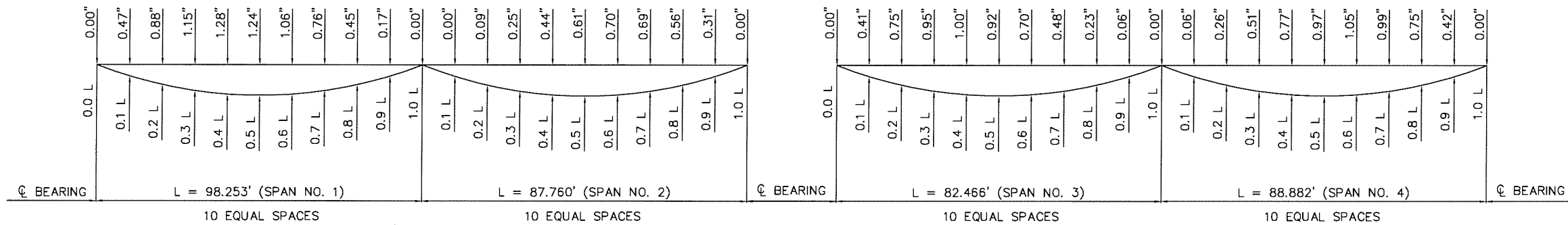
BOTTOM OF DECK SLAB REINFORCING STEEL LAYOUT - SPANS 3 & 4

EP BARS PROJECTING FROM DECK SLAB INTO TRAFFIC RAILS HAVE BEEN OMITTED FOR CLARITY. SEE STD. SFP1-2 FOR PLACEMENT OF EP BARS.

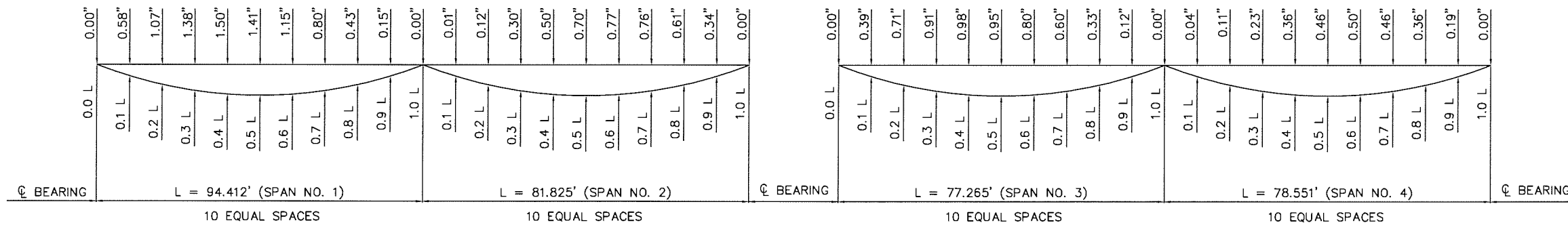
DESIGN	SJN	01/09	BRIDGE A	TULSA COUNTY
DRAWN	SJN	01/09	DETAILS OF SUPERSTRUCTURE	
CHECKED	SAL	01/09	(SHEET NO. 4 OF 5)	
APPROVED				
SQUAD	BKL		STATE JOB PIECE NO. 28880(04)	SHEET NO. 21



GIRDER 1 DEAD LOAD DEFLECTION DIAGRAM



GIRDER 2 DEAD LOAD DEFLECTION DIAGRAM



GIRDER 3 DEAD LOAD DEFLECTION DIAGRAM

THE BEAM DEAD LOAD DEFLECTIONS SHOWN AT THE TENTH POINTS ARE THE DEFLECTIONS DUE TO THE DECK SLAB, HAUNCH AND CONCRETE TRAFFIC RAIL. THE DEAD LOAD DEFLECTIONS SHALL BE TAKEN INTO CONSIDERATION IN POURING THE DECK SLAB AND HAUNCH

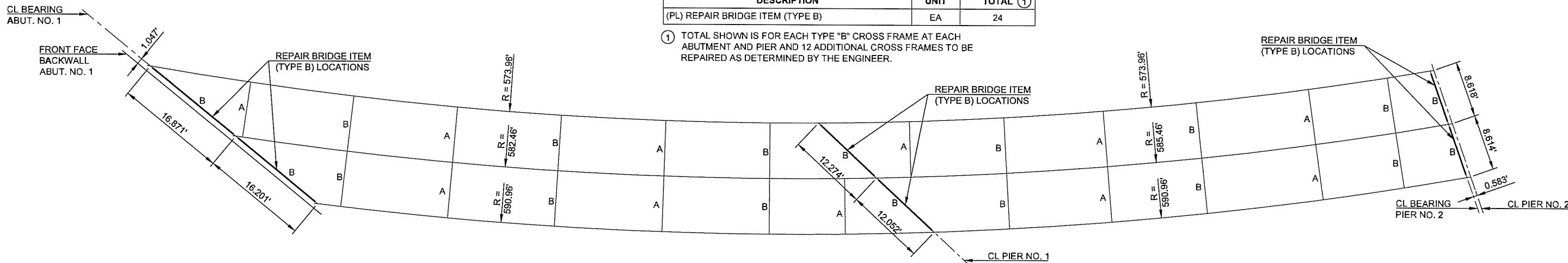
DESIGN	SJN	01/09	BRIDGE A	TULSA COUNTY
DRAWN	GNP	01/09	DETAILS OF SUPERSTRUCTURE	
CHECKED	SAL	01/09	(SHEET NO. 5 OF 5)	
APPROVED				
SQUAD	BKL		STATE JOB PIECE NO. 28880(04)	SHEET NO. 22

DESCRIPTION	REVISIONS	DATE

REPAIR BRIDGE ITEM (TYPE B) QUANTITIES

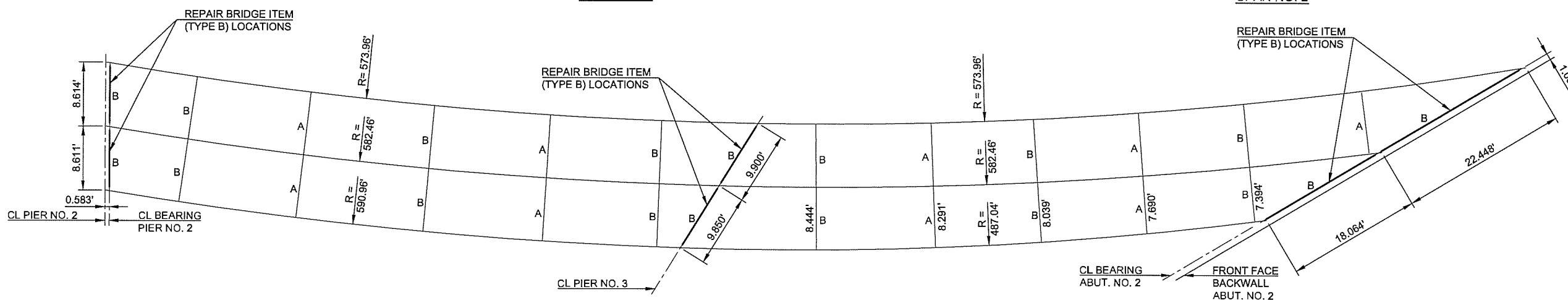
DESCRIPTION	UNIT	TOTAL ①
(PL) REPAIR BRIDGE ITEM (TYPE B)	EA	24

① TOTAL SHOWN 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.



SPAN NO. 1

SPAN NO. 2



SPAN NO. 3

SPAN NO. 4

GIRDER AND DIAPHRAGM LAYOUT

NOTES:

ALL INFORMATION SHOWN WAS OBTAINED FROM RECORD DRAWINGS. CONTRACTOR SHALL FIELD VERIFY BEFORE STARTING WORK.

METHOD OF DETACHING THE DIAGONALS FROM THE TOP MEMBER WITHOUT DAMAGING THE DIAGONALS SHALL BE SUBMITTED FOR APPROVAL TO THE ENGINEER. ANY DIAGONALS DAMAGED DURING DETACHING FROM TOP MEMBER SHALL BE REPLACED AT NO ADDITIONAL COSTS UNLESS APPROVED BY THE ENGINEER. DIAGONALS SHALL BE WELDED TO THE NEW TOP MEMBER AS SHOWN.

STRUCTURAL STEEL REPLACEMENTS:

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

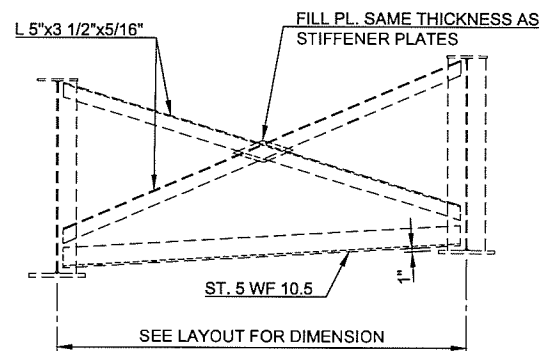
WELDING TO EXISTING STRUCTURES:

ALL WELDS MUST BE MADE TO SOUND STEEL. ADJUST WELD LOCATIONS AND EXTENTS OF NEW STRUCTURAL STEEL IF SOUND STEEL IS NOT FOUND AT LOCATIONS SHOWN IN THE PLANS. ALL WELDING SHALL BE IN ACCORDANCE WITH SECTION 724.03 OF THE SPECIFICATIONS.

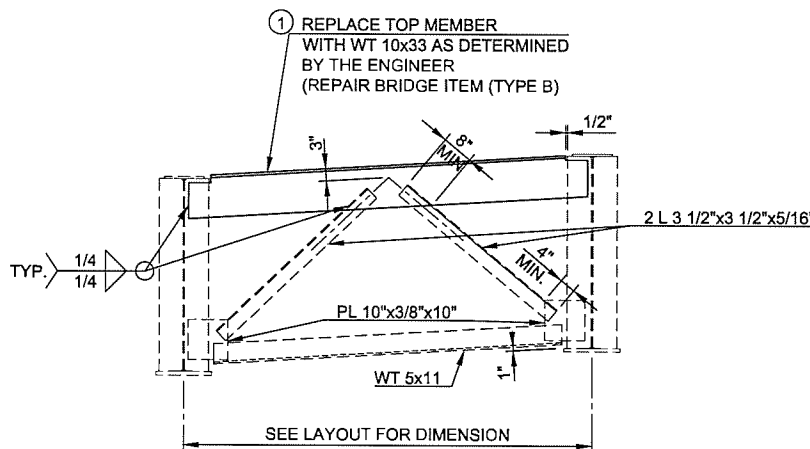
ALL FIELD WELDS ARE TO BE INSPECTED BY THE ODOT MATERIALS DIVISION OR THEIR REPRESENTATIVE AND SHALL BE IN ACCORDANCE WITH THE CURRENT ANSII/AASHTO/AWS D1.5 BRIDGE WELDING CODE. CONTACT THE ODOT MATERIALS DIVISION AT (405) 522-4999 AT LEAST 72 HOURS PRIOR TO THE ANTICIPATED COMPLETION OF FIELD WELDS.

DETERIORATED EXISTING STRUCTURAL STEEL

NOTIFY THE ENGINEER OF ANY DETERIORATED STRUCTURAL STEEL DURING OPERATIONS. THE ENGINEER IN TURN WILL NOTIFY THE BRIDGE ENGINEER TO THE EXTENT OF THE DAMAGE. THE BRIDGE ENGINEER SHALL THEN DETERMINE IF ANY REPAIRS ARE NECESSARY, AND IF SO, WHAT METHOD OF REPAIR SHALL BE USED.



TYPE "A" CROSS FRAME
(SHOWN FOR INFORMATION ONLY)

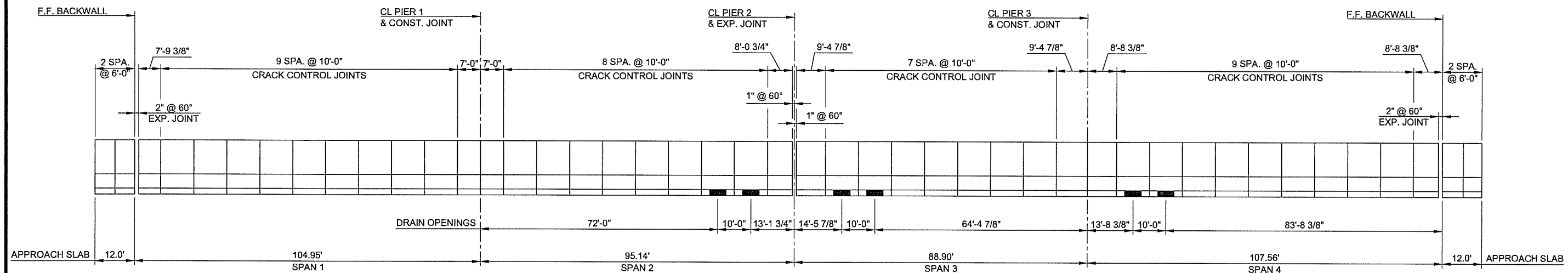


TYPE "B" CROSS FRAME
(SHOWN WITH REPAIR BRIDGE ITEM (TYPE B))

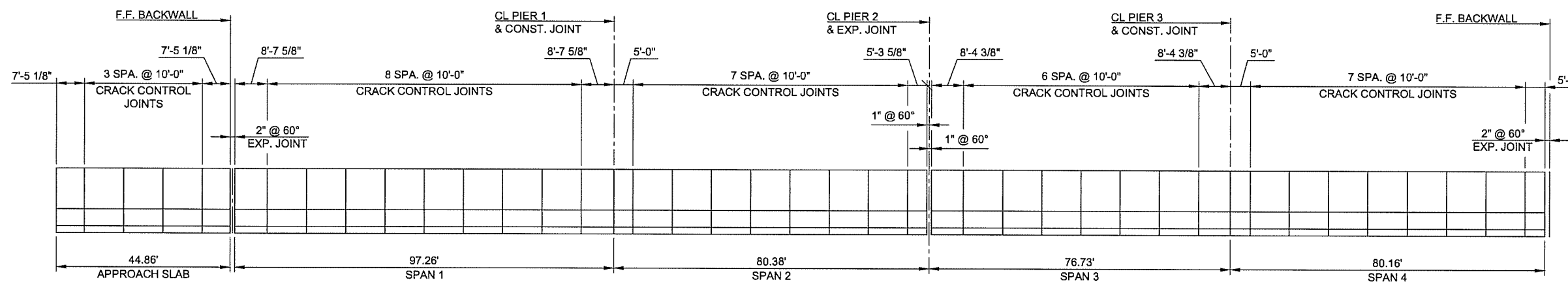
DESIGN	JSH	4/14	OKLAHOMA DEPARTMENT OF TRANSPORTATION	
DRAWN	MRM	4/14	BRIDGE A	TULSA COUNTY
CHECKED	JWB	3/16	REPAIR BRIDGE ITEM (TYPE B) DETAILS	
APPROVED				
SQUAD	TT		STATE JOB NO. 28880(04)	SHEET NO. 23

3/21/2016 1:02:00 AM - MATETRA TECH111989 ODOT/EC 1414/TASK ORDER 3/CAD/SHEETFILES/23 - REPAIR BRIDGE ITEM.DWG - MARQUART, MATT

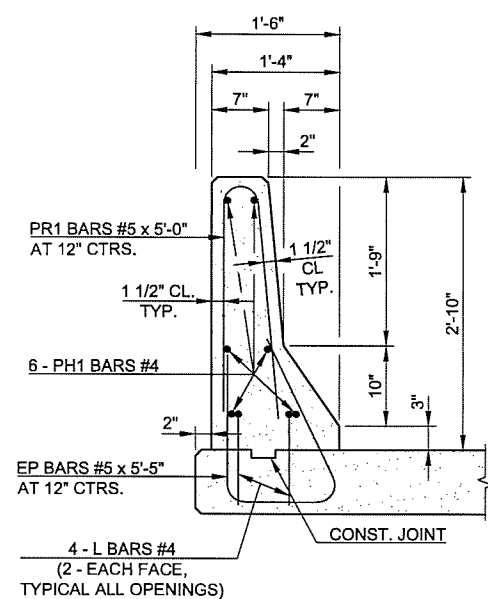
DESCRIPTION	REVISIONS	DATE



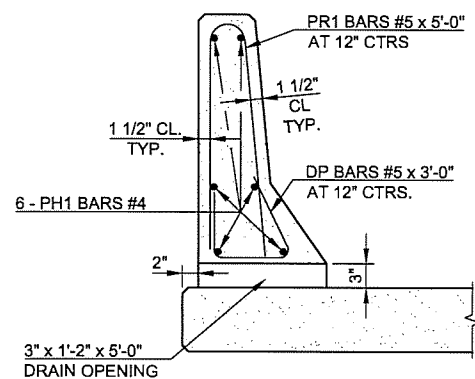
NORTH SLOPED FACE PARAPET



SOUTH SLOPED FACE PARAPET



SECTION THRU POST



SECTION THRU DRAIN OPENING

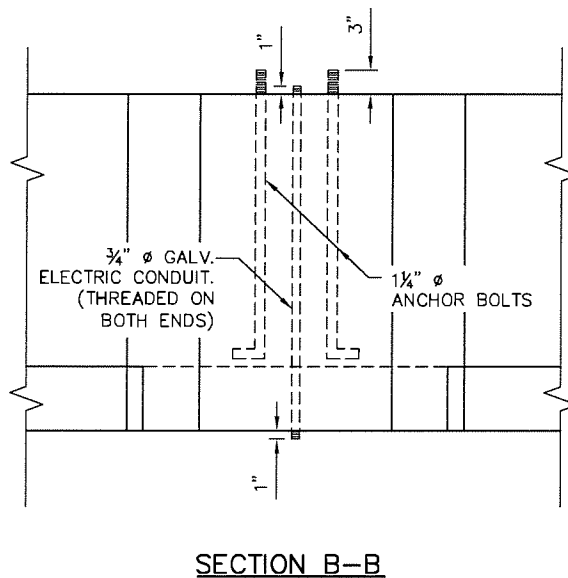
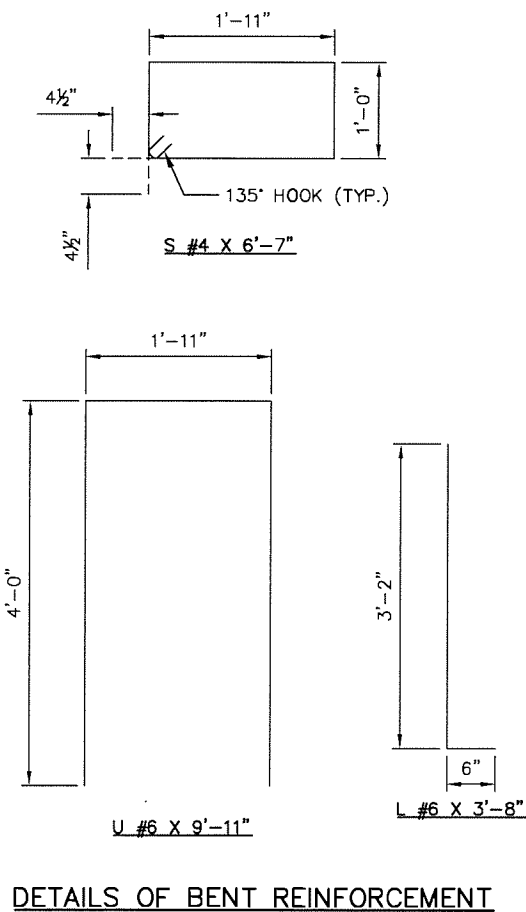
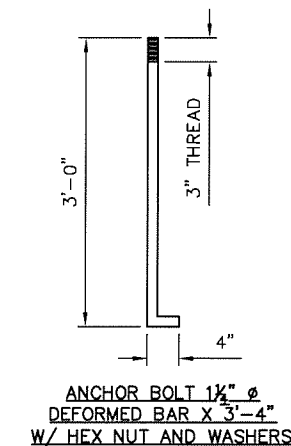
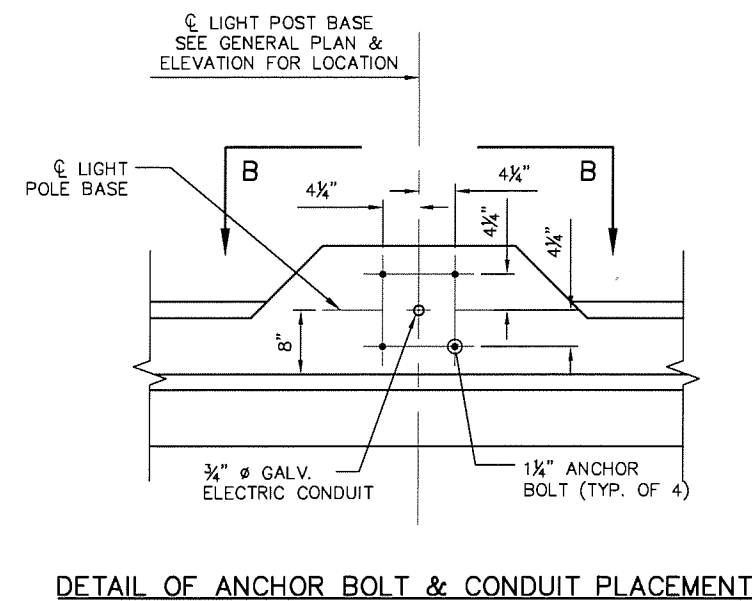
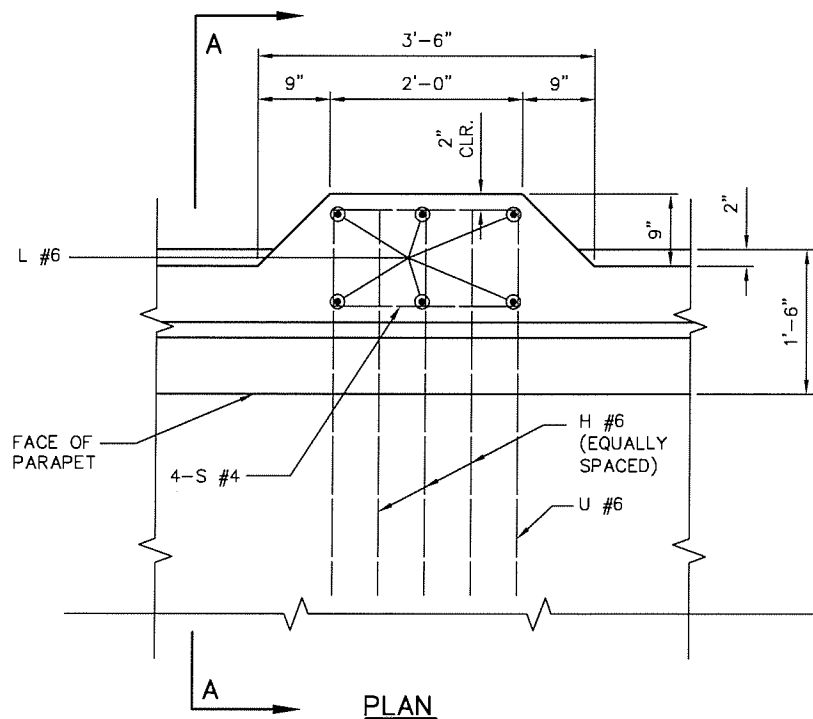
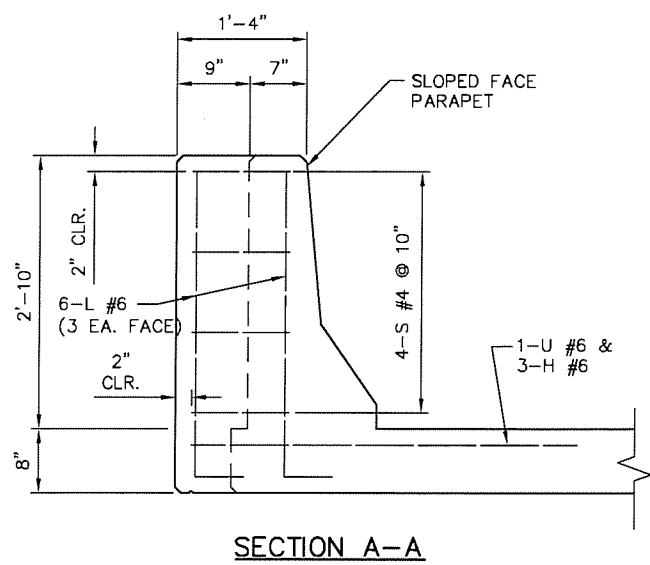
SECTION THRU BRIDGE PARAPET AT DECK SLAB

NOTES:
SEE STANDARD SFP1-2 FOR ALL OTHER DETAILS

DESIGN	JWB	9/15	OKLAHOMA DEPARTMENT OF TRANSPORTATION BRIDGE A TULSA COUNTY
DRAWN	MRM	9/15	
CHECKED	JWB	3/16	
APPROVED			
SQUAD	TT		STATE JOB NO. 28880(04)
			SHEET NO. 24

3/21/2016 11:03:20 AM - M:\TETRA TECH\11399 ODOT\TEC 1414\FYASK ORDER 3\CAD\SHHEFILES24 - PARAPET DTLS.DWG - MARQUART, MATT

X:\Projects\611-ODOT-IDL North & South Bound Lanes\DWG\Sheets\611-BRIDGE 15A\SHEETS\611-SB-SFP-LIGHT SUPPORT01.dwg, 3/25/2016 8:30:51 AM, DEP



NOTES:

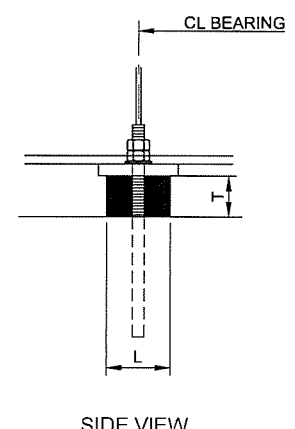
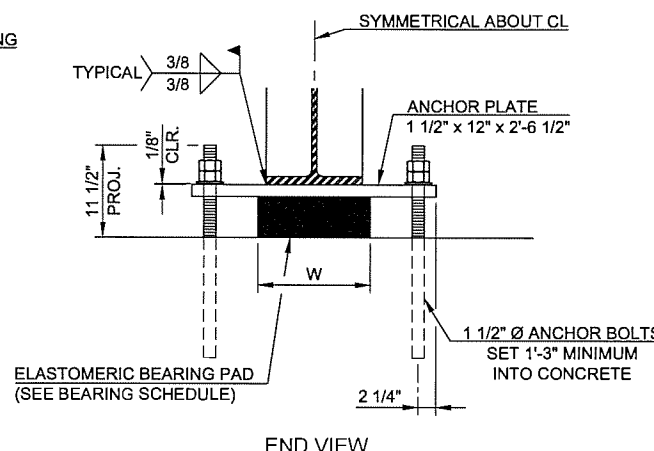
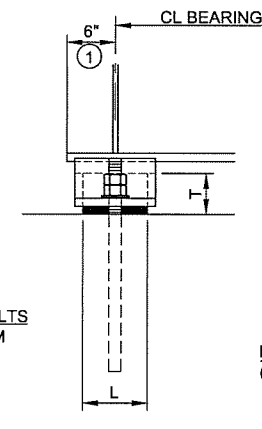
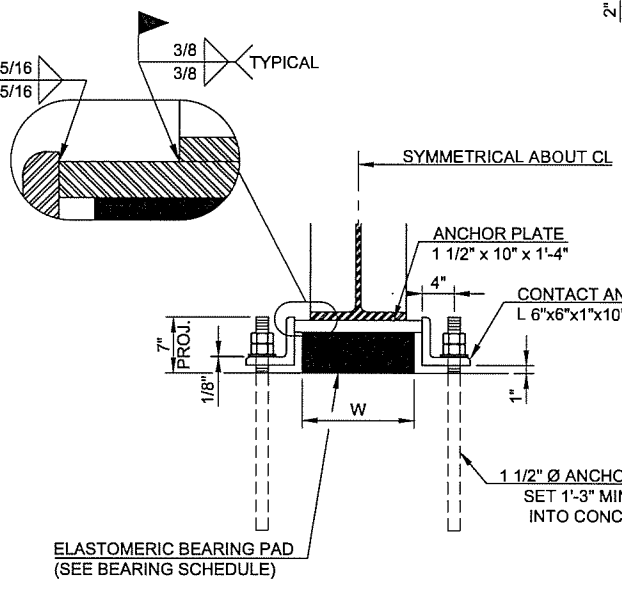
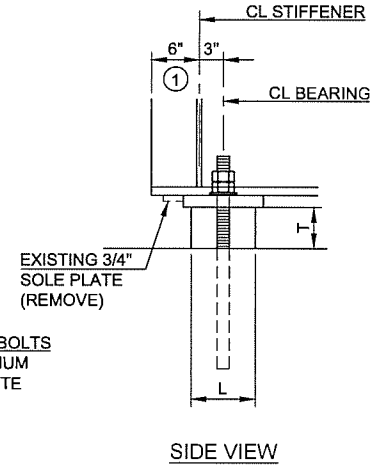
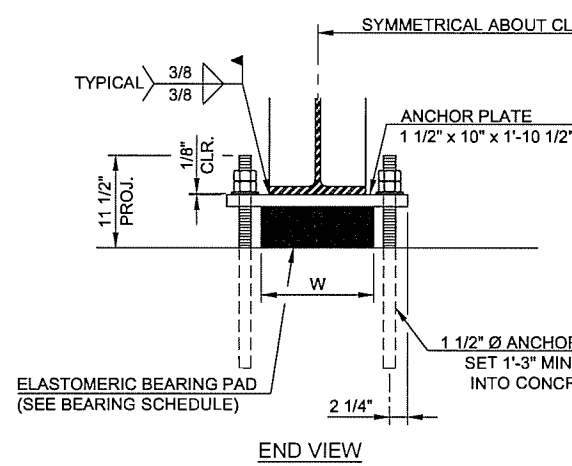
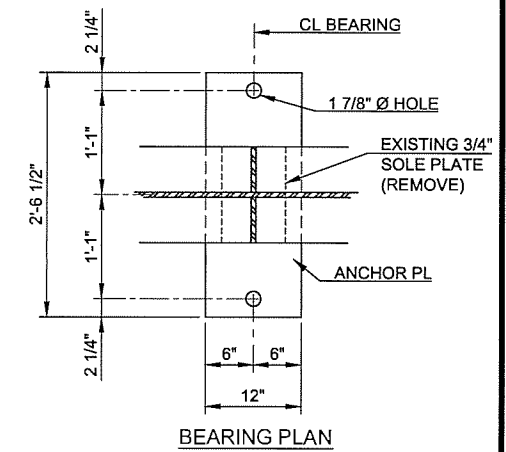
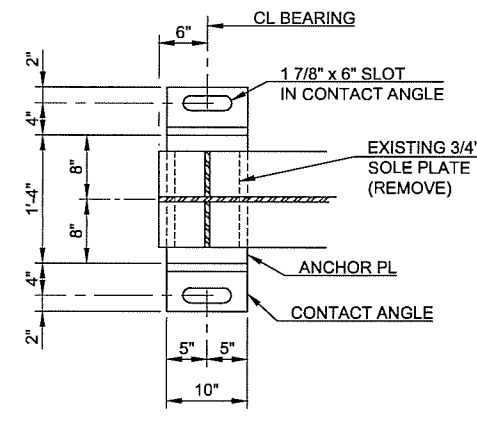
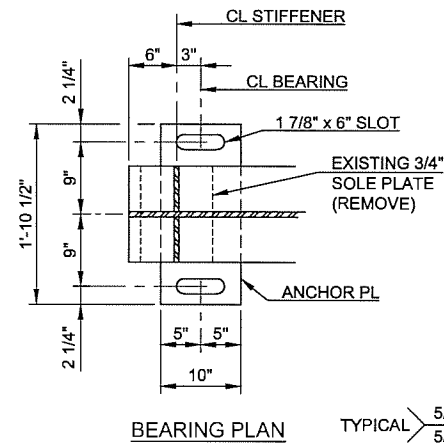
CONTRACTOR SHALL VERIFY ANCHOR BOLT & CONDUIT CONFIGURATION FOR COMPATIBILITY WITH EXISTING LIGHT POLES AND MAKE ADJUSTMENTS IF REQUIRED.

BAR LIST - ONE LIGHT POLE BASE				
MARK	NO.	SIZE	FORM	LENGTH
EPOXY COATED				
H	3	#6	STR.	4'-0"
L	6	#6	BNT	3'-8"
S	4	#4	BNT.	6'-7"
U	1	#6	BNT.	9'-11"

DESIGN	SJN	01/09	BRIDGE A	TULSA COUNTY
DRAWN	SJN	01/09	DETAILS OF LIGHT POLE (SLOPED FACE PARAPET)	
CHECKED	SAL	01/09		
APPROVED				
SQUAD	BKJ		STATE JOB PIECE NO. 28880(04)	SHEET NO. 25

DESCRIPTION	REVISIONS	DATE

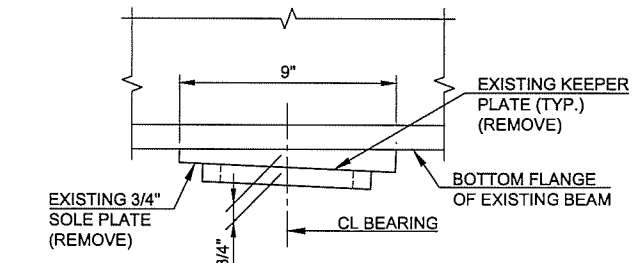
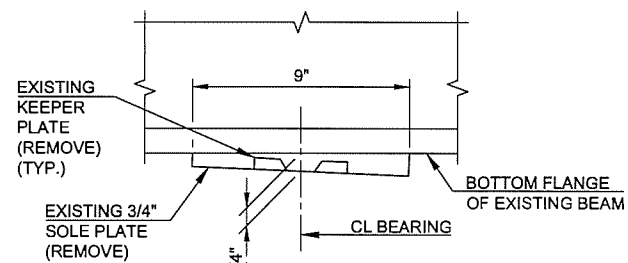
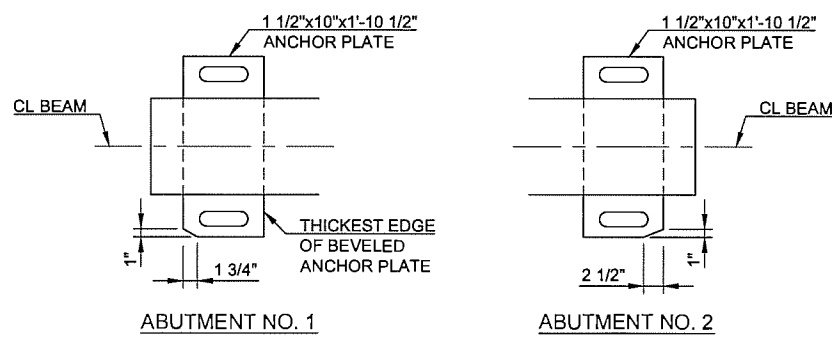
① ANCHOR BOLTS SHALL BE CENTERED IN SLOTS DURING SETTING OF BEAMS. DIMENSION MAY VARY AT EXPANSION BEARING DEPENDING ON TEMPERATURE AT THE TIME OF BEAM SETTING.



BEARING DETAILS
ABUTMENTS

BEARING DETAILS
PIER NO. 2

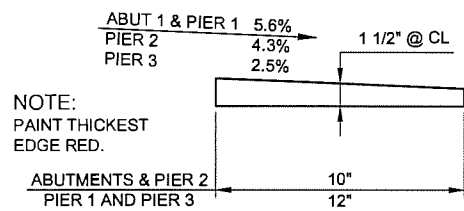
BEARING DETAILS
PIER NO. 1 AND NO. 3



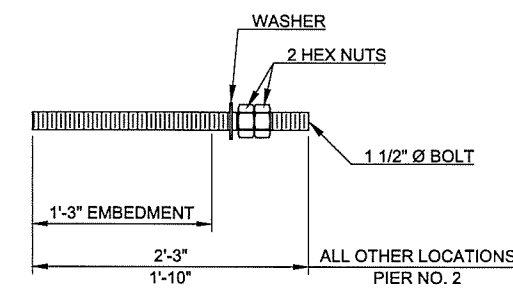
CHAMFER DETAILS

DETAIL OF SOLE PLATE AT PIER 2

DETAIL OF SOLE PLATE AT PIER 1 AND 3



BEARING SCHEDULE				
60 DUROMETER ELASTOMERIC PAD				
LOCATION	SIZE (T x L x W)	COVER LAYER	INNER LAYER	LAMINATE PLATE
ABUTMENTS & PIER NO. 2	9 1/8" x 8" x 1'-2"	2 - 1/4"	7 - 3/8"	8 - 1/8"
PIER NO. 1 & PIER NO. 3	4 1/8" x 10" x 1'-8"	2 - 1/4"	7 3/8"	8 1/8"



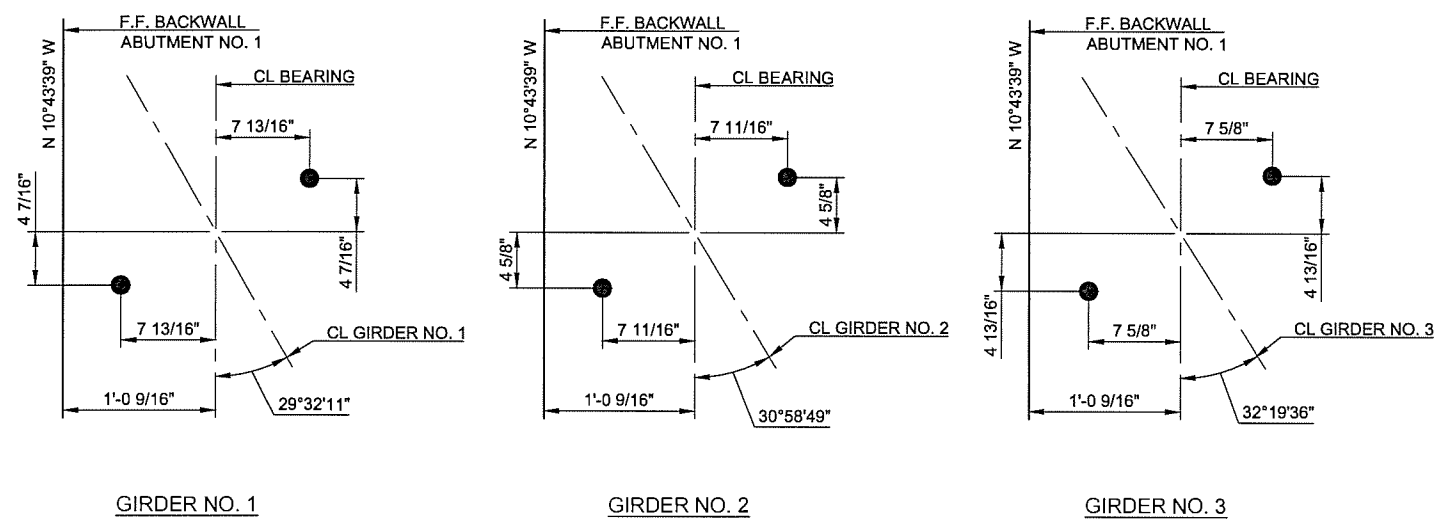
ANCHOR BOLT DETAIL

DESIGN	JSH	1/14	OKLAHOMA DEPARTMENT OF TRANSPORTATION	
DRAWN	MRM	1/14	BRIDGE A	TULSA COUNTY
CHECKED	JWB	3/16		
APPROVED				
SQUAD	TT		STATE JOB NO. 28880(04)	SHEET NO. 26

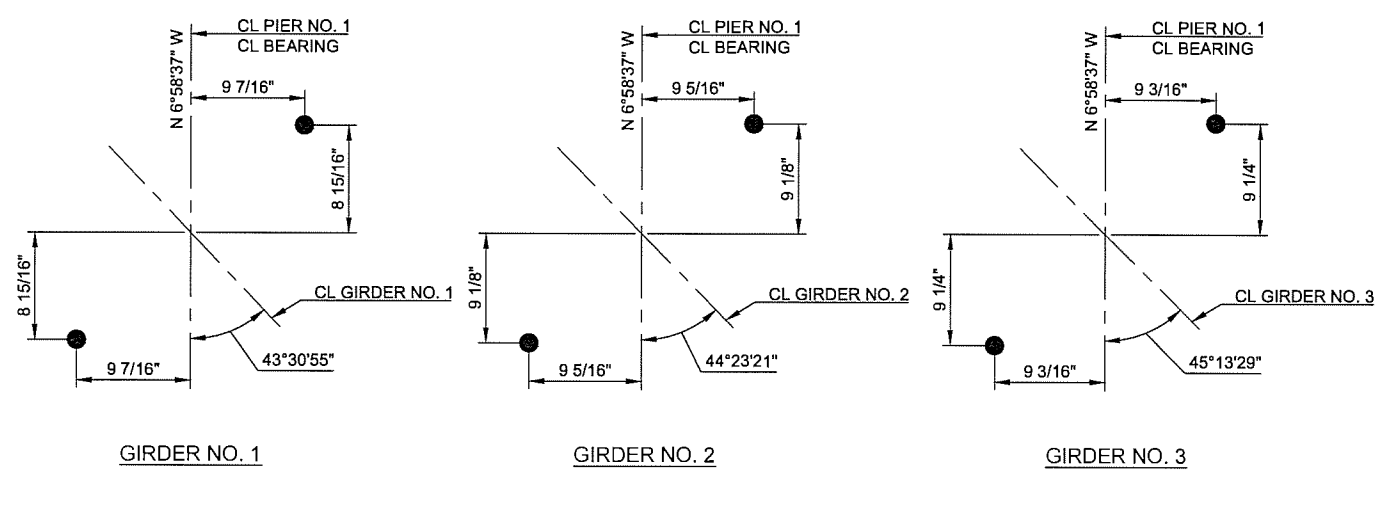
BEARING DETAILS
(SHEET 1 OF 2)

3/21/2016 11:04:00 AM - M:\TETRA TECH\1399 ODOT\1414\FY14\TASK ORDER 3\CAD\SHEETFILES\26 - BEARING DETAILS.1.DWG - MARQUART, MATT

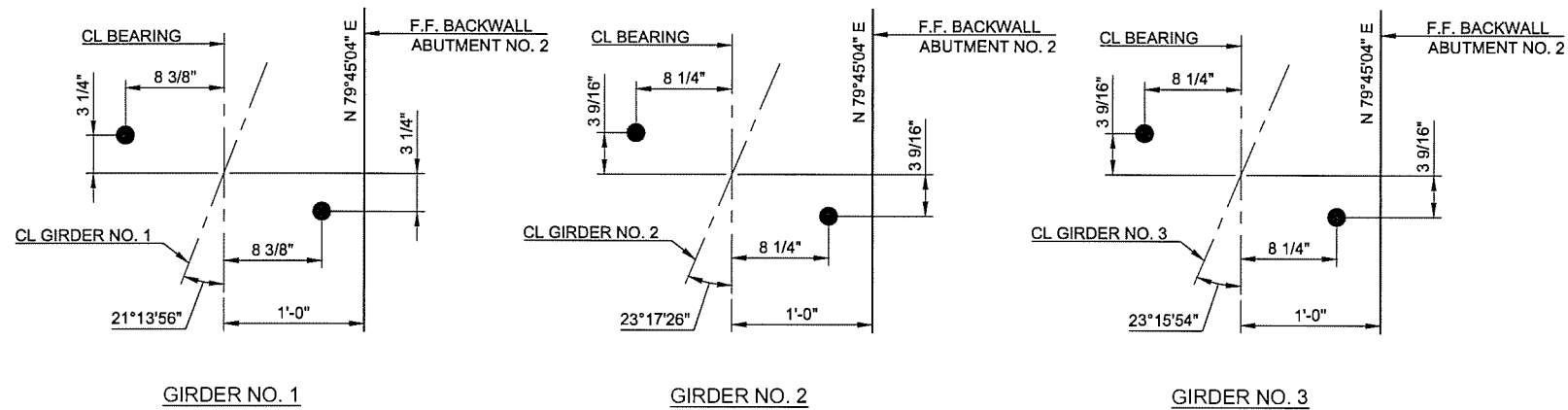
DESCRIPTION	REVISIONS	DATE



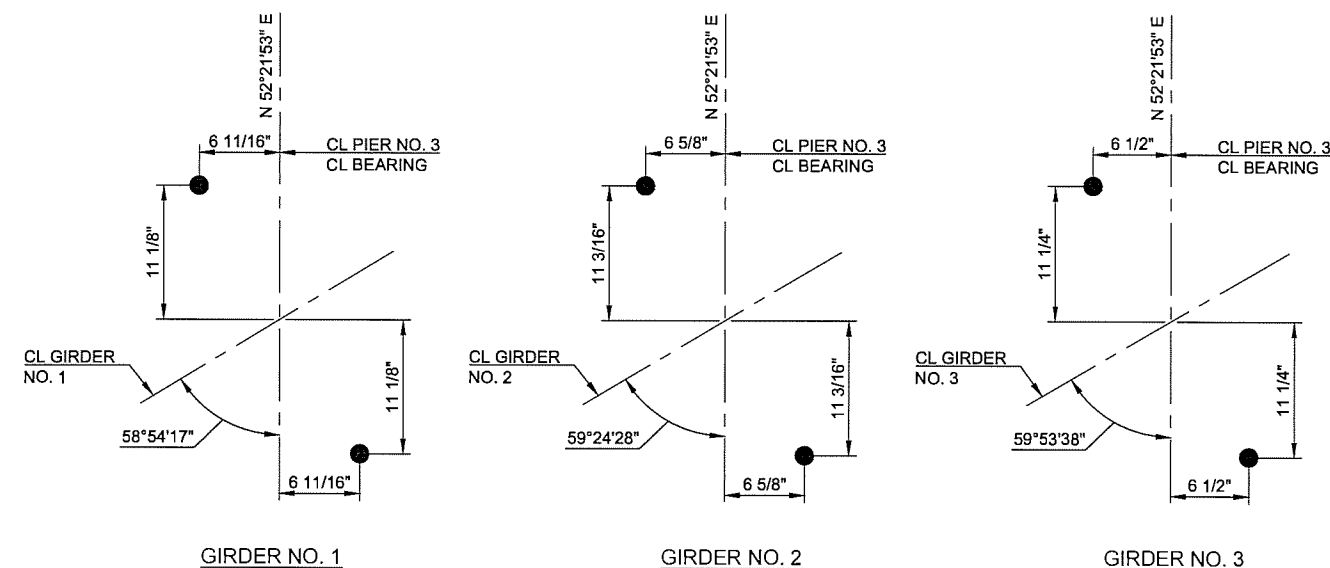
ABUTMENT NO. 1 ANCHOR BOLT SETTING



PIER NO. 1 ANCHOR BOLT SETTING



ABUTMENT NO. 2 ANCHOR BOLT SETTING



PIER NO. 3 ANCHOR BOLT SETTING

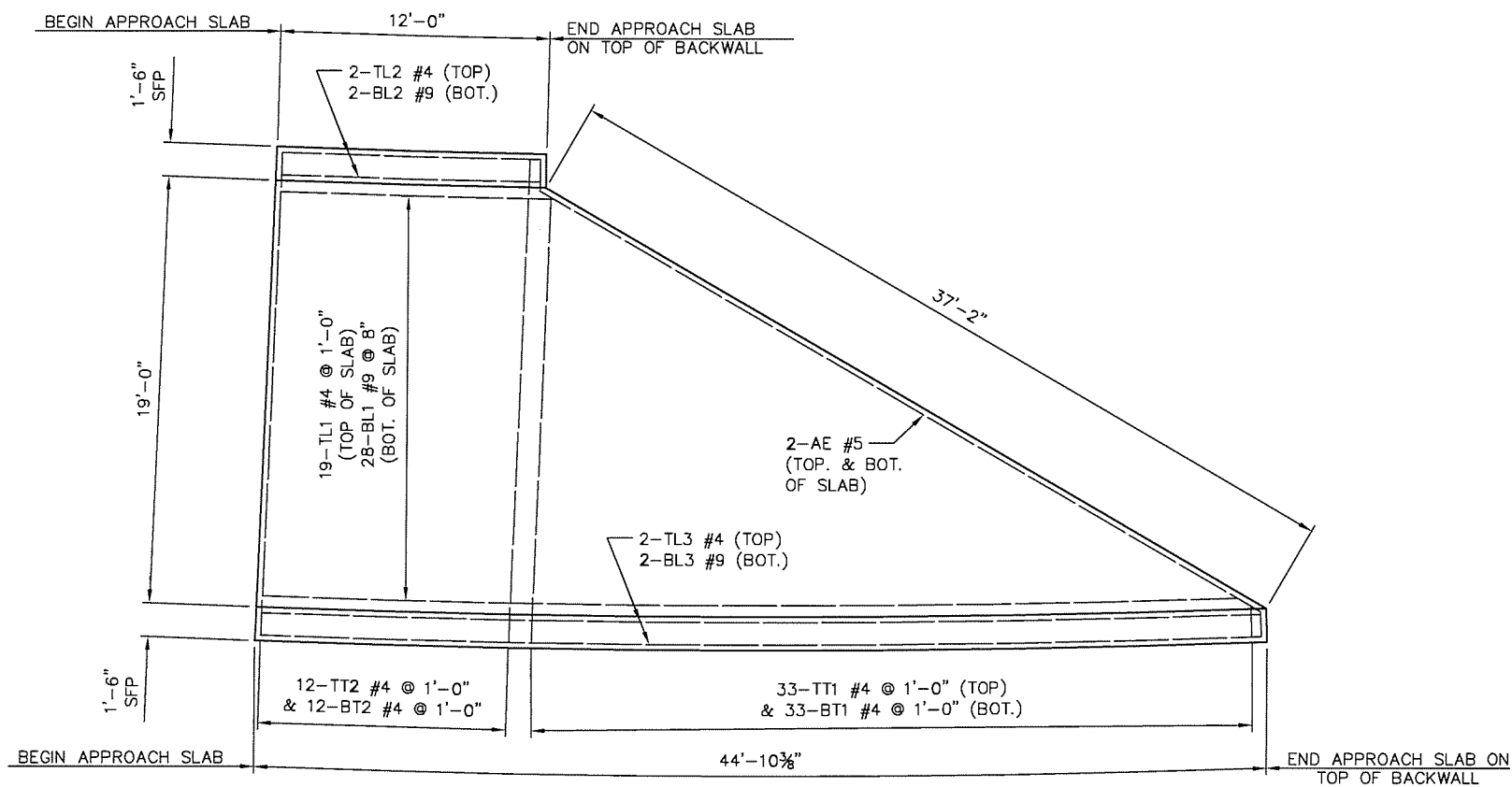
NOTE:
FOR PIER 2 ANCHOR BOLT
SETTING SEE SHEET 16.

DESIGN	JSH	1/14	OKLAHOMA DEPARTMENT OF TRANSPORTATION BRIDGE A TULSA COUNTY
DRAWN	MRM	1/14	
CHECKED	JWB	3/16	
APPROVED			
SQUAD	TT		
STATE JOB NO. 28880(04)			SHEET NO. 27

BEARING DETAILS
(SHEET 2 OF 2)

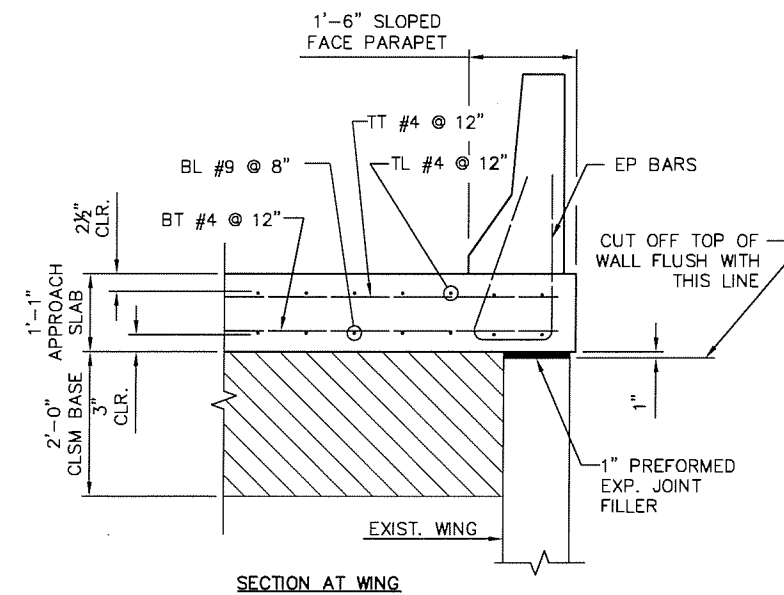
3/21/2016 11:04:52 AM - M:\TETRA TECH\11399 ODOT\EC 1414\FY14\TASK ORDER 3\CAD\SHSHEETFILES\27 - BEARING DETAILS.2.DWG - MARQUART, MATT

X:\Projects\611-ODOT-IDL North & South Bound Lanes\DWG\Sheets\611-BRIDGE 15A\SHEETS\611-SB-BR15A-AS01.dwg, 3/25/2016 8:32:09 AM, DEP

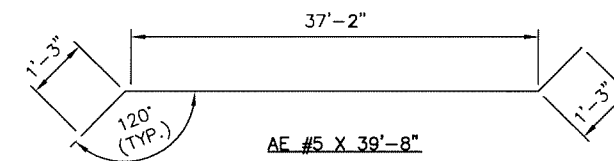


APPROACH SLAB NO. 1 REINFORCING PLAN

EP BARS PROJECTING FROM APPROACH SLAB INTO TRAFFIC RAILS HAVE BEEN OMITTED FOR CLARITY. SEE STD. SFP1-2 FOR PLACEMENT OF EP BARS.



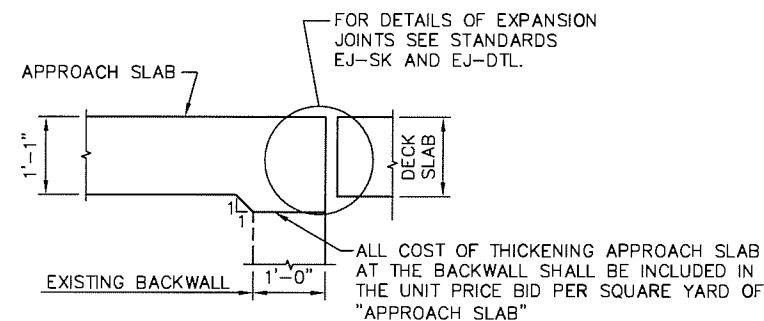
TYPICAL APPROACH SLAB SECTION



DETAILS OF BENT REINFORCEMENT

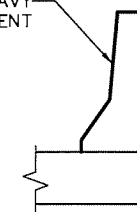
BAR LIST-APPROACH SLAB NO. 1					
MARK	NO.	SIZE	FORM	LENGTH	LENGTH VARIATION
EPOXY COATED					
AE	2	#5	BNT.	39'-8"	
BL1	28	#9	STR.	27'-8" AVG.	12'-1" TO 43'-3"
BL2	2	#9	STR.	11'-6"	
BL3	2	#9	STR.	44'-4"	
BT1	33	#4	STR.	10'-7" AVG.	1'-4" TO 19'-10"
BT2	12	#4	STR.	21'-6"	
EP	59	#5	BNT	5'-5"	
TL1	19	#4	STR.	27'-8" AVG.	12'-1" TO 43'-3"
TL2	2	#4	STR.	11'-6"	
TL3	2	#4	STR.	44'-4"	
TT1	33	#4	STR.	10'-7" AVG.	1'-4" TO 19'-10"
TT2	12	#4	STR.	21'-6"	

NOTE:
FOR EP BAR BEND, SEE STD. SFP1-2



SECTION THROUGH EXPANSION JOINT BETWEEN APPROACH SLAB AND DECK SLAB

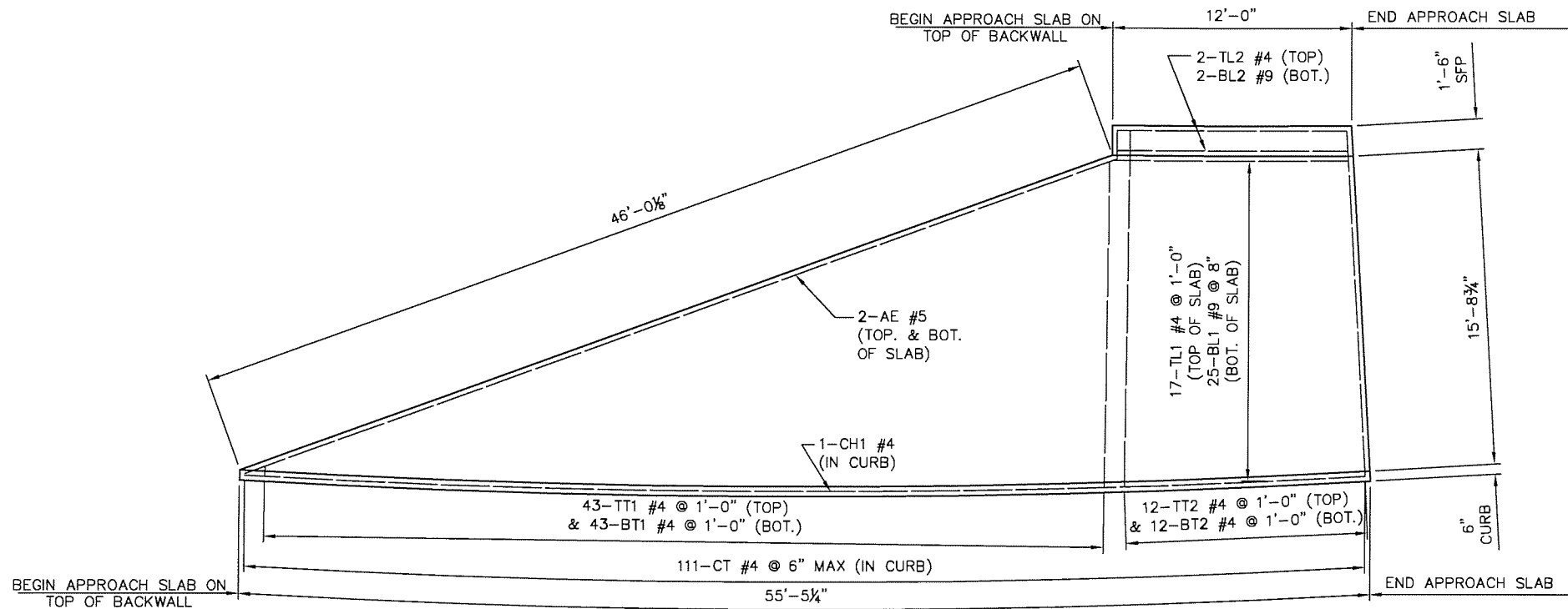
TREAT SURFACES INDICATED BY HEAVY LINES WITH WATER REPELLENT



WATER REPELLENT TREATMENT DETAIL

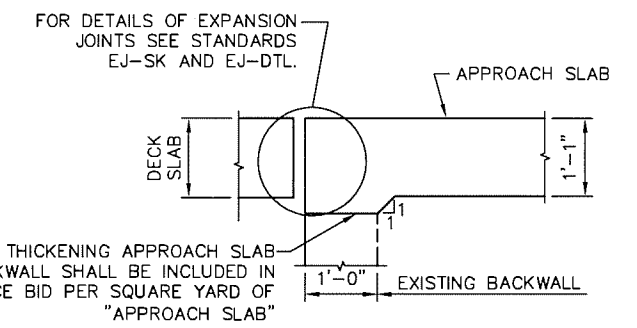
DESIGN	SJN	01/09	BRIDGE A	TULSA COUNTY
DRAWN	SJN	01/09	DETAILS OF APPROACH SLABS (SHEET NO. 1 OF 2)	
CHECKED	SAL	01/09		
APPROVED				
SQUAD	BKJ		STATE JOB PIECE NO. 28880(04)	SHEET NO. 28

X:\Projects\611-ODOT-IDL North & South Bound Lanes\DWG\Sheets\611-BRIDGE 15A\SHEETS\611-SB-BR15A-AS02.dwg, 3/25/2016 8:33:41 AM, DEP



APPROACH SLAB NO. 2 REINFORCING PLAN

EP BARS PROJECTING FROM APPROACH SLAB INTO TRAFFIC RAILS HAVE BEEN OMITTED FOR CLARITY. SEE STD. SFP1-2 FOR PLACEMENT OF EP BARS.

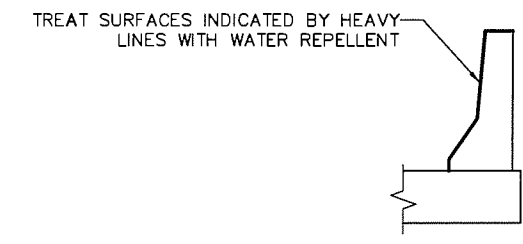
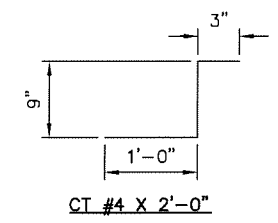


SECTION THROUGH EXPANSION JOINT BETWEEN APPROACH SLAB AND DECK SLAB

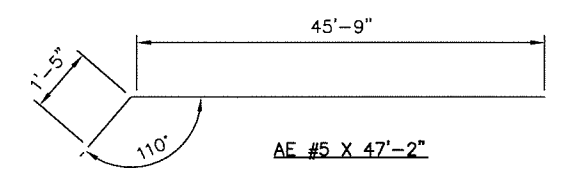
BAR LIST-APPROACH SLAB NO. 2

MARK	NO.	SIZE	FORM	LENGTH	LENGTH VARIATION
EPOXY COATED					
AE	2	#5	BNT.	47'-2"	
BL1	25	#9	STR.	33'-3" AVG.	11'-8" TO 54'-10"
BL2	2	#9	STR.	11'-6"	
BT1	43	#4	STR.	8'-4" AVG.	6" TO 16'-2"
BT2	12	#4	STR.	17'-2"	
CH1	1	#4	STR.	54'-10"	
CT	111	#4	BNT.	2'-0"	
EP	13	#5	BNT.	5'-5"	
TL1	17	#4	STR.	33'-3" AVG.	11'-8" TO 54'-10"
TL2	2	#4	STR.	11'-6"	
TT1	43	#4	STR.	8'-4" AVG.	6" TO 16'-2"
TT2	12	#4	STR.	17'-2"	

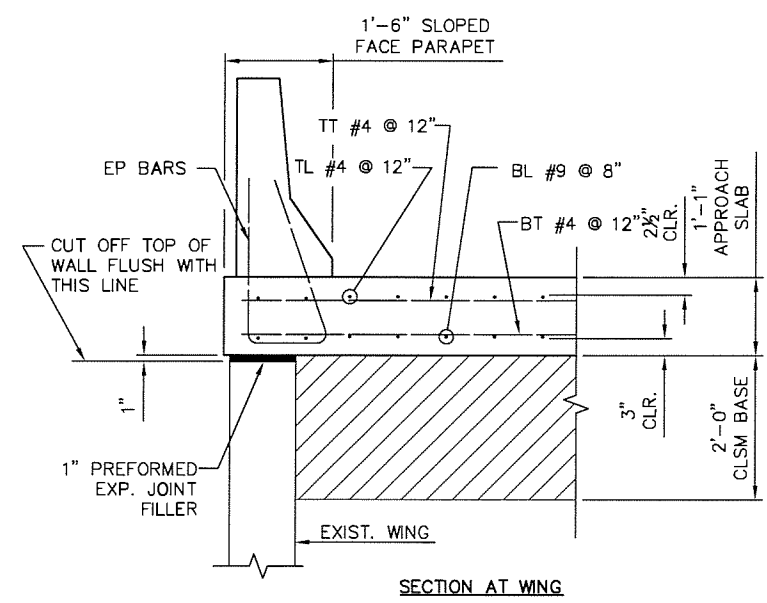
NOTE:
FOR EP BAR BENDS, SEE STD. SFP1-2



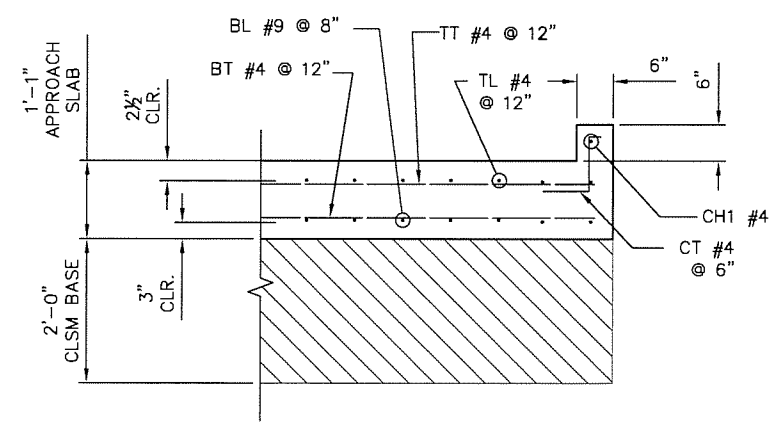
WATER REPELLENT TREATMENT DETAIL



DETAILS OF BENT REINFORCEMENT



SECTION AT WING



CURB SECTION

TYPICAL APPROACH SLAB SECTION

SUMMARY OF QUANTITIES - APPROACH SLAB

ITEM	UNIT	APPROACH SLAB NO. 1	APPROACH SLAB NO. 2	TOTAL
① APPROACH SLAB	SY	70.00	68.00	138.00
SAW CUT GROOVING	SY	60.00	60.00	120.00
CONCRETE PARAPET	LF	57.00	12.00	69.00
WATER REPELLENT (VISUALLY INSPECTED)	SY	23.00	5.00	28.00
CLSM BACKFILL	CY	47.00	45.00	92.00

① THIS QUANTITY INCLUDES ALL COSTS TO CONSTRUCT THE APPROACH SLAB INCLUDING THE COST OF CONCRETE, REINFORCING STEEL, PREFORMED EXPANSION JOINT MATERIAL, LABOR, EQUIPMENT AND OTHER INCIDENTALS TO COMPLETE THE WORK AS SHOWN.

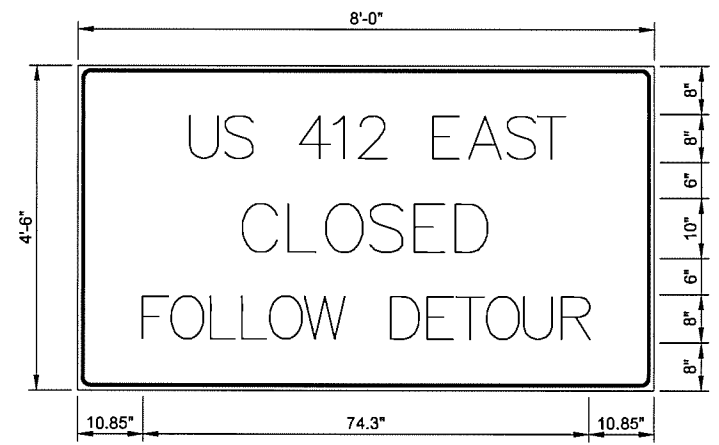
DESIGN	SJN	01/09	BRIDGE A	TULSA COUNTY
DRAWN	SJN	01/09		
CHECKED	SAL	01/09	DETAILS OF APPROACH SLABS (SHEET NO. 2 OF 2)	
APPROVED				
SQUAD	BKJ		STATE JOB PIECE NO. 28880(04)	SHEET NO. 29

DESCRIPTION	REVISIONS	DATE

- A SUFFICIENT NUMBER OF TYPE III BARRICADES WITH SIGNS AS SHOWN, SHALL BE USED TO COMPLETELY CLOSE THE US 75 RAMP TO TRAFFIC ONLY.
- SIGN SHALL READ "US 75 RAMP TO US 412 EAST CLOSED. FOLLOW DETOUR" OR AS DIRECTED BY THE ENGINEER.

ROUTE ASSEMBLY

		M4-8E
		M3-1E
		M1-4E(3)
		IM1-1E(3)
A		M5-1(L)
B		M6-3E
C		M5-2(L)
D		M5-2(R)
E		M6-1E(L)
F		M6-2E(R)



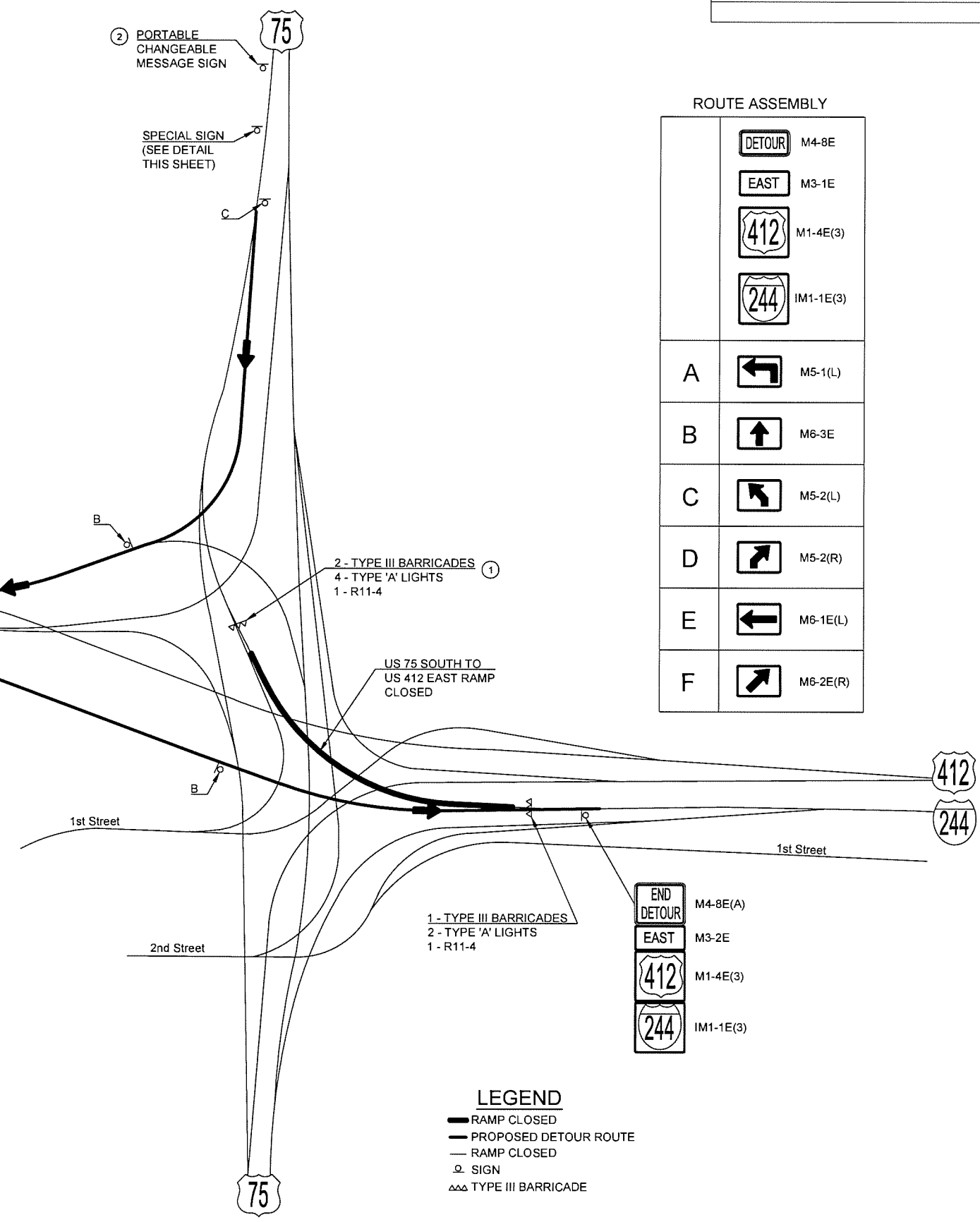
SIGN NUMBER	SPECIAL SIGN
WIDTH X HEIGHT	8'-0" x 4'-6"
BORDER WIDTH	0.63"
CORNER RADIUS	0
MOUNTING	GROUND
BACKGROUND	TYPE: REFLECTIVE COLOR: ORANGE-WHITE
LEGEND/BORDER	TYPE: REFLECTIVE COLOR: BLACK/BLACK

BORDER
R = 1.5"
TH = 0.63"
IN = 0.47"

DIMENSIONS ARE IN INCHES, TENTHS.
LETTER LOCATIONS ARE PANEL EDGE TO LOWER LEFT CORNER

LETTER POSITIONS (X)												LENGTH	SERIES/SIZE			
U	S		4	1	2		E	A	S	T					60.1	8
17.9	23.7	28.2	36.2	42.6	45.6	50.1	58.1	62.9	68.7	69.5						
C	L	O	S	E	D											
27.5	35.1	41.4	48.8	56.1	62.9										41.0	10
F	O	L	L	O	W		D	E	T	O	U	R				
10.8	15.9	22.2	27.4	32.4	38.1	44.2	52.2	58.3	63.1	68.1	74.4	80.7			74.3	8

US 75 SOUTH TO US 412 EAST RAMP
DETOUR



- LEGEND**
- RAMP CLOSED
 - PROPOSED DETOUR ROUTE
 - RAMP CLOSED
 - ⊙ SIGN
 - ▲▲▲ TYPE III BARRICADE

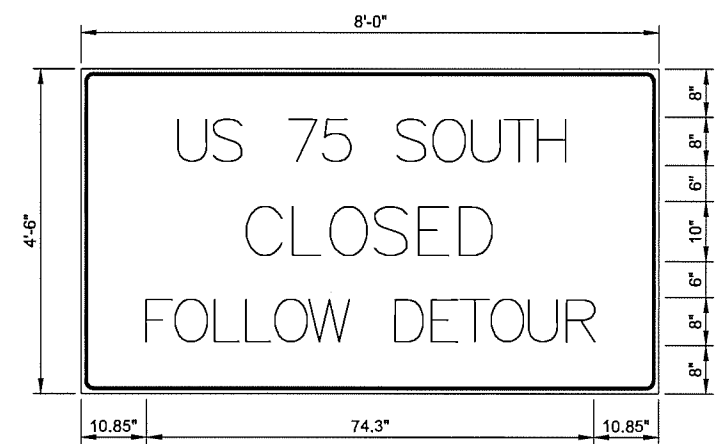
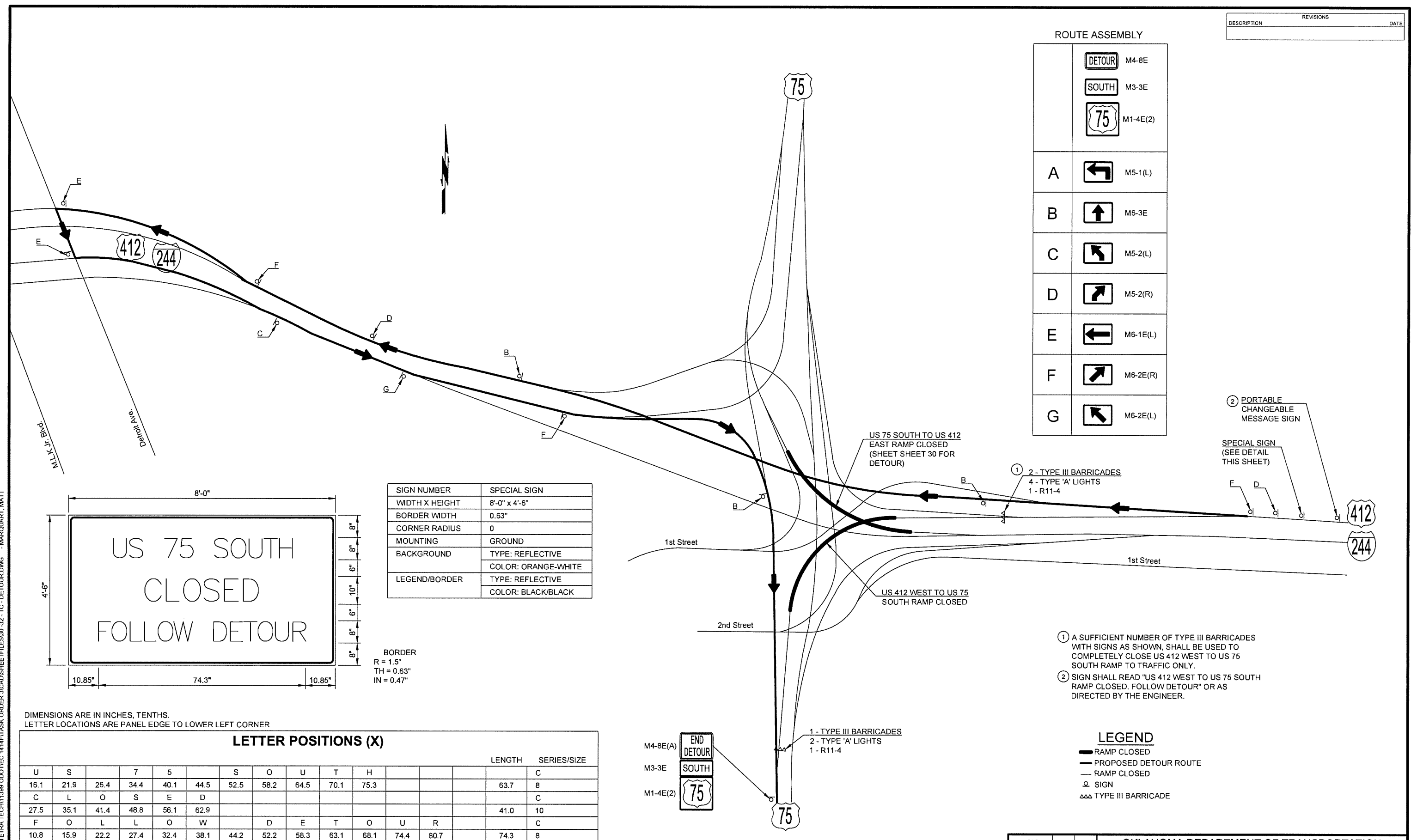
DESIGN	MRM	9/15	OKLAHOMA DEPARTMENT OF TRANSPORTATION TULSA COUNTY
DRAWN	MRM	9/15	
CHECKED	JLC	3/16	
APPROVED			
SQUAD	TT		
STATE JOB NO. 28880(04)			TRAFFIC CONTROL (DETOUR 1)
			SHEET NO. 30

3/29/2016 3:10:21 PM - MATETRA TECH\11399.ODOT\EC-1414\TASK ORDER 3\CAD\SHSHEETFILES\30-32-TC-DETOUR.DWG - MARQUART, MATT

DESCRIPTION	REVISIONS	DATE

ROUTE ASSEMBLY

		M4-8E
		M3-3E
		M1-4E(2)
A		M5-1(L)
B		M6-3E
C		M5-2(L)
D		M5-2(R)
E		M6-1E(L)
F		M6-2E(R)
G		M6-2E(L)

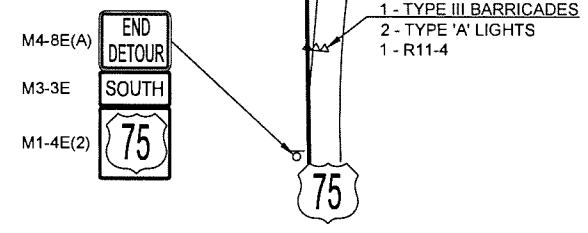


SIGN NUMBER	SPECIAL SIGN
WIDTH X HEIGHT	8'-0" x 4'-6"
BORDER WIDTH	0.63"
CORNER RADIUS	0
MOUNTING	GROUND
BACKGROUND	TYPE: REFLECTIVE
	COLOR: ORANGE-WHITE
LEGEND/BORDER	TYPE: REFLECTIVE
	COLOR: BLACK/BLACK

BORDER
R = 1.5"
TH = 0.63"
IN = 0.47"

DIMENSIONS ARE IN INCHES, TENTHS.
LETTER LOCATIONS ARE PANEL EDGE TO LOWER LEFT CORNER

LETTER POSITIONS (X)													LENGTH	SERIES/SIZE
U	S		7	5		S	O	U	T	H				C
16.1	21.9	26.4	34.4	40.1	44.5	52.5	58.2	64.5	70.1	75.3			63.7	8
C	L	O	S	E	D									C
27.5	35.1	41.4	48.8	56.1	62.9								41.0	10
F	O	L	L	O	W		D	E	T	O	U	R		C
10.8	15.9	22.2	27.4	32.4	38.1	44.2	52.2	58.3	63.1	68.1	74.4	80.7	74.3	8



- ② PORTABLE CHANGEABLE MESSAGE SIGN
- SPECIAL SIGN (SEE DETAIL THIS SHEET)
- ① 2 - TYPE III BARRICADES
4 - TYPE 'A' LIGHTS
1 - R11-4
- ① A SUFFICIENT NUMBER OF TYPE III BARRICADES WITH SIGNS AS SHOWN, SHALL BE USED TO COMPLETELY CLOSE US 412 WEST TO US 75 SOUTH RAMP TO TRAFFIC ONLY.
- ② SIGN SHALL READ "US 412 WEST TO US 75 SOUTH RAMP CLOSED. FOLLOW DETOUR" OR AS DIRECTED BY THE ENGINEER.

LEGEND

- RAMP CLOSED
- PROPOSED DETOUR ROUTE
- RAMP CLOSED
- SIGN
- TYPE III BARRICADE

**US 412 WEST TO US 75 SOUTH RAMP
DETOUR**

DESIGN	MRM	9/15	OKLAHOMA DEPARTMENT OF TRANSPORTATION	
DRAWN	MRM	9/15	TULSA COUNTY	
CHECKED	JLC	3/16	TRAFFIC CONTROL (DETOUR 2)	
APPROVED				
SQUAD	TT			
STATE JOB NO. 28880(04)			SHEET NO. 31	

3/29/2016 3:11:49 PM - MATETRA TECH\11399.00\DEC.1414\TASK ORDER 3\CAD\SHSHEETFILES\30-32-TC-DETOUR.DWG - MARQUART, MATT

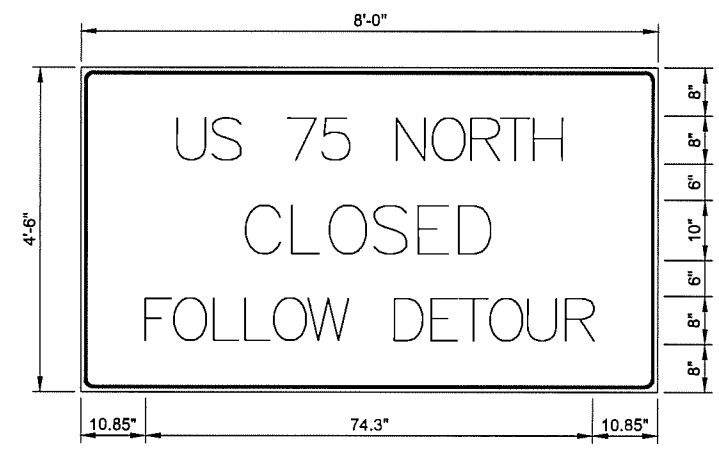
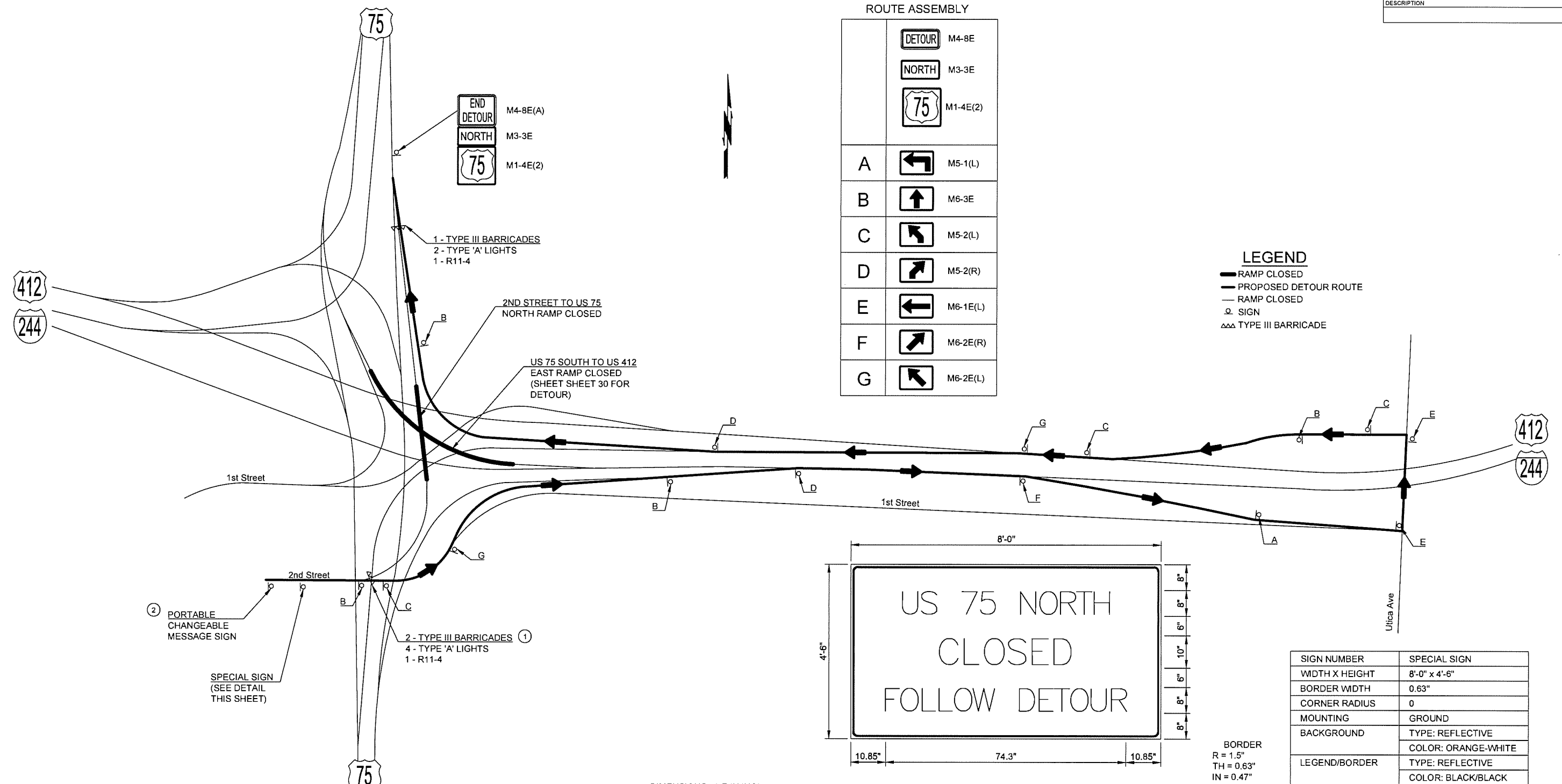
DESCRIPTION	REVISIONS	DATE

ROUTE ASSEMBLY

		M4-8E
		M3-3E
		M1-4E(2)
A		M5-1(L)
B		M6-3E
C		M5-2(L)
D		M5-2(R)
E		M6-1E(L)
F		M6-2E(R)
G		M6-2E(L)

LEGEND

- RAMP CLOSED
- PROPOSED DETOUR ROUTE
- RAMP CLOSED
- SIGN
- TYPE III BARRICADE



SIGN NUMBER	SPECIAL SIGN
WIDTH X HEIGHT	8'-0" x 4'-6"
BORDER WIDTH	0.63"
CORNER RADIUS	0
MOUNTING	GROUND
BACKGROUND	TYPE: REFLECTIVE COLOR: ORANGE-WHITE
LEGEND/BORDER	TYPE: REFLECTIVE COLOR: BLACK/BLACK

BORDER
R = 1.5"
TH = 0.63"
IN = 0.47"

DIMENSIONS ARE IN INCHES, TENTHS.
LETTER LOCATIONS ARE PANEL EDGE TO LOWER LEFT CORNER

LETTER POSITIONS (X)

													LENGTH	SERIES/SIZE	
U	S		7	5		N	O	R	T	H				63.8	8
16.1	22	26.4	34.4	40.1	44.6	52.6	58.7	65.0	70.2	75.4					
C	L	O	S	E	D									41.0	10
27.5	35.1	41.4	48.8	56.1	62.9										
F	O	L	L	O	W		D	E	T	O	U	R		74.3	8
10.8	15.9	22.2	27.4	32.4	38.1	44.2	52.2	58.3	63.1	68.1	74.4	80.7			

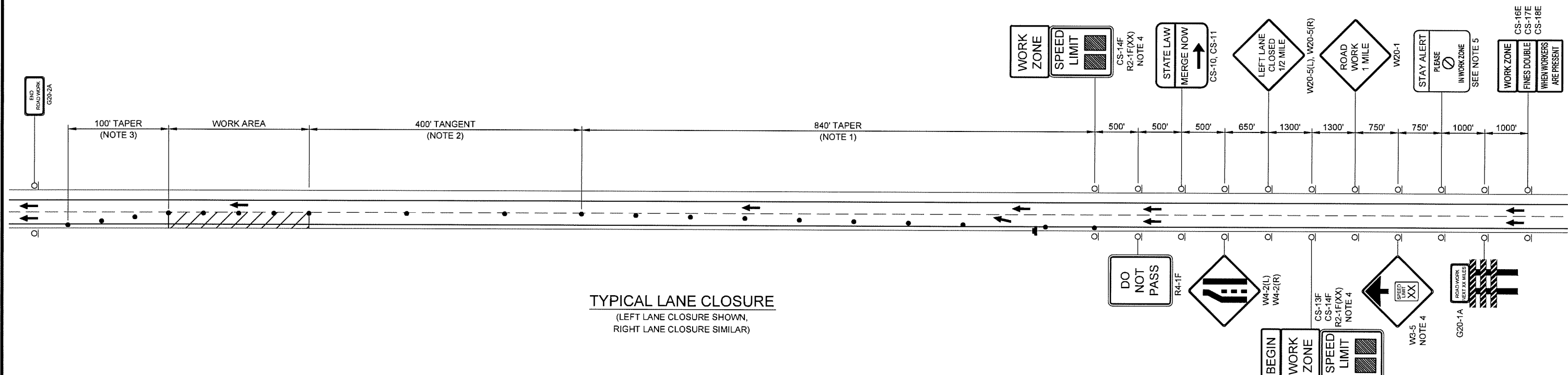
- 1 A SUFFICIENT NUMBER OF TYPE III BARRICADES WITH SIGNS AS SHOWN, SHALL BE USED TO COMPLETELY CLOSE 2ND STREET TO US 75 NORTH RAMP TO TRAFFIC ONLY.
- 2 SIGN SHALL READ "2ND STREET TO US 75 NORTH RAMP CLOSED. FOLLOW DETOUR" OR AS DIRECTED BY THE ENGINEER.

**2ND STREET TO US 75 NORTH RAMP
DETOUR**

DESIGN	MRM	9/15	OKLAHOMA DEPARTMENT OF TRANSPORTATION TULSA COUNTY
DRAWN	MRM	9/15	
CHECKED	JLC	3/16	
APPROVED			
SQUAD	TT		
TRAFFIC CONTROL (DETOUR 3)			STATE JOB NO. 28880(04)
			SHEET NO. 32

3/29/2016 3:13:20 PM - MATETRA TECH\1399 ODOT\EC 1414\TASK ORDER 3\CAD\SHSHEETFILES\30-32-TC-DETOUR.DWG - MARQUART, MATT

DESCRIPTION	REVISIONS	DATE



TYPICAL LANE CLOSURE
(LEFT LANE CLOSURE SHOWN,
RIGHT LANE CLOSURE SIMILAR)

NOTES 1:
MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES (FEET) SHALL BE EQUAL TO THE POSTED SPEED LIMIT (M.P.H.) WITH THE FOLLOWING EXCEPTIONS. SPACING SHALL NOT EXCEED 25 FEET FOR CONES OR TUBE CHANNELIZERS. SPACING SHALL NOT EXCEED 50 FEET FOR TYPE II BARRICADES, VERTICAL, PANELS OR DRUMS.

NOTE 2:
MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES (FEET) SHALL BE EQUAL TO TWICE THE POSTED SPEED LIMIT (M.P.H.) WITH THE FOLLOWING EXCEPTIONS. SPACING SHALL NOT EXCEED 50 FEET FOR CONES OR TUBE CHANNELIZERS. SPACING SHALL NOT EXCEED 100 FEET FOR TYPE II BARRICADES, VERTICAL PANELS OR DRUMS.

NOTE 3:
DOWNSTREAM TAPERS SHALL CONTAIN A MINIMUM OF FOUR (4) CHANNELIZING DEVICES

NOTE 4:
CONSTRUCTION SPEED LIMIT TO BE DETERMINED BY THE DIVISION ENGINEER.

NOTE 5:
SEE SUMMARY OF PAY QUANTITIES (TRAFFIC) FOR DETAIL

ALL CONFLICTING PAVEMENT MARKINGS AND RAISED PAVEMENT MARKER REFLECTORS SHALL BE REMOVED AFTER COMPLETION OF THE WORK, THE TEMPORARY INAPPLICABLE PAVEMENT MARKINGS SHALL BE REMOVED.

FOR ADDITIONAL INFORMATION ABOUT TAPER LENGTHS AND SPACING OF CHANNELIZING DEVICES, SEE STANDARD DRAWING TCS2-1-(LATEST REVISION).

- LEGEND**
- CHANNELIZING DEVICE (DRUMS)
 - SIGN
 - ▬ ARROW DISPLAY
 - ▨ WORK AREA

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DESIGN	MRM	9/15	OKLAHOMA DEPARTMENT OF TRANSPORTATION TULSA COUNTY
DRAWN	MRM	9/15	
CHECKED	JLC	3/16	
APPROVED			
SQUAD	TT		
TRAFFIC CONTROL TYPICAL LANE CLOSURE			STATE JOB NO. 28880(04) SHEET NO. 33