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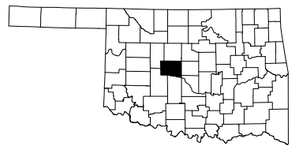
CONTROL SURVEY DATA:

SEE SURVEY DATA SHEETS



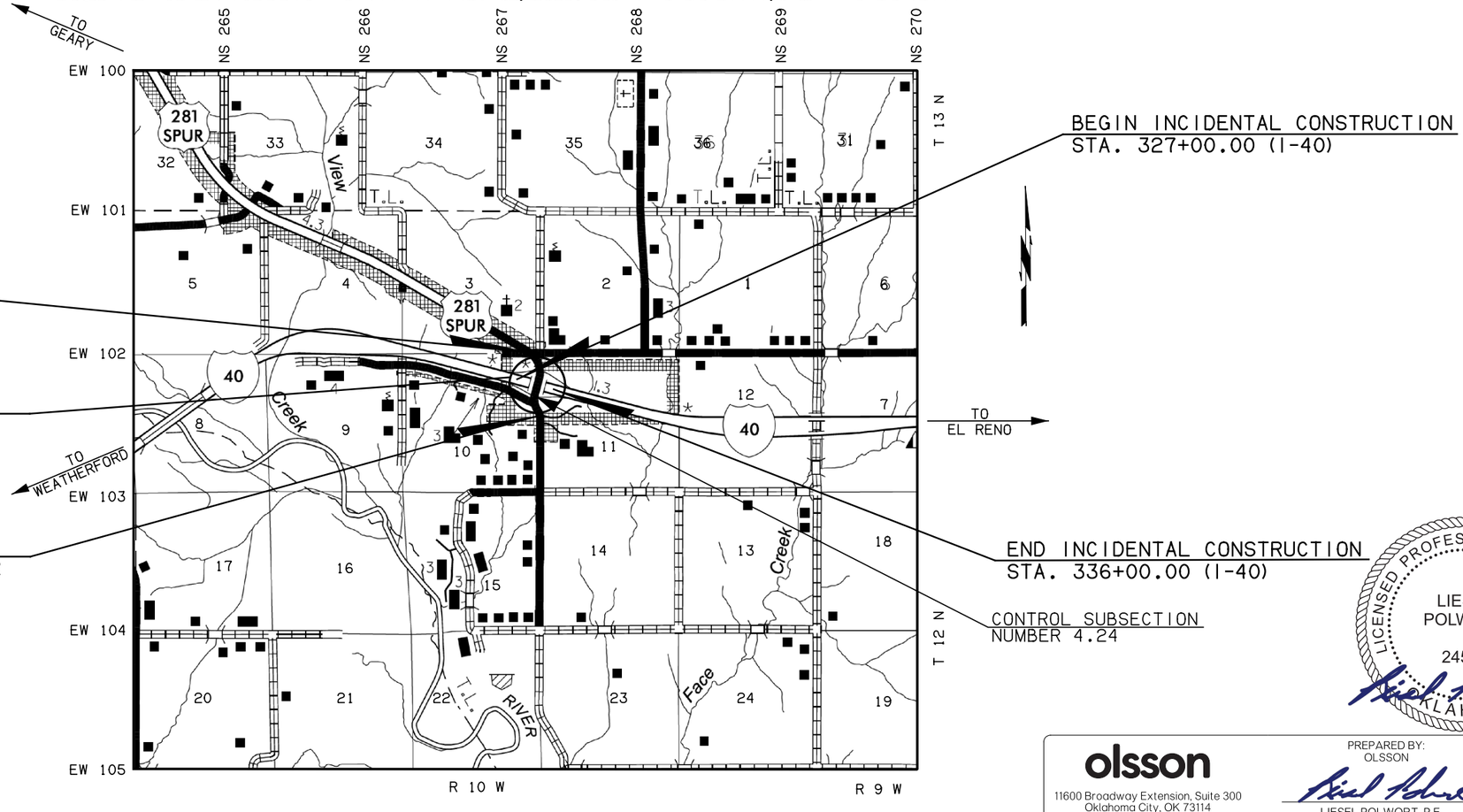
LOCATION MAP

STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED
UNITED STATES HIGHWAY
FEDERAL AID PROJECT NO. NHPP-010N(037)PM
STATE JOB NO. 27959(04)
CANADIAN COUNTY
BRIDGE AND APPROACHES PLANS
U.S. HIGHWAY 281 SPUR OVER I-40
CONTROL SECTION NO. 281-09-52
BRIDGE 'A' LOCATION NO. 0905 0418 X, EXISTING NBI 15355, NEW NBI 31550

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE



BRIDGE 'A'
BEGIN STA. 49+47.08
BRIDGE LENGTH = 271.66'
END STA. 52+18.74

STA. 54+62.32
END US-281 SPUR CONSTRUCTION

BRIDGE 'A'

STA. 47+98.00
BEGIN US-281 SPUR CONSTRUCTION

BEGIN INCIDENTAL CONSTRUCTION
STA. 327+00.00 (I-40)

END INCIDENTAL CONSTRUCTION
STA. 336+00.00 (I-40)

CONTROL SUBSECTION
NUMBER 4.24

DESIGN DATA: US-281 SPUR		
AADT 2024	=	9,200
AADT 2044	=	12,200
DESIGN SPEED	=	45 MPH
K	=	9.750%
D	=	54.043%
T	=	25%
T3	=	20%

SCALES 1"

PLAN 1" = 50'

PROFILE HOR. 1" = 50'

VER. 1" = 10'

LAYOUT MAP 1" = 2,600'

CONVENTIONAL SYMBOLS

PROPOSED ROAD	TELEPHONE UNDERGROUND
RAILROADS	SANITARY SEWER
RANGE & TOWNSHIP	GAS LINE
SECTION LINES	WATER LINE
QUARTER SECTION LINES	DRAINAGE STRUCTURES - IN PLACE
FENCES	DRAINAGE STRUCTURES - NEW
GROUND LINE	RIGHT-OF-WAY LINES - EXISTING
EXISTING ROADS	RIGHT-OF-WAY LINES - NEW
BASE LINE	RIGHT-OF-WAY MARKERS - IN PLACE
GRADE LINES	RIGHT-OF-WAY MARKERS - REMOVE & REPLACE
TELEPHONE & TELEGRAPH	RIGHT-OF-WAY MARKERS - NEW
POWER LINES	CONTROLLED ACCESS
BUILDINGS	RIGHT-OF-WAY FENCE
OILWELL	

LAYOUT MAP

ROADWAY LENGTH	392.66 FT.	0.074 MI.
BRIDGE LENGTH	271.66 FT.	0.051 MI.
PROJECT LENGTH	664.32 FT.	0.125 MI.

EQUATIONS: NONE

EXCEPTIONS: NONE

2019 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION GOVERN, APPROVED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION, DECEMBER 18, 2019.

LICENSED PROFESSIONAL ENGINEER
LIESEL POLWORT
24569
OKLAHOMA

olsson
11600 Broadway Extension, Suite 300
Oklahoma City, OK 73114
(405) 242-6600
C.A. 2483
EXP. 06-30-2025

PREPARED BY:
OLSSON
LIESEL POLWORT, P.E.
OKLA. REG. NO. 24569
DATE 8/30/2024

OKLAHOMA DEPARTMENT OF TRANSPORTATION	DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION
DATE APPROVED	DATE APPROVED
BY	BY
CHIEF ENGINEER	DIVISION ADMINISTRATOR

S.W.O. 5125 Project No. NHPP-010N(037)PM Sheet No. 0001

6/5/2025

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INDEX OF SHEETS

	DESCRIPTION
0001	TITLE
0002	INDEX OF SHEETS AND STANDARDS
0003	TYPICAL SECTIONS
AB01	GENERAL NOTES AND SUMMARY OF PAY QUANTITIES (BRIDGE)
AE01	ENVIRONMENTAL NOTES
AR01	SUMMARY OF PAY QUANTITIES & NOTES (ROADWAY)
AR02	GENERAL CONSTRUCTION NOTES (ROADWAY)
AR03	SUMMARY SHEET (ROADWAY)
AR04	SUMMARY OF DRAINAGE STRUCTURES
AT01	GENERAL NOTES (TRAFFIC)
AT02-AT03	SUMMARY OF PAY QUANTITIES & NOTES (TRAFFIC)
AT04	SUMMARY SHEET (TRAFFIC)
B001	GENERAL PLAN AND ELEVATION
B002	SUMMARY OF BRIDGE QUANTITIES
B003-B004	SUBSURFACE PROFILE
B005	BRIDGE CONSTRUCTION SEQUENCE
B006	SUBSTRUCTURE STAKING DIAGRAM
B007	SUBSTRUCTURE EXCAVATION AND PIPE UNDERDRAIN
B008-B009	DETAILS OF ABUTMENT NO. 1
B010-B011	DETAILS OF ABUTMENT NO. 2
B012-B015	DETAILS OF PIERS
B016-B017	DETAILS OF BEAMS
B018	DETAILS OF BEARINGS
B019-B023	DETAILS OF SUPERSTRUCTURE
B024	DETAILS OF PARAPET
B025	DETAILS OF APPROACH SLAB
B026-B027	DETAILS OF SLOPEWALL
B028	AESTHETIC TREATMENT DETAILS
R001	STORM WATER MANAGEMENT PLAN
R002	DRAINAGE MAP
R003	ROADWAY DETAILS
R004	GEOMETRIC DETAIL
R005	EROSION CONTROL DETAIL SHEET
R006-R007	PLAN & PROFILE
R008	DEMOLITION PLAN
R009	SUGGESTED SEQUENCE OF CONSTRUCTION
S001-S015	SURVEY DATA SHEETS
T001-T013	SUGGESTED TRAFFIC CONTROL
T014	SPECIAL SIGN DETAILS
T015	SIGNING AND STRIPING
T016-T017	LIGHTING PLAN
X001-X011	CROSS SECTIONS

INDEX OF ODOT STANDARDS

ROADWAY	TRAFFIC SIGNING	TRAFFIC CONTROL	TRAFFIC SAFETY	TRAFFIC LIGHTING	BRIDGE
2019	2009	2009	2009	2009	2009
BMPR-0	PM1-1-03	TCS1-1-01	THRI-1-02	CCD1-1-00	FSHP-42-2-00E
TESCA-0	PM6-1-00	TCS2-1-00	SKT-1-00	PBD1-1-00	EJ-SQ-04E
RSF-0	DU1-1-00	TCS3-1-01	GA31-1-00	GMF1-2-01	EJ-DTL-02E
TSD-0	DU2-1-00	TCS4-1-01	GHW1-1-00	BMF3-2-00	HP1-2-01E
TRFD-0	MOD1-1-00	TCS5-1-00	GHW2-1-00	HLBP1-1-01	
SSS-2-1	RSD1-1-00	TCS6-1-02		HLGN1-1-01	
ASCD-6-1	RSD2-1-00	TCS7-1-02		HLPD1-1-00	
CSCD-6-2	WSD1-1-00	TCS8-1-00		HLPD2-1-01	
LECS-5-2	WSD2-1-00	TCS9-1-01		PPD1-2-00	
LTU-5-1	WSD3-1-00	TCS10-1-00		HLD1-2-01	
PED-4-1	MSD1-1-00	TCS11-1-01		HLD2-2-01	
PSE-2-1	MSD2-1-00	TCS12-1-00		SPD1-1-00	
CET4S-4-2	MSD3-1-01	TCS13-1-00		SCD1-1-00	
GPI-5-2	MSD5-1-00	TCS14-1-00		TEWD1-2-00	
SSCD-4-1	SBS1-1-00	TCS15-1-00			
MFC-5-1	SBS2-1-00	TCS18-1-01			
MJB-4-2	SBS3-1-00	TCS19-1-01			
SBI-5-2	SBS4-1-00	TCS20-1-00			
PBB-1-3	GMS1-1-00	TCS21-1-02			
CCI-1-0	SSP1-1-02	TCS23-1-00			
CCI-2-0	SSA1-1-00	TCS24-1-02			
PUD-4-1	FGS2-1-01	TCS25-1-00			
DC-4-1	SPA1-1-00				
PDT-2-3	IA1-1-00				
	MIA1-1-00				
	APC1-1-00				
	MPP1-1-00				

KEARA A. PHILLIPS-BERLIN, P.E., S.E.
OKLA. REG. 25864

RESPONSIBLE FOR:

BRIDGE AND STRUCTURES
(SHEETS AB01, AND B001-B028)

LIESEL POLWORT, P.E.
OKLA. REG. 24569

RESPONSIBLE FOR:

ALL OTHER DRAWINGS NOT
PREVIOUSLY LISTED

NOTE:

SURVEY SHEETS (S1-S15) ARE SEALED BY OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION, REFER TO THOSE SHEETS FOR RESPONSIBLE PARTY.

OKLAHOMA DEPARTMENT OF TRANSPORTATION

FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE

DESIGN		
DRAWN		
CHECKED		
APPROVED		
SQUAD		

OKLAHOMA DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION

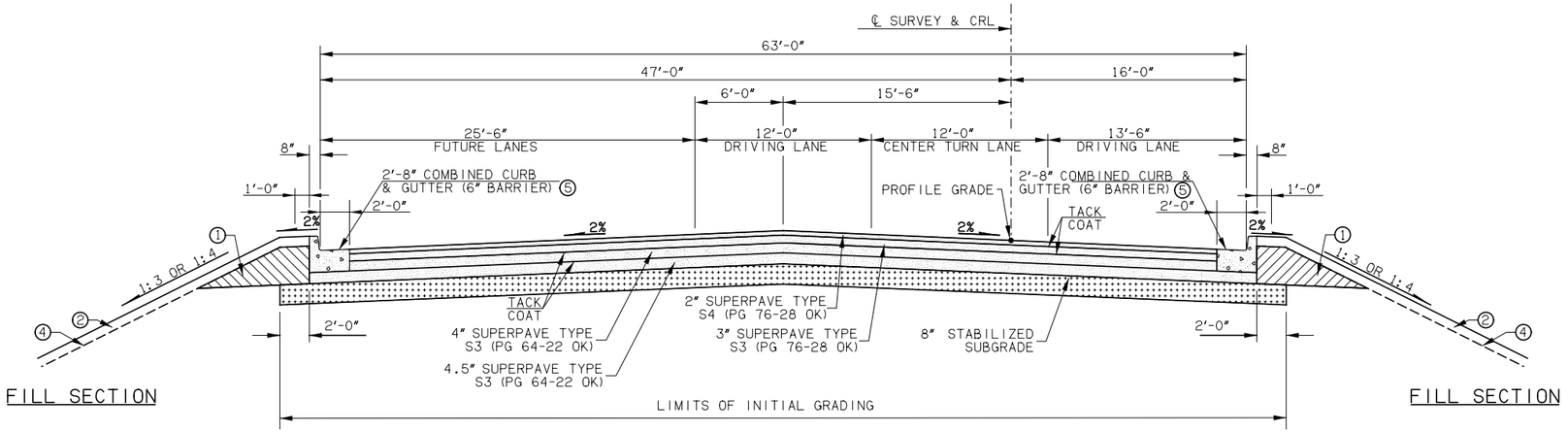
INDEX OF SHEETS AND STANDARDS

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. 0002

8/20/2024

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE



TYPICAL SECTION NO. 1

STA. 48+23.50 TO STA. 49+17.08
STA. 52+48.74 TO STA. 54+30.00

① BACKFILL NOTE:
THIS AREA IS TO BACKFILLED AND COMPACTED AS PART OF FINISHING OPERATION. QUANTITY IS MEASURED IN UNCLASSIFIED BORROW.

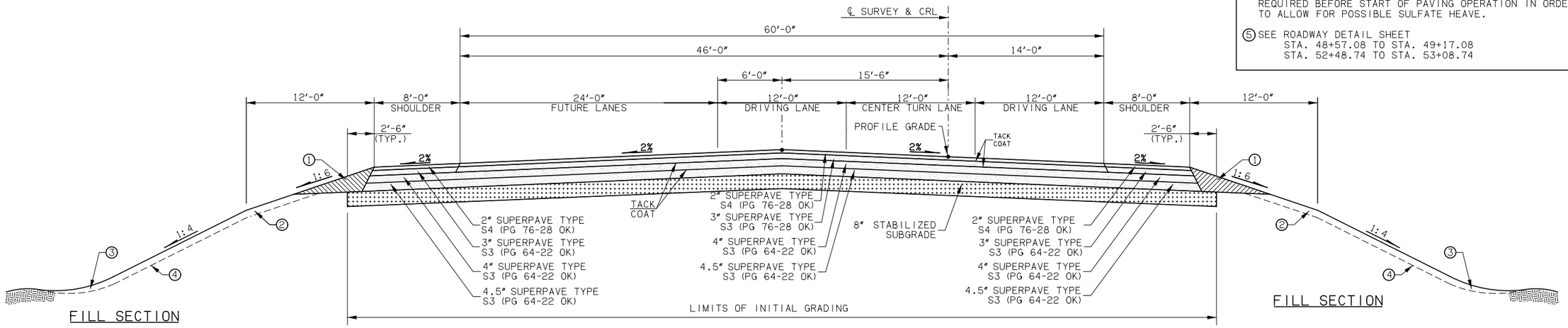
② TOPSOIL NOTE:
THE CONTRACTOR SHALL STRIP ALL OF THE AVAILABLE TOPSOIL, STOCKPILE IT, AND PLACE IT BACK ON THE SECTION IN ACCORDANCE WITH SECTION 205 OF THE STANDARD SPECIFICATIONS. RESERVED TOPSOIL SHALL BE SPREAD APPROX. 5" THICK FIRST ON THE COMPLETED SLOPES OF THE CUT SECTIONS AND THE REMAINDER ON COMPLETED FILL SLOPES OR OTHER PRIORITY AREAS LOCATED BY THE ENGINEER. THE GRADING LINE AS SHOWN ON THE TYPICAL AND CROSS SECTIONS IS TO THE TOP OF TOPSOIL. EARTHWORK QUANTITIES WERE NOT ADJUSTED FOR SALVAGED TOPSOIL AND THE TOPSOIL QUANTITY IS INCLUDED IN THE EARTHWORK SUMMARY.

③ SEE ROUNDING DETAIL.

④ THE CONTRACTOR SHALL NOT BORROW SOIL WITH A SULFATE CONCENTRATION GREATER THAN 600 PPM INTO THE TOP 24" OF THE GRADING SECTION.

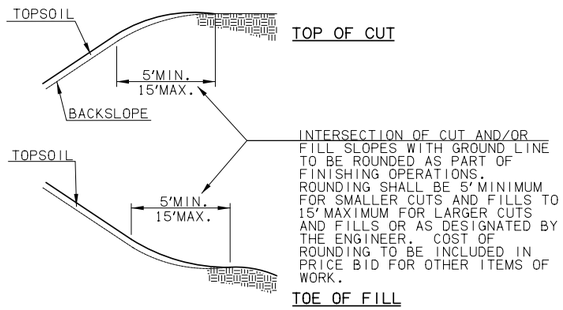
A MELLOWING PERIOD OF 7 DAYS OR LONGER MAY BE REQUIRED BEFORE START OF PAVING OPERATION IN ORDER TO ALLOW FOR POSSIBLE SULFATE HEAVE.

⑤ SEE ROADWAY DETAIL SHEET
STA. 48+57.08 TO STA. 49+17.08
STA. 52+48.74 TO STA. 53+08.74



TYPICAL SECTION NO. 2

STA. 47+98.00 TO STA. 48+23.50
STA. 54+30.00 TO STA. 54+62.32

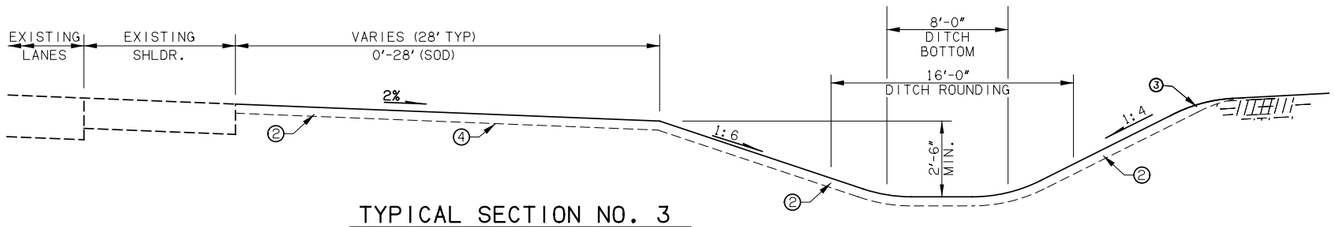


TOP OF CUT

INTERSECTION OF CUT AND/OR FILL SLOPES WITH GROUND LINE TO BE ROUNDED AS PART OF FINISHING OPERATIONS. ROUNDING SHALL BE 5' MINIMUM FOR SMALLER CUTS AND FILLS TO 15' MAXIMUM FOR LARGER CUTS AND FILLS OR AS DESIGNATED BY THE ENGINEER. COST OF ROUNDING TO BE INCLUDED IN PRICE BID FOR OTHER ITEMS OF WORK.

TOE OF FILL

ROUNDING DETAIL



TYPICAL SECTION NO. 3

I-40 INCIDENTAL CONSTRUCTION

			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DESIGN			
DRAWN			
CHECKED			TYPICAL SECTIONS
APPROVED			
SQUAD			

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. 0003

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GENERAL NOTES

SPECIFICATIONS:

COMPLY WITH THE REQUIREMENTS OF THE 2019 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EXCEPT AS MODIFIED BY THE PLANS AND SPECIAL PROVISIONS.

PILE DRIVING EQUIPMENT:

USE A PILE DRIVING HAMMER OF THE SIZE AND TYPE CAPABLE OF CONSISTENTLY DELIVERING THE EFFECTIVE DYNAMIC ENERGY SUFFICIENT TO DRIVE THE PILES TO THE REQUIRED TIP ELEVATION AND TO ACHIEVE THE REQUIRED AXIAL LOAD RESISTANCE WITHOUT EXCEEDING THE LIMITATIONS SET ON THE ALLOWABLE DRIVING STRESSES IN ACCORDANCE WITH SECTION 5140F THE STANDARD SPECIFICATIONS.

ABUTMENT PILING CAPACITY:

THE MAXIMUM FACTORED PILE REACTION FOR EACH HP 12x53 PILE IS 75.8 TONS.
THE FOLLOWING FORMULA (GATES EQUATION) SHALL BE USED TO DETERMINE THE AXIAL LOAD RESISTANCE OF THE DRIVEN FOUNDATION PILES.

AXIAL LOAD RESISTANCE = $\emptyset$ [(0.875 $\sqrt{E}$ LOG$_{10}$ (10N))-50]

WHERE:

$\emptyset$ = RESISTANCE FACTOR OF 0.4

E = ENERGY PRODUCED BY THE HAMMER PER BLOW IN FOOT-POUNDS. FOR GRAVITY AND SINGLE ACTING DIESEL HAMMERS, THE VALUE IS BASED ON THE ACTUAL RAM STROKE OBSERVED IN THE FIELD AND MEASURED IN FEET MULTIPLIED BY THE RAM WEIGHT IN POUNDS.

N = AVERAGE NUMBER OF HAMMER BLOWS PER INCH OF PILE PENETRATION FOR THE LAST 10 TO 20 BLOWS DELIVERED TO THE PILE HEAD.

THE ABOVE FORMULA IS ONLY APPLICABLE WHEN:

1) THE PILE DRIVING HAMMER HAS A FREE FALL (GRAVITY & SINGLE ACTING HAMMERS ONLY).
2) THE HEAD OF THE PILE IS NOT BROOMED, CRUSHED OR OTHERWISE DAMAGED.
3) THE PENETRATION IS QUICK AND UNIFORM.
4) THERE IS NO APPRECIABLE REBOUND OF THE HAMMER.
5) A FOLLOWER IS NOT USED.

THE NUMBER OF BLOWS PER INCH OF PILE PENETRATION MAY BE MEASURED EITHER DURING INITIAL DRIVING OR BY RE-DRIVING WITH A WARM HAMMER OPERATED AT FULL ENERGY AFTER A PILE SET PERIOD, AS DETERMINED BY THE ENGINEER.
IF WATER JETS ARE USED IN CONNECTION WITH THE DRIVING, DETERMINE THE AXIAL LOAD RESISTANCE BY THE FORMULA SHOWN ONLY AFTER THE JETS HAVE BEEN WITHDRAWN.

CALL OKIE:

IN ACCORDANCE WITH THE OKLAHOMA UNDERGROUND FACILITIES DAMAGE PREVENTION ACT THE CONTRACTOR WILL 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.

CONCRETE:

PROVIDE ALL PEDESTAL CONCRETE EDGES WITH A ¾" CHAMFER. PROVIDE ALL OTHER EXPOSED CONCRETE EDGES OF THE SUBSTRUCTURE WITH A 1½" CHAMFER UNLESS OTHERWISE SHOWN OR NOTED. PROVIDE ALL EXPOSED CONCRETE EDGES OF THE SUPERSTRUCTURE WITH A ¾" CHAMFER UNLESS OTHERWISE SHOWN OR NOTED. USE SIZED LUMBER FOR ALL CHAMFER STRIPS.
EQUIP CONCRETE VIBRATORS WITH A SHEATH DESIGNED TO PREVENT DAMAGE TO EPOXY COATING WHEN VIBRATING CONCRETE CONTAINING EPOXY COATED REINFORCING STEEL.

STAY-IN-PLACE DECK FORMS:

STAY-IN-PLACE STEEL DECK FORMS MAY BE USED IF THE DECK SLAB THICKNESS SHOWN IN THE PLANS IS OBTAINED BY MEASURING FROM THE TOP OF THE DECK SLAB TO THE TOP PORTIONS OF THE STEEL CORRUGATION. PREFORMED STYROFOAM OR ANY OTHER APPROVED FILLER MATERIAL WILL BE BONDED TO THE STAY-IN-PLACE STEEL FORM CORRUGATIONS. WEIGHT OF THE STAY-IN-PLACE STEEL DECK FORMS WILL NOT EXCEED 5 PSF. THE DEPARTMENT CONSIDERS ALL COST OF STAY-IN-PLACE STEEL DECK FORMS TO BE INCLUDED IN THE CONTRACT UNIT PRICE OF CLASS AA CONCRETE. SEE SECTION 502 OF THE STANDARD SPECIFICATIONS.
STAY-IN-PLACE PRE-STRESSED CONCRETE DECK FORMS MAY BE USED, AT NO ADDITIONAL COST TO THE DEPARTMENT, IF THE FOLLOWING CONDITIONS ARE MET:

1. SHOP DRAWINGS AND STRUCTURAL CALCULATIONS FOR THE FORMS ARE SUBMITTED TO THE BRIDGE ENGINEER FOR APPROVAL.
2. A NEW STRUCTURAL DESIGN, STRUCTURAL CALCULATIONS AND A NEW REINFORCING SCHEDULE FOR THE DECK SLAB IS SUBMITTED TO THE BRIDGE ENGINEER FOR APPROVAL.
3. ALL SHOP DRAWINGS, NEW DECK REINFORCING SCHEDULES AND ALL STRUCTURAL DESIGNS AND CALCULATIONS WILL BE PREPARED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF OKLAHOMA.

TEMPORARY DECK OVERHANG SUPPORT:

PROVIDE NECESSARY SHORING FOR THE PHASE I DECK OVERHANG TO SUPPORT CONSTRUCTION LOADS DURING THE CONSTRUCTION OF PHASE II. THE CANTILEVER WILL NOT SUPPORT ANY CONSTRUCTION LOADS DIRECTLY. THE CONTRACTOR WILL TAKE CARE TO AVOID DAMAGE TO THE BRIDGE DECK. ANY DAMAGE TO THE BRIDGE DECK WILL BE REPAIRED, AT THE CONTRACTOR'S EXPENSE, TO THE SATISFACTION OF THE ENGINEER.

TEMPORARY RETAINING STRUCTURE:

TEMPORARY RETAINING STRUCTURES NOT SPECIFICALLY DESIGNED AND COMPLETELY DETAILED IN THE PLANS WILL BE MEASURED FOR PAYMENT AND WILL BE INCLUDED IN THE CONTRACT UNIT PRICE OF "TEMPORARY EARTH RETAINAGE." LOCATIONS OF POTENTIAL TEMPORARY RETAINING STRUCTURES TO FACILITATE THE PROPOSED SEQUENCE OF CONSTRUCTION SHOWN IN THE PLANS ARE FOR INFORMATIONAL PURPOSES ONLY AND HAVE NOT BEEN DESIGNED AND DETAILED. ACTUAL LIMITS OF TEMPORARY RETAINING STRUCTURES WILL BE DETERMINED BY THE CONTRACTOR. TEMPORARY RETAINING STRUCTURES WILL BE DESIGNED IN ACCORDANCE WITH SUBSECTION 502.04 OF THE SPECIFICATIONS BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF OKLAHOMA. SUBMIT TEMPORARY RETAINING STRUCTURE DESIGN CALCULATIONS AND DRAWINGS TO THE BRIDGE ENGINEER FOR APPROVAL. DO NOT BEGIN INSTALLATION UNTIL APPROVAL OF THE DESIGN CALCULATIONS AND DRAWINGS BY THE ENGINEER IS RECEIVED.

WATER REPELLENT TREATMENT:

APPLY WATER REPELLENT TREATMENT TO THE BRIDGE IN A MANNER CONSISTENT WITH THE DETAILS SHOWN IN THE PLANS.

STRUCTURAL STEEL:

PROVIDE STRUCTURAL STEEL FOR PLATE GIRDERS AND ALL STIFFENER PLATES IN ACCORDANCE WITH AASHTO M270 (ASTM A709), GRADE 50WT2 (WEATHERING STEEL, NON FRACTURE CRITICAL CHARPY V-NOTCH TESTED FOR ZONE 2). USE SHEAR CONNECTORS CONFORMING TO AASHTO M169 (ASTM A108), GRADE 1015, 1018 OR 1020. PROVIDE WELDING WITH WEATHERING CHARACTERISTICS. CAMBER GIRDERS TO ACCOUNT FOR DEAD LOAD DEFLECTION AND VERTICAL CURVE. NON-DESTRUCTIVE TESTING WILL BE REQUIRED AS APPROPRIATE.
PROVIDE STRUCTURAL STEEL FOR DIAPHRAGM SHAPES AND PLATES IN ACCORDANCE WITH AASHTO M270 (ASTM A709), GRADE 50W (WEATHERING STEEL, CHARPY V-NOTCH TESTING NOT REQUIRED). USE BOLTS CONFORMING TO AASHTO M164 (ASTM A325). PROVIDE ALL BOLTS, NUTS, WASHERS AND WELDING WITH WEATHERING CHARACTERISTICS.
PROVIDE STRUCTURAL STEEL FOR ANCHOR PLATES AND BUILT-UP CONTACT ANGLES IN ACCORDANCE WITH ASTM A240 (AUSTENITIC STAINLESS STEEL, TYPE 316, CHARPY V-NOTCH TESTING NOT REQUIRED). FOR ANCHOR BOLTS, PROVIDE CONTINUOUSLY THREADED BARS IN ACCORDANCE WITH ASTM A320, CLASS 2, GRADE B8M (AUSTENITIC STAINLESS STEEL, TYPE 316, CHARPY V-NOTCH TESTING NOT REQUIRED). USE AUSTENITIC STAINLESS STEEL NUTS AND WASHERS CONFORMING TO ASTM A194, GRADE 8M AND ASTM A320, RESPECTIVELY. PERFORM ALL WELDING CONSISTENT WITH PROCEDURES FOR STAINLESS STEEL. ALL SHOP AND FIELD WELDING SHALL BE ARC WELDING AND SHALL BE DONE IN ACCORDANCE WITH THE CURRENT ANSI/AWS D1.5 BRIDGE WELDING CODE. FIELD WELDERS SHALL BE PRE-QUALIFIED BY THE OKLAHOMA DEPARTMENT OF TRANSPORTATION.

STEEL GIRDER BRACING FOR DECK SLAB PLACEMENT:

SUBMIT DRAWINGS OF THE BRACING SYSTEM TO THE BRIDGE ENGINEER FOR APPROVAL. BRACING SYSTEMS OTHER THAN THAT SHOWN IN THE PLANS MAY BE USED IF DESIGN CALCULATIONS AND DRAWINGS OF THE PROPOSED BRACING SYSTEM ARE SUBMITTED TO AND APPROVED BY THE BRIDGE ENGINEER. DRAWINGS AND CALCULATIONS OF THE PROPOSED SYSTEM WILL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF OKLAHOMA. DO NOT PLACE DECK SLAB CONCRETE UNTIL THE BRACING SYSTEM IS APPROVED. THE DEPARTMENT CONSIDERS ALL COST FOR BRACING TO BE INCLUDED IN OTHER ITEMS OF WORK.
USE ADJUSTABLE CANTILEVER FORMING BRACKETS AT EXTERIOR GIRDERS CAPABLE OF BEING ADJUSTED DURING THE PLACEMENT OF DECK SLAB CONCRETE IN ORDER TO MAINTAIN PROPER GRADES AT THE DECK SLAB OVERHANG. IF SHIMS ARE TO BE USED TO ADJUST THE FORMING BRACKETS, PROVIDE THE BRIDGE ENGINEER A METHOD TO PREDICT CRUSH AND SETTLEMENT OF SHIMS. BEAR THE LEG BRACE OF THE BRACKETS ON THE GIRDER WEB AND WITHIN 6 INCHES OF THE BOTTOM FLANGE.
USE #4 EPOXY COATED REINFORCING STEEL WITH THREADED ENDS OR GALVANIZED ALL THREADS FOR TENSION TIES. PLACE TENSION TIES PERPENDICULAR TO THE GIRDERS. ATTACH TENSION TIES TO THE TOP FLANGE OF THE GIRDERS WITH TY-BAR CLIPS AS SHOWN IN THE PLANS. DO NOT WELD TY-BAR CLIPS TO THE TOP FLANGE OF THE GIRDERS.
WEDGE HARDWOOD STRUTS, OR ANOTHER MATERIAL OF AN EQUIVALENT STRENGTH, BETWEEN THE GIRDERS WEBS WITHIN 6 INCHES OF THE BOTTOM FLANGE AT EACH TENSION TIE LOCATION.

DECK SLAB:

EPOXY-COAT OR GALVANIZE STEEL ITEMS USED TO FACILITATE CONSTRUCTION, SUCH AS DECK FORM HANGERS, TY-BAR CLIPS, INSERT WELD ANCHORS, OR OTHER APPURTENANCES, THAT WILL REMAIN IN PLACE IN THE DECK SLAB. EPOXY-COAT IN ACCORDANCE WITH AASHTO M284 OR GALVANIZE IN ACCORDANCE WITH AASHTO M111.
IN THE EVENT OF AN EMERGENCY, HALT THE PLACEMENT OF CONCRETE BY FORMING A CONSTRUCTION JOINT MADE PERPENDICULAR TO THE DIRECTION OF TRAFFIC OR AS DIRECTED BY THE ENGINEER. DO NOT PLACE ANY HEAVY EQUIPMENT ON THE FINISHED DECK SLAB WITHIN 5 FEET OF ANY CONSTRUCTION JOINT UNTIL CONCRETE IS IN PLACE ON BOTH SIDES OF THE RESPECTIVE JOINT AND AT LEAST 48 HOURS HAS ELAPSED SINCE CONCRETE PLACEMENT.
SEAL ALL DECK SLAB CONSTRUCTION JOINTS WITH HIGH MOLECULAR WEIGHT METHACRYLATE IN ACCORDANCE WITH SECTION 523 OF THE SPECIFICATIONS. INCLUDE ALL COST OF EQUIPMENT AND LABOR FOR THE INSTALLATION OF THE HIGH MOLECULAR WEIGHT METHACRYLATE SEALER IN THE CONTRACT UNIT PRICE OF "SEALER CRACK PREPARATION". INCLUDE ALL COST OF THE HIGH MOLECULAR WEIGHT METHACRYLATE SEALER IN THE CONTRACT UNIT PRICE OF "SEALER RESIN". THE DEPARTMENT WILL NOT MEASURE THE PREPARATION AND SEALER OF EMERGENCY CONSTRUCTION JOINTS FOR PAYMENT.

ELASTOMERIC COATING:

THIS ITEM INCLUDES THE APPLICATION OF URETHANE COATING SYSTEM SUCH AS CIM 1000 MANUFACTURED BY C.I.M. INDUSTRIES, POLYCOAT-PC-IM 129 MANUFACTURED BY POLYCOAT PRODUCTS, TO SURFACES OF THE ABUTMENTS AND PIERS AS DETAILED IN THE PLANS.
COLOR OPTIONS OF ELASTOMERIC COATING SHALL BE GRAY AND BLACK. PROVIDE COLOR OF ELASTOMERIC COATING AS APPROVED BY THE DEPARTMENT.
SURFACE PREPARATION AND APPLICATION OF PRODUCT SHALL BE PER MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS. REMOVE CONCRETE LAITANCE AND EXPOSE AGGREGATE BY BLASTING AS RECOMMENDED BY MANUFACTURER'S SPECIFICATIONS. PROTECT ELASTOMERIC BEARING PADS AND CONCRETE NOT HAVING URETHANE COATING APPLIED TO SURFACE DURING SURFACE PREPARTION. BEARING PADS THAT ARE DAMAGED DURING SURFACE PREPARATION SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.
APPLICATION OF PRODUCT SHALL PRODUCE A MINIMUM DRY MIL THICKNESS OF 58 MILS OVER ALL SURFACES AND EDGES DETAILED IN THE PLANS. MASK OFF ALONG THE FINISH EDGE OF THE PRODUCT SO THAT A STRAIGHT LINE IS PRODUCED. ALSO PROTECT CONCRETE NOT HAVING URETHANE COATING APPLIED TO THE SURFACE DURING APPLICATION. PRIOR TO APPLICATION, TEST FOR MOISTURE PER MANUFACTURER'S RECOMMENDATION, AND MINIMIZE OUT GASSING BY APPLYING PRIMER AND APPLYING PRODUCT AT ENVIRONMENTAL CONDITIONS RECOMMENDED BY MANUFACTURER.
BEARING SHALL BE SET PRIOR TO APPLICATION OF PRODUCT, AND BOTTOM OF ELASTOMERIC PADS SHALL BE IN FULL CONTACT WITH CONCRETE SURFACE. APPLICATION OF PRODUCT SHALL EXTEND 1" UP THE SIDES OF THE BEARING PADS, SEALING THE JOINT BETWEEN THE PAD AND THE PEDESTAL. MASK OFF THE REMAINDER OF THE PAD PRIOR TO APPLICATION OF PRODUCT.

PAY QUANTITY NOTES

(1) PAYMENT TO THE CONTRACTOR WILL BE BASED ON PLAN QUANTITIES.
(2) THE CONTRACTOR MAY PLACE CONCRETE AGAINST THE LIMITS OF EXCAVATION IF THE MATERIAL IS EXCAVATED TO THE NEAT LINES OF THE SUBSTRUCTURE AND APPROVED BY THE ENGINEER. IF NECESSARY, USE FORMS AT VERTICAL FACES AND REMOVE FORMS AFTER THE CONCRETE HARDENS. IF THE CONTRACTOR CHOOSES TO PLACE CONCRETE AGAINST THE SOIL, THE DEPARTMENT WILL PAY FOR SUBSTRUCTURE EXCAVATION COMMON IN ACCORDANCE WITH THE DIAGRAMS SHOWN IN THE PLANS.
(3) THE APPROACH SLABS CONTAIN AN ESTIMATED TOTAL OF 159.00 C.Y. OF CLASS AA CONCRETE AND 30,520.00 LB. OF EPOXY COATED REINFORCING STEEL.
(4) THE FIXED BEARING ASSEMBLIES CONTAIN AN ESTIMATED CONTRACT TOTAL OF 3,700.00 LB. OF STAINLESS STEEL. INCLUDE THE COST OF ANCHOR PLATES, CONTACT ANGLES, ELASTOMERIC PAD, ANCHOR BOLTS, WASHERS, NUTS, LABOR, MATERIAL, EQUIPMENT AND INCIDENTALS IN THE PRICE BID PER EACH OF "STAINLESS STEEL FIXED BEARING ASSEMBLY".
(5) THE EXPANSION BEARING ASSEMBLIES CONTAIN AN ESTIMATED CONTRACT TOTAL OF 3,900.00 LB. OF STAINLESS STEEL. INCLUDE THE COST OF ANCHOR PLATES, CONTACT ANGLES, ELASTOMERIC PAD, ANCHOR BOLTS, WASHERS, NUTS, LABOR, MATERIAL, EQUIPMENT AND INCIDENTALS IN THE PRICE BID PER EACH OF "STAINLESS STEEL EXPANSION BEARING ASSEMBLY".
(6) THE QUANTITY SHOWN FOR CLASS AA CONCRETE INCLUDES AN ESTIMATED 14.00 C.Y. FOR GIRDER HAUNCHES.

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE

J.P. NO. 27959(04)

PAY QUANTITIES

0200 BRIDGE 'A' US-281 SPUR OVER I-40

ITEM NO.	CODE NO.	ITEM		UNIT	TOTAL
501(B)	1300	SUBSTRUCTURE EXCAVATION COMMON	(1,2)	CY	320.00
501(G)	1800	CLSM BACKFILL	(1)	CY	377.60
502	3100	TEMPORARY EARTH RETAINAGE		LSUM	1.00
504(A)	5200	APPROACH SLAB	(1,3)	SY	440.20
504(B)	5300	SAW-CUT GROOVING	(1)	SY	2321.90
504(E)	5520	42" F-SHAPED PARAPET	(1)	LF	663.40
506(A)	7200	STRUCTURAL STEEL	(1)	LB	335700.00
507(A)	8200	STAINLESS STEEL FIXED BEARING ASSEMBLY	(1,4)	EA	24.00
507(B)	8300	STAINLESS STEEL EXP. BEARING ASSEMBLY	(1,5)	EA	24.00
509(A)	0210	CLASS AA CONCRETE	(1,6)	CY	467.40
509(B)	0320	CLASS A CONCRETE	(1)	CY	402.90
510(C)	1450	SLOPE WALL (5")	(1)	SY	932.00
511	2100	MECHANICAL SPLICES	(1)	EA	1242.00
511(A)	2210	REINFORCING STEEL	(1)	LB	3380.00
511(B)	2310	EPOXY COATED REINFORCING STEEL	(1)	LB	207820.00
514(A)	5210	PILES, FURNISHED (HP 10x42)		LF	182.00
514(A)	5220	PILES, FURNISHED (HP 12x53)		LF	952.00
514(B)	5310	PILES, DRIVEN (HP 10x42)		LF	182.00
514(B)	5320	PILES, DRIVEN (HP 12x53)		LF	952.00
514(L)	6300	PILE SPLICE, H-PILE (NON-BIDDABLE)		EA	1.00
515(A)	7200	WATER REPELLENT (VISUALLY INSPECTED)	(1)	SY	1077.00
516(A)	8240	DRILLED SHAFTS 60" DIAMETER		LF	244.00
516(A)	8250	DRILLED SHAFTS 72" DIAMETER		LF	68.00
516(C)	8400	CROSSHOLE SONIC LOGGING		EA	4.00
517	9110	ELASTOMERIC COATING		SF	1654.00
518(B)	0300	SEALED EXPANSION JOINTS	(1)	LF	134.00
523(A)	3200	SEALER CRACK PREPARATION	(1)	LF	334.70
523(B)	3300	SEALER RESIN	(1,7)	GAL	4.00
613(H)	6205	6" PERFORATED PIPE UNDERDRAIN ROUND	(8)	LF	134.00
613(I)	6310	6" NON-PERF. PIPE UNDERDRAIN RND.	(9)	LF	169.00
619(D)	6700	REMOVAL OF EXISTING BRIDGE STRUCTURE	(10)	LSUM	1.00

J.P. NO. 27959(04)

STAKING PAY ITEMS

0600 STAKING

ITEM NO.	CODE NO.	ITEM	UNIT	TOTAL
642(B)	3300	CONSTRUCTION STAKING LEVEL II	LSUM	1.00

J.P. NO. 27959(04)

CONSTRUCTION PAY ITEMS

0640 CONSTRUCTION

ITEM NO.	CODE NO.	ITEM	UNIT	TOTAL
220	1100	SWPPP DOCUMENTATION AND MANAGEMENT	LSUM	1.00
641	2100	MOBILIZATION	LSUM	1.00

PAY QUANTITY NOTES (CONT.)

(7) QUANTITY SHOWN FOR SEALER RESIN ESTIMATED AT 0.011 GALLONS PER FOOT OF CONSTRUCTION JOINT.
(8) INCLUDE THE COST OF PIPE UNDERDRAIN COVER MATERIAL (BOTH FILTER SAND AND COARSE) AND FILTER FABRIC IN THE CONTRACT UNIT PRICE OF "6" PERFORATED PIPE UNDERDRAIN ROUND". INSTALL AS SHOWN IN THE PLANS AND ON STD. PUD-3.
(9) THE ENGINEER MAY ADJUST THE EXTENT, LOCATION AND DEPTH OF NON-PERFORATED PIPE UNDERDRAIN DURING CONSTRUCTION. INCLUDE THE COST OF TRENCH EXCAVATION AND STANDARD BEDDING MATERIAL IN THE CONTRACT UNIT PRICE OF "6" NON-PERF. PIPE UNDERDRAIN ROUND". INSTALL AS SHOWN IN THE PLANS AND ON STD. PUD-3.
(10) ITEM "REMOVAL OF EXISTING BRIDGE STRUCTURE" CONSISTS OF REMOVAL AND DISPOSAL OF 30'-55'-55'-30' CONCRETE SLAB SPANS x 28' CLEAR ROADWAY IN ACCORDANCE WITH SECTION 619.04(B)2 OF THE SPECIFICATIONS AND IN A MANNER APPROVED BY THE ENGINEER. ALL REMOVED MATERIALS SHALL BECOME PROPERTY OF THE CONTRACTOR.

DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN			BRIDGE 'A' CANADIAN COUNTY US-281 SPUR OVER I-40
CHECKED			GENERAL NOTES AND SUMMARY OF PAY QUANTITES (BRIDGE)
APPROVED			
SQUAD			

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. AB01

REVISIONS		
REV. NO.	DESCRIPTION	DATE

ENVIRONMENTAL MITIGATION NOTES

EARTHWORK NOTE:
THE CONTRACTOR MUST ENSURE THAT ANY MATERIAL INCORPORATED INTO THE PROJECT IS FREE OF ANY HAZARDOUS, INDUSTRIAL OR CONTAMINATED WASTE, REFER TO SUB-SECTIONS 106.01 AND 202.02 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

IMPORTED MATERIAL (EG. BORROW) - IF MATERIAL IS IMPORTED TO THE PROJECT AND AT ANY POINT THE MATERIAL IS DETERMINED BY THE ENGINEER TO INCLUDE ANY TYPE OF UNACCEPTABLE CONTAMINATION, THE MATERIAL MAY REQUIRE REMOVAL, IN WHOLE, OR IN PART. IF REMOVAL IS REQUIRED, THEN THE INITIAL PLACEMENT, REMOVAL AND PROPER DISPOSAL OF THIS MATERIAL SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE DISPOSAL OF THE UNACCEPTABLE **MATERIAL** SHALL BE APPROVED BY THE ENGINEER, REFER TO SUB-SECTION 107.15 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

TO ASSIST THE CONTRACTOR, THE "OFF PROJECT FACILITY/BORROW SITE HAZARDOUS MATERIALS QUESTIONNAIRE" IS PROVIDED ON THE DEPARTMENT'S WEB SITE:

https://oklahoma.gov/content/dam/ok/en/odot/documents/ok-gov-docs/programs-and-projects/environmental/hazard-questionnaire-2016.pdf

THIS QUESTIONNAIRE IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR SO THAT A CLEARER UNDERSTANDING OF THE CHARACTERISTICS OF THE PROPOSED SITE/ MATERIAL IS ACHIEVED. COMPLETION AND SUBMITTAL OF THIS FORM TO THE ENGINEER DOES NOT EXCUSE THE CONTRACTOR FROM PROVIDING MATERIALS THAT ARE FREE OF HAZARDOUS AND INDUSTRIAL COMPOSITION IN ACCORDANCE WITH SUB-SECTIONS 106.01 AND 202.02 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

NON-COMPLIANCE NOTE:
FAILURE TO IMPLEMENT THE COMMITMENTS SPECIFIED IN THE PLAN NOTES CAN RESULT IN NON-COMPLIANCE ISSUES ON THE PROJECT. WORK ACTIVITIES MAY BE SUSPENDED ON THE PROJECT, FOR AN UNDETERMINED DURATION, WHILE WORKING WITH REGULATORS TO BRING THE PROJECT BACK INTO COMPLIANCE. THE CONTRACTOR WILL NOT BE COMPENSATED FOR TIME LOST.

WATER QUALITY CONSERVATION NOTE:
APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE IMPACTS FROM STORM WATER DISCHARGES AND SEDIMENTATION IN STREAMS, AS ESTABLISHED BY THE OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY, SHALL BE CONSCIENTIOUSLY IMPLEMENTED THROUGHOUT THE PROPOSED CONSTRUCTION PERIODS, IN ORDER TO MINIMIZE ANY POTENTIAL IMPACTS TO ANY LISTED SPECIES. THE EFFECTIVENESS OF EROSION CONTROLS SHALL BE MAINTAINED FOR THE DURATION OF CONSTRUCTION ACTIVITIES. HAZARDOUS MATERIALS, CHEMICALS, FUELS, LUBRICATING OILS, AND OTHER SUCH SUBSTANCES SHALL BE STORED AT LEAST 100 FEET FROM THE ORDINARY HIGH WATER MARK (OHWM). REFUELING OF CONSTRUCTION EQUIPMENT SHALL ALSO BE CONDUCTED AT LEAST 100 FEET FROM THE OHWMS. SEDIMENT AND EROSION CONTROLS SHALL BE INSTALLED AROUND STAGING AREAS TO PROHIBIT DISCHARGE OF MATERIALS FROM THESE SITES. CONSTRUCTION WASTE MATERIALS AND DEBRIS SHALL BE STOCKPILED AT LEAST 25 FEET OUTSIDE OF THE OHWMS, AND THESE MATERIALS SHALL BE REMOVED AND DISPOSED OF PROPERLY FOLLOWING COMPLETION OF THE PROJECT. PREVENTATIVE MEASURES MUST BE TAKEN TO PROHIBIT THE DISCHARGE OF CONTAMINANTS INTO ANY SURFACE WATERS.

ENVIRONMENTAL MITIGATION NOTES

CULTURAL RESOURCES LOCATION EXCEPTION NOTE:
LOCATIONS OUTSIDE THE PROJECT AREA IN THE FOLLOWING AREA MUST NOT BE UTILIZED FOR BORROW, EQUIPMENT STAGING, HAUL ROADS, SPOIL DUMPS OR ANY OFF-SITE PROJECT-RELATED ACTIVITY.

T12N R10W

SECTION 9: NE¼ NE¼ NE¼
NW¼ NE¼ NE¼
SECTION 10: E½ NW¼ NW¼

WHOOPING CRANE PLAN NOTE:
IF WHOOPING CRANES ARE SEEN AT OR WITHIN ONE MILE OF THE PROPOSED WORK SITE, THE RESIDENT ENGINEER SHALL IMMEDIATELY CONTACT THE ODOT BIOLOGIST. IF THERE IS A CONFIRMED SIGHTING AND/OR WHOOPING CRANES ARE OBSERVED WITHIN ONE MILE OF THE PROPOSED WORK SITE, ALL CONSTRUCTION ACTIVITIES SHALL CEASE UNTIL IT IS DETERMINED THAT WHOOPING CRANES HAVE LEFT THE PROJECT VICINITY WITHOUT BEING HARASSED.

MIGRATORY BIRD NOTE:
MIGRATORY BIRDS ARE PROTECTED BY THE FEDERAL MIGRATORY BIRD TREATY ACT. MANY BIRDS COMMONLY USE BRIDGES AND CULVERTS FOR NESTING. THE NESTING SEASON FOR MOST BIRD SPECIES EXTENDS FROM MARCH 1 TO AUGUST 31. THE PROJECT WAS SURVEYED FOR MIGRATORY BIRD NESTS IN MAY 2015. ALTHOUGH NO NESTS WERE OBSERVED, THE SURVEY IS VALID ONLY UNTIL THE START OF THE 2016 NESTING SEASON (BEGINNING MARCH 1). THE RESIDENT ENGINEER SHALL CONTACT THE ODOT BIOLOGIST IF ANY BIRD USE OF THE EXISTING STRUCTURES IS OBSERVED. IF BIRDS ARE OBSERVED THEN PAINTING, REPAIR, RETROFIT, REHABILITATION OR DEMOLITION OF THE EXISTING BRIDGES AND CULVERTS SHALL BE CONDUCTED BETWEEN SEPTEMBER 1, AND FEBRUARY 28, WHEN MIGRATORY BIRD NESTS ARE NOT OCCUPIED. THE BRIDGES AND CULVERTS MAY BE PROTECTED FROM NEW NEST ESTABLISHMENT PRIOR TO MARCH 1, BY MEANS THAT DO NOT RESULT IN BIRD DEATH OR INJURY. OPTIONS INCLUDE THE EXCLUSION OF ADULT BIRDS FROM SUITABLE NEST SITES ON OR WITHIN A STRUCTURE BY THE PLACEMENT OF WEATHER-RESISTANT POLYPROPYLENE NETTING WITH 0.25-INCH OR SMALLER OPENINGS, PRIOR TO MARCH 1. METHODS OTHER THAN NETTING MUST BE PRE-APPROVED BY THE ODOT BIOLOGIST.

SPECIES (CHOOSE THOSE THAT APPLY)	SEASONAL RESTRICTION PERIOD
MIGRATORY BIRDS: SWALLOWS AND PHOEBES	MARCH 1 – AUGUST 31

HAZARDOUS MATERIALS NOTE:

LATITUDE/LONGITUDE	STATION	OCC FAC./CASE NO.	FACILITY
35.5347, -98.2368	ABT. 56+00.	91-2416/ 064-1842	CHEROKEE TRAVEL MART.
35.5312, -98.2381	ABT. 45+00.	91-2033 / 064-2079	#108 FUEL AND FOOD

PETROLEUM CONTAMINATION MAY EXIST AT OR NEAR THE REFERENCED LEAKING UNDERGROUND STORAGE TANK (LUST) SITES. THESE LOCATIONS MUST NOT BE UTILIZED FOR BORROW MATERIAL. BASED ON THE AVAILABLE INFORMATION, CONTAMINATION IS NOT EXPECTED TO AFFECT CONSTRUCTION ACTIVITIES, BUT IS STILL POSSIBLE. IN THE EVENT CONTAMINATED SOIL OR GROUNDWATER IS ENCOUNTERED, THE CONTACTOR SHALL ADHERE TO ODOT'S HAZARDOUS MATERIALS SPECIFICATION 107.15 AND NOTIFY THE RESIDENT ENGINEER, WHO MAY THEN CONTACT THE ENVIRONMENTAL PROGRAMS DIVISION AT (405) 521-3050 FOR ASSISTANCE.

ENVIRONMENTAL NOTES

DETAIL
REVIEW
APPROVED
ENVIRONMENTAL DIVISION

STATE OF OKLAHOMA | DEPARTMENT OF TRANSPORTATION

JOB PIECE NO. 27959(04) | SHEET NO. AE01

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS		
	DESCRIPTION	DATE
1	REVISED PAY ITEMS	07/10/25
2	DELETED PAY ITEM & NOTE ADDED NOTE & UPDATED NOTE REFERENCE	08/27/25
3	ADD NOTE / UPDATE NOTE REFERENCE	09/04/25

PAY QUANTITY NOTES

(R-1) PAYMENT FOR THIS ITEM WILL BE BASED ON PLAN QUANTITY ONLY. SEE SECTION 109.01B OF THE STANDARD SPECIFICATIONS.

(R-3) INCLUDES 200 CU. YDS. FOR DRIVEWAYS, RETURNS, DIKES, AND MISCELLANEOUS EARTHWORK.

(R-4) AN ESTIMATED QUANTITY OF 2212 C.Y. TOPSOIL TO BE RESERVED FOR REPLACEMENT OF APPROXIMATELY 5" ON COMPLETED FORESLOPES, DITCHES, AND BACKSLOPES. THIS QUANTITY IS INCLUDED IN THE EARTHWORK BALANCE. ANY ADDITIONAL EXCAVATION REQUIRED IN CUT SECTIONS TO ALLOW FOR PLACEMENT OF TOPSOIL TO FINAL GRADE, SHALL BE INCLUDED IN THE PRICE BID.

(R-6) FOR SOLID SLAB SODDING PRICE BID TO INCLUDE COST OF 10-20-10 FERTILIZER, ESTIMATED AT 200 POUNDS PER 1,000 SQ. YDS. OF SOD.

(R-7) FOR SOLID SLAB SODDING PRICE BID TO INCLUDE COST OF WATERING, ESTIMATED AT 60 GALLONS PER SQ. YD. OF SOD.

(R-11) THE QUANTITIES ESTIMATED FOR TEMPORARY EROSION AND SEDIMENT CONTROL IS 3.29 ACRES.

(R-14) ESTIMATED AT 150 POUNDS OF 18-46-0 FERTILIZER PER ACRE OF AREA ON WHICH TOPSOIL IS TO BE REPLACED.

(R-15) QUANTITY BASED ON TWO APPLICATIONS.

(R-19) 2 PRICE BID TO INCLUDE THE CHEMICAL ADDITIVE(S) TO ACHIEVE THE RATE SPECIFIED FOR THE APPROPRIATE SOIL CLASSIFICATION AS SPECIFIED IN THE MOST CURRENT ODOT MATERIALS DIVISION OHD L-50. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CLASSIFY THE SOIL AND DETERMINE THE APPROPRIATE ADDITIVE(S).

(R-25) ESTIMATED AT 0.075 GALLONS PER SQUARE YARD OF ORIGINAL EMULSION OF TACK COAT (BEFORE DILUTION FOR APPLICATION) IN ACCORDANCE WITH SECTION 407 OF THE STANDARD SPECIFICATIONS.

(R-26) ESTIMATED AT 112 LBS. PER SQ. YD. PER 1" THICK.

(R-39) INCLUDES REMOVAL OF ALL EXISTING ROADWAY DRAINAGE STRUCTURES, HEADWALLS (UNLESS OTHERWISE SPECIFIED), INLETS, FENCES, AND OTHER STRUCTURES WITHIN THE RIGHT OF WAY.

(R-40) TO BECOME THE PROPERTY OF AND BE DISPOSED OF BY THE CONTRACTOR IN A MANNER APPROVED BY THE ENGINEER.

(R-41) MATERIALS REMOVED SHALL NOT BE MEASURED FOR PAYMENT UNDER SECTION 202.06 UNCLASSSIFIED EXCAVATION.

(1) INCLUDES 315 TONS FOR MAINTENANCE OF TRAFFIC BETWEEN NEWLY CONSTRUCTED PAVEMENT AND EXISTING TRAVEL WAY BETWEEN PHASES OF CONSTRUCTION.

(2) TOPSOIL STOCKPILES AND DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR AT LEAST 21 DAYS ARE TO BE STABILIZED WITH TEMPORARY SEEDING AND MULCH NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY IN THE AREA. PRIOR TO SEEDING, (10-20-10) FERTILIZER SHALL BE APPLIED TO ALL AREAS TO BE STABILIZED.

(3) EROSION AND SEDIMENT CONTROL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER FROM THE BEGINNING OF CONSTRUCTION UNTIL AN ACCEPTABLE VEGETATIVE COVER IS ESTABLISHED. INSPECTION BY THE CONTRACTOR AND ANY NECESSARY REPAIRS TO INCLUDE REMOVAL OF ACCUMULATED SILT SHALL BE PERFORMED ONCE EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.5 INCH AS RECORDED BY A NON-FREEZING RAIN GAUGE TO BE LOCATED ON SITE.

(4) PRICE BID TO INCLUDE COST OF TRENCH EXCAVATION AND STANDARD BEDDING MATERIAL AS SHOWN ON THE SUMMARY OF DRAINAGE STRUCTURES.

(5) INCLUDES THE PRICE OF AN OMNI-FLEX, OR APPROVEDEQUAL, TONGUE AND GROOVE GASKET JOINT.

(6) THE REMOVED GUARDRAIL IS TO BECOME THE PROPERTY OF THE STATE AND IS TO BE DELIVERED TO THE EL RENO RESIDENCY, 15100 NW. 36th ST. YUKON, OKLA. THIS IS TO INCLUDE THE UNDAMAGED RAIL, STEEL POSTS AND ALL HARDWARE. DELIVERED ITEMS WILL BE NEATLY STACKED AT THE LOCATION AS DIRECTED BY THE ENGINEER.

ALL DAMAGED GUARDRAIL SHALL BE THE PROPERTY OF THE CONTRACTOR AND WILL BE DISPOSED OF BY HIM IN A MANNER APPROVED BY THE ENGINEER.

THE ENGINEER WILL BE RESPONSIBLE FOR DETERMINING WHAT WILL BE DAMAGED OR UNDAMAGED GUARDRAIL.

(7) MASONRY MANHOLES, INLETS, JUNCTION BOXES, ETC. SHALL NOT BE USED.

(8) PRICE BID SHALL INCLUDE THE COST OF FRAMES AND GRATES.

(9) TRENCH WIDTHS SHALL BE AS SHOWN ON ODOT STANDARD SPI-4. SPECIFIED TRENCH WIDTHS SHALL BE MAINTAINED FULL DEPTH FROM THE FLOWLINE TO THE GRADING TEMPLATE. ALL TRENCH EXCAVATION GREATER THAN 5 FEET IN DEPTH SHALL BE SHORED. ALL COSTS TO BRING TRENCHING INTO CONFORMANCE WILL BE INCLUDED IN PRICE BID FOR PIPE.

2 3 (10) ESTIMATED QUANTITIY TO BE USED AT THE DESCRETION OF THE ENGINEER.

ROADWAY PAY ITEMS

0100 ROADWAY

ITEM NO.	CODE NO.	ITEM DESCRIPTION	NOTES	UNIT	QUANTITY
201(A)	1200	CLEARING AND GRUBBING		LSUM	1.00
202(A)	2200	UNCLASSIFIED EXCAVATION	(R-1)	CY	7,920.00
202(D)	2500	UNCLASSIFIED BORROW	(R-1)(R-3)	CY	200.00
205(A)	6200	TYPE A - SALVAGED TOPSOIL	(R-4)(2)	LSUM	1.00
221(B)	2300	TEMPORARY SILT FENCE	(3)	LF	1,765.00
221(C)	2400	TEMPORARY SEDIMENT FILTER	(3)	EA	1.00
221(E)	2600	TEMPORARY SILT DIKE	(3)	LF	480.00
221(F)	2700	TEMPORARY ROCK FILTER DAM TYPE 1	(3)	CY	10.50
230(A)	7200	SOLID SLAB SODDING	(R-6)(R-7)	SY	15,926.00
233(A)	0200	VEGETATIVE MULCHING	(R-11)	AC	4.00
234(A)	1220	FERTILIZING (18-46-0)	(R-14)	TON	0.25
241	3100	MOWING	(R-15)	AC	7.00
307(K)	4200	STABILIZED SUBGRADE	(R-19) 2	SY	2,758.00
407(B)	7300	TACK COAT	(R-25)	GAL	2,003.00
411(B)	1300	SUPERPAVE, TYPE S3(PG 76-28 OK)	(R-26)	TON	390.00
411(B)	1330	SUPERPAVE, TYPE S3 (PG 64-22 OK)	(R-26)(1)	TON	1,258.00
411(C)	1400	SUPERPAVE, TYPE S4(PG 76-28 OK)	(R-26)	TON	292.00
501(G)	1810	CLSM BACKFILL	(10) 3	CY	20.00
509(A)	0200	CLASS AA CONCRETE		CY	55.00
511(B)	2300	EPOXY COATED REINFORCING STEEL		LB	8,040.00
609(B)	4360	2'-8" COMB. CRB. & GUT. (6" BARRIER)		LF	311.00
611(A)	7215 1	MANHOLE (5' DIA.)	(7)(8)(9)	EA	1.00
611(B)	7305 1	ADD'L. DEPTH IN MANHOLE (5' DIA.)	(7)(8)(9)	VF	3.00
611(G)	7978	INLET GPI TYPE 2 (DES. 12)	(7)(8)(9)	EA	1.00
611(L)	1600	JUNCTION BOXES	(7)(8)(9)	CF	65.00
613(A)	5212	21" R.C. PIPE CLASS III	(4)(5)	LF	79.00
613(A)	5220	30" R.C. PIPE CLASS III	(4)(5)	LF	385.00
613(M)	6968	TYPE C4 CULVERT END TREATMENT		EA	4.00
619(A)	6200	REMOVAL OF STRUCTURES & OBSTRUCTIONS	(R-39)(R-40)	LSUM	1.00
619(B)	6364	REMOVAL OF ASPHALT PAVEMENT	(R-40)(R-41)	SY	2,037.00
2 619(B)	6396	REMOVAL OF GUARDRAIL	(R-41)(6)	LF	1,107.00
619(C)	6600	SAWING PAVEMENT		LF	280.00

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN		
CHECKED		SUMMARY OF PAY QUANTITIES & NOTES (ROADWAY)
APPROVED		
SQUAD		

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. AR01

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE

ROADWAY GENERAL CONSTRUCTION NOTES

MAINTENANCE OF THROUGH TRAFFIC INCLUDES THE MAINTENANCE OF THE EXISTING ROAD IN CLOSE PROXIMITY TO THE NEW CONSTRUCTION AS SHOWN ON THE PLANS.

FOR PROJECTS THAT INCLUDE WIDENING AND/OR RESURFACING, THE CONTRACTOR SHALL SCHEDULE OPERATIONS TO MINIMIZE POTENTIAL DROP-OFF HAZARDS AND SHALL SUBMIT A SEQUENCE OF CONSTRUCTION OPERATIONS TO THE RESIDENT ENGINEER FOR APPROVAL BEFORE OPERATIONS BEGIN. ANY PORTION OF THE CONSTRUCTION OPERATIONS, SUCH AS SUPERPAVE LAYING OPERATIONS, EXCAVATION FOR PAVEMENT WIDENING, OR EXTENSION OF ROADWAY STRUCTURES, SHALL BE LIMITED TO ONE SIDE AT A TIME, AND THE PROCEDURES OUTLINED IN THE PAVEMENT DROP-OFF TREATMENT STANDARD PDT-1 (LATEST REVISION) SHALL BE IMPLEMENTED. ONLY THAT AMOUNT OF OPEN TRENCH WILL BE ALLOWED THAT CAN BE SURFACED IN 1 (ONE) DAY'S TIME WITHOUT APPROVAL BY THE ENGINEER. LIGHTS, SIGNS AND BARRICADES SHALL BE MOVED AS WORK PROGRESSES.

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

ALL FLOWLINES THAT ARE TO BE FILLED SHALL BE THOROUGHLY TAMPED BEFORE CONSTRUCTION OR EXTENSION OF DRAINAGE STRUCTURES. ALL COST TO BE INCLUDED IN OTHER ITEMS OF WORK

IN ORDER TO ALLEVIATE DUST CONDITIONS DURING GRADING OPERATIONS AND BEFORE PAVEMENT WORK IS COMPLETED, THE CONTRACTOR SHALL SPRINKLE GRADING AT INTERVALS APPROVED BY THE ENGINEER. ALL COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

THE CONTRACTOR SHALL NOT WASTE ANY EXCESS EXCAVATION UNTIL ALL PLANNED EMBANKMENTS AND BACKFILLS ARE COMPLETED. EXCESS UNCLASSIFIED EXCAVATION MATERIAL DETERMINED BY THE ENGINEER TO BE SUITABLE FOR BACKFILL SHALL BE USED TO REDUCE ANY UNCLASSIFIED BORROW NEEDED. COST OF SECOND HANDLING SHALL BE INCLUDED IN OTHER ITEMS OF WORK. ANY REMAINING EXCESS EXCAVATION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND BE DISPOSED OF IN A MANNER APPROVED BY THE ENGINEER.

PRIME COAT SHALL BE APPLIED TO THE SUBGRADE IMMEDIATELY AFTER FINAL COMPACTION AND SHAPING TO RETAIN MOISTURE FOR PROPER CHEMICAL REACTION OF THE SOIL ADDITIVE.

THE CONTRACTOR SHALL KEEP THE OPEN TRENCH DRAINED. COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

VEGETATIVE MULCHING: THE VEGETATIVE MULCH SHALL BE ANCHORED IN ACCORDANCE WITH THE "ADHESIVE SPRAY METHOD", AS SPECIFIED IN 233.04B(1) OF THE STANDARD SPECIFICATIONS.

AREAS ON WHICH SALVAGED TOPSOIL IS TO BE REPLACED SHALL HAVE 18-46-0 FERTILIZER APPLIED, AT THE RATE OF 150 POUNDS PER ACRE, JUST PRIOR TO THE REPLACEMENT OF SALVAGED TOPSOIL.

AT THE BEGINNING OF TURFING OPERATIONS, ANY AREAS INCLUDED IN PLANNED QUANTITIES THAT HAVE GROWN A SATISFACTORY VOLUNTEER TURF OF PERENNIAL GRASS, AS DETERMINED BY THE ENGINEER, SHALL BE FERTILIZED AND WATERED AS CALLED FOR ON THE PLANS, BUT SHALL NOT BE SEEDED, SODDED, OR SPRIGGED.

SURFACING OF RETURNS, UNLESS OTHERWISE SHOWN ON THE PLANS, SHALL BE OF THE SAME MATERIAL (BASE AND SURFACE) AS THAT OF THE ABUTTING SHOULDER OF THE MAINLINE. BASE AND SURFACE THICKNESS SHALL BE THE THICKNESS SHOWN ON PLANS.

THE ENGINEER SHALL CHECK GRADES AT RAMP TERMINALS, AND MAKE ANY ADJUSTMENTS OF THE GRADES AND SUPERELEVATIONS, WHICH ARE REQUIRED TO OBTAIN SMOOTH PROFILES FOR BOTH EDGES OF THE RAMP PAVEMENT. CROSS SLOPE BREAKOVER SHALL NOT EXCEED 5% (FIVE PERCENT).

ONLY THE SILICONE SEALANT OPTIONS, FROM STANDARD LECS-4, WILL BE ALLOWED ON THIS PROJECT.

PRIOR TO FINAL ACCEPTANCE, ALL EXPOSED CURB SURFACES SHALL BE CLEANED OF ALL DISCOLORATION SUCH AS ASPHALT STAIN, TIRE MARKS, OR OTHER DISFIGUREMENT.

EXCESS ASPHALT AT JOINTS AND CRACKS IN EXISTING PAVEMENT SHALL BE REMOVED FLUSH TO TOP OF PAVING IN A MANNER APPROVED BY THE ENGINEER.

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 SHALL PROVIDE SEVEN (7) DAYS NOTICE TO SURROUNDING BUSINESSES BEFORE ANY ROADWAY CLOSURES.

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN		
CHECKED		GENERAL CONSTRUCTION NOTES (ROADWAY)
APPROVED		
SQUAD		

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. AR02

8/20/2024

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OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE

SUMMARY OF EARTHWORK

LOCATION	UNCLASSIFIED EXCAVATION 202(A)	EMBANKMENT	EMBANKMENT +15%*	UNCLASSIFIED BORROW 202(D)	EXCESS EXCAVATION
	CY	CY	CY	CY	CY
US-281 SPUR					
STA. 47+98.00 TO STA. 54+62.32	5,291	4,644	5,341	50	0
I-40					
STA. 327+00.00 TO STA. 336+00.00	2,629	1,033	1,188	0	1,391
TOTALS (ROADWAY)	**7,920**	**5,677**	**6,529**	**0**	**1,391**

NOTE: TOTAL UNCLASSIFIED BORROW QUANTITY ADJUSTED USING EXCESS EXCAVATION.

SUMMARY OF SEDIMENT AND EROSION CONTROL

						PERMANENT	
STATION TO STATION	TEMPORARY SILT FENCE 221(C)	TEMPORARY SEDIMENT FILTER 221(D)	TEMPORARY SILT DIKE 221(F)	TEMPORARY ROCK FILTER DAM TYPE 1 221(G)	VEGETATIVE MULCHING 233(A)	SOLID SLAB SODDING 230(A)	TYPE A SALVAGED TOPSOIL 205(A)
	LF	EA	LF	CY	AC	SY	CY
US-281 SPUR							
STA. 47+98.00 TO STA. 50+85.00	305				0.47	2256	313
STA. 50+85.00 TO STA. 54+62.33	560				0.76	3687	512
I-40							
STA. 327+00.00 TO STA. 336+00.00	900 *	1	480	10.5	2.06	9983	1387
	1765	**1**	**480**	**10.5**	**3.29**	**15926**	**2212**

* QUANTITY INCLUDED TO BE USED AT DIRECTION OF THE ENGINEER

SUMMARY OF SURFACING

STATION	TO	STATION	STABILIZED SUBGRADE 307(K)	TACK COAT 407(B)	SUPERPAVE, TYPE S3 (PG 76-28 OK) 411(B)	SUPERPAVE, TYPE S3 (PG 64-22 OK) 411(B)	SUPERPAVE, TYPE S4 (PG 76-28 OK) 411(C)	SUPERPAVE, TYPE S4 (PG 64-22 OK) 411(C)	CLASS AA CONCRETE 509(A)*	EPOXY COATED REINF. STEEL 511(B)*	2'-8" COMB. CURB & GUTTER (6" BARRIER) 609(B)
			SY	GAL	TON	TON	TON	TON	CY	LB	LF
PERMANENT											
US-281 SPUR											
STA. 47+98.00	TO	STA. 48+23.50	252.02	107.60	32.96	130.64	21.83	6.19			
STA. 48+23.50	TO	STA. 48+57.08	285.48	114.05	40.92	136.65	27.36	1.32			68.00
STA. 48+57.08	TO	STA. 49+17.08	483.33	638.00	68.21	193.26	45.60	0.00			
STA. 49+17.08	TO	STA. 49+47.08							27.20	2010.00	
STA. 52+18.74	TO	STA. 52+48.74							27.20	2010.00	
STA. 52+48.74	TO	STA. 53+08.74	483.33	638.00	68.21	193.26	45.60	0.00			
STA. 53+08.74	TO	STA. 54+30.00	949.65	375.30	138.85	447.47	92.83	1.16			243.00
STA. 54+30.00	TO	STA. 54+62.32	303.23	129.09	40.13	156.28	26.57	7.04			
TOTALS			**2757.05**	**2002.05**	**389.27**	**1257.56**	**259.80**	**15.71**	**54.40**	**4020.00**	**311.00**

* QUANTITIES FOR THE TRANSITION BARRIER

SUMMARY OF REMOVALS

SHEET NO.	LOCATION	REMOVAL OF ASPHALT PAVEMENT 619(B)	REMOVAL OF GUARDRAIL 619(B)	REMOVAL OF CABLE BARRIER 619(B)	SAWING PAVEMENT 619(C)
		SY	LF	LF	LF
	US-281 SPUR				
20	STA. 47+98.00 TO STA. 50+85.00	876	320		120
20	STA. 50+85.00 TO STA. 54+62.33	1161	323		160
	I-40				
20	STA. 327+00.00 TO STA. 336+00.00		464	900	
	TOTALS	**2037**	**1107**	**900**	280.00

SUMMARY OF STRUCTURES AND OBSTRUCTIONS

SHEET NO.	STATION TO STATION	REMOVAL OF HEADWALL	REMOVAL OF DRAINAGE INLETS	REMOVAL OF EXISTING PIPE
		EA	EA	LF
	US-281 SPUR			
20	STA. 47+98.00 TO STA. 50+85.00			
20	STA. 50+85.00 TO STA. 54+62.33			
	I-40			
20	STA. 327+00.00 TO STA. 336+00.00	4	1	206
	TOTALS	**4**	**1**	**206**

DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN			
CHECKED			SUMMARY SHEET (ROADWAY)
APPROVED			
SQUAD			

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. AR03

8/20/2024

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE

SUMMARY OF STORM SEWERS AND DRAINAGE STRUCTURES

					STORM SEWER DESIGN CRITERIA								INSTALLATION		INLETS	MANHOLES				PIPE		END SECTION	
STR. NO.	P&P SH. NO.	STATION	DESCRIPTION	DESIGN	DRAINAGE AREA	CAPTURE "Q"	TOTAL "Q" IN STRUCTURE	BY-PASS "Q"	ELEV. TOP MANHOLE OR GRATE	FLOWLINE IN	FLOWLINE OUT	FLOWLINE IN @ DOWN-STREAM STR. OR DITCH	TRENCH EXCAVATION	STD. BEDDING MATERIAL CLASS B	INLET GPI TYPE 2 DES 12 611(G)	JUNCTION BOXES 611(L)	MANHOLE 5' DIA. 611(A)	ADD'L DEPTH 5' DIA 611(B)	MANHOLE FRAME & COVER	21" RCP CLASS III 613(A)	30" RCP CLASS III 613(A)	TYPE C4 CULVERT END SECTION 613(M)	
					AC	CFS	CFS	CFS	FT	FT .	FT .	FT	CY	CY	EA	CF	EA	VF	EA	LF	LF	EA	
9	19	STA. 49+73.30, 106.57' LT US 281 SPUR	CONST. END SECTION W/ 19 LF OF 30" RCP STUB TO STR. 12	PCES-4-1, SPI-4-0, SPB-1-3 FHTCP-3-0	4.16	28.75	28.75	---	---		1518.41 E	1518.18	17.50	9.10							19	1	
10	19	STA. 50+82.92, 120.00' LT US 281 SPUR	CONST. GPI-TYPE 2, DES. 12 W/ 29 LF OF 21" RCP STUB TO STR. 11	SPI-4-0, SPB-1-3 GPI-4-0, FHTCP-3-0	0.97	6.67	6.67	---	1522.52		1518.77 E	1518.57	14.60	7.90	1					29			
11	19	STA. 50+83.12, 91.09' LT US 281 SPUR	CONST. 4'X4' JUNCTION BOX W/ EXTEND 50 LF OF 21" RCP STUB TO STR. 12	MFC-4-1, MJB-3-1, SPI-4-0, SPB-1-3, FHTCP-3-0	---	---	6.67	---	1522.59	1518.57 W	1518.57 S	1517.68	25.20	13.60		64.22			1.00	50			
12	19	STA. 49+73.30, 88.30' LT US 281 SPUR	CONST. 5' DIA. MANHOLE W/ 175 LF OF 30" RCP AND END SECTION	MFC-4-1, MJB-3-1, PCES-4-1, SPI-4-0, SPB-1-3, FHTCP-3-0	---	---	35.42	---	1524.70	1517.68 N 1518.18 W	1517.68	1515.71	160.90	83.00			1	2.02	1.00		175	1	
14	19	STA. 51+85.77 US 281 SPUR	CONST. 191 LF OF 30" RCP W/ END SECTIONS	PCES-4-1, SPI-4-0, SPB-1-3 FHTCP-3-0	4.35	30.05	30.05	---	---	1519.64	1516.60	1516.60	175.70	90.60							191	2	
		TOTALS											**393.90**	**204.20**	**1.00**	**64.22**	**1.00**	**2.02**	**2.00**	**79.00**	**385.00**	**4.00**	

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN		
CHECKED		SUMMARY OF DRAINAGE STRUCTURES
APPROVED		
SQUAD		

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. AR04

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OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			
DESCRIPTION	REVISIONS				DATE

TRAFFIC SIGNING GENERAL CONSTRUCTION NOTES

REMOVED MATERIAL TO BECOME PROPERTY OF CONTRACTOR AND IT SHALL BE DISPOSED OF IN A MANNER APPROVED BY THE ENGINEER.

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

ALL REGULATORY SIGNS SHALL HAVE HIGH INTENSITY SHEETING. THE HIGH INTENSITY SHEETING SHALL MEET THE REQUIREMENTS OF ASTM D4956-(LATEST REVISION) FOR TYPE III SHEETING.

ALL WARNING SIGNS SHALL HAVE FLUORESCENT YELLOW SHEETING. THE FLUORESCENT YELLOW SHEETING SHALL MEET THE REQUIREMENTS OF ASTM D4956-(LATEST REVISION) REQUIREMENTS FOR TYPE VIII SHEETING.

ALL GREEN AND BLUE SIGNS ON CONVENTIONAL HIGHWAYS SHALL HAVE HIGH INTENSITY SHEETING. THE HIGH INTENSITY SHEETING SHALL MEET THE REQUIREMENTS OF ASTM D4956-(LATEST REVISION) FOR TYPE III SHEETING.

ALL PANEL AND OVERHEAD SIGNS SHALL HAVE TYPE III HIGH INTENSITY BACKGROUND WITH TYPE VIII LEGENDS AND BORDERS. THE TYPE III BACKGROUND AND THE TYPE VIII LEGENDS AND BORDERS SHALL MEET THE REQUIREMENTS OF ASTM D4956-(LATEST REVISION).

THE MANUFACTURER SHALL FURNISH A TYPE 'A' CERTIFICATION IN ACCORDANCE WITH ODOT STANDARD SPECIFICATIONS, LATEST EDITION, AND SUBSECTION 106.04. THE CERTIFICATION SHALL INCLUDE TEST RESULTS ON THE MATERIAL SUBMITTED FOR APPROVAL.

ALL BROKEN CONCRETE INCLUDING OLD SIGN FOOTINGS WITH STUBS, WASTE MATERIAL AND DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE LIMITS OF THE PROJECT AND DISPOSED OF IN AN AREA APPROVED BY THE ENGINEER. NO PAYMENT SHALL BE MADE FOR THE DISPOSAL OF THIS MATERIAL. ANY PIPE POST OR WIDE FLANGE POST ABOVE THE OLD SIGN FOOTINGS SHALL BE CUT AND HANDLED AS PROPERTY OF THE STATE AND SHALL BE NEATLY STACKED ON THE JOB SITE, AS DESIGNATED BY THE ENGINEER UNTIL SUCH TIME AS DIVISION PERSONNEL CAN REMOVE THE MATERIAL FROM THE JOB SITE.

NO SPLICES SHALL BE PERMITTED IN ANY PIPE OR WIDE FLANGE SIGN POSTS.

ALL ANCHOR BOLTS SHALL BE GRADE A-36 STEEL.

THE STATIONS AND LOCATIONS OF THE SIGN PLACEMENT, AS SHOWN ON THE PLAN SHEETS, ARE APPROXIMATE. EXACT STATIONS AND LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR SO THAT THE SIGN IS INSTALLED IN ACCORDANCE WITH DEPARTMENT STANDARDS AND THE MUTCD IN ORDER TO PROVIDE OPTIMUM VISIBILITY TO THE ONCOMING/APPROACHING MOTORIST. IF A PROPOSED LOCATION CONFLICTS WITH OTHER SIGNS, UTILITIES OR OTHER ROADWAY FEATURES, THE ENGINEER SHALL BE NOTIFIED.

POST LENGTHS SHOWN ON SIGN SUMMARY ARE APPROXIMATE, EXACT LENGTH SHALL BE DETERMINED BY FIELD SURVEY BY THE CONTRACTOR.

THE COST OF REPLACEMENT OF MISSING OR DAMAGED EDGE STRIP ON EXISTING SIGNS SHALL BE INCLUDED IN OTHER ITEMS OF WORK.

ALL EXISTING AND NEW BREAKAWAY SIGN POSTS, PIPES AND WIDE FLANGE BEAMS SHALL HAVE SHEET METAL BOLT RETAINER PLATES AS SPECIFIED IN O.D.O.T. STD. FGS1-1-(LATEST REVISION). REPLACEMENT COST OF MISSING OR DAMAGED BOLT RETAINER PLATES AND ALL ASSOCIATED HARDWARE AND LABOR SHALL BE INCLUDED IN OTHER ITEMS OF WORK.

ALL REMOVED SIGNS, SIGN POSTS, BOLTS, MISCELLANEOUS HARDWARE, AND DELINEATORS SHALL REMAIN THE PROPERTY OF THE STATE. THE CONTRACTOR SHALL NEATLY STACK SUCH REMOVED MATERIAL AT A LOCATION ON THE JOB SITE AS DESIGNATED BY THE ENGINEER UNTIL SUCH TIME AS DIVISION PERSONNEL CAN REMOVE THE MATERIAL FROM THE JOB SITE.

ALL SIGNS SHALL BE REMOVED FROM THE POSTS IN A SALVAGEABLE MANNER FOR REUSE. CARE SHALL BE TAKEN DURING REMOVAL AND TRANSPORTING TO ALLEVIATE DAMAGE OF MATERIALS. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED DURING REMOVAL OF SIGNS AND SIGN POSTS.

AFTER REMOVAL OF ANY SIGN FOOTINGS, THE HOLES SHALL BE FILLED WITH SOIL AND TAMPED AND SHAPED IN A MANNER APPROVED BY THE ENGINEER.

FOR NEW OR EXISTING GROUND MOUNTED SIGNS, MAXIMUM STUB POST PROJECTION ABOVE FOOTING/GROUND LINE SHALL BE 1-3/4" + /- 1/4". MAXIMUM FOOTING PROJECTION ABOVE GROUND LINE SHALL BE NO MORE THAN 2". SHOULD ADDITIONAL SOIL BE REQUIRED, THE ENGINEER WILL DESIGNATE AN AREA TO OBTAIN ADDITIONAL SOIL. ALL ASSOCIATED COSTS SHALL BE INCLUDED IN OTHER ITEMS OF WORK.

WHERE EXISTING SIGNS NEED TO BE RE-ADJUSTED TO KEEP SIGN 1" ABOVE FUSE PLATE TO COMPLY WITH STD. FGS1-1 AND FGS2-1 (LATEST REVISION), THE CONTRACTOR SHALL CUT ANY WIDE FLANGE SIGN POST THAT EXTEND ABOVE THE SIGN. THE CUT SURFACE SHALL BE GROUND SMOTH AND GIVIN A HEAVY AND THOROUGH COAT OF ZINC-RICH PAINT IN A MANNER APPROVED BY THE ENGINEER.

TRAFFIC OPERATIONS GENERAL CONSTRUCTION NOTES (LIGHTING)

FIVE (5) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION ON THIS PROJECT, THE RESIDENT ENGINEER SHALL CONTACT THE OKLAHOMA HIGHWAY PATROL, SIZE AND WEIGHTS SECTION (405)-425-2210 AND ADVISE THE OFFICE WHEN SAID DETOURING WILL BEGIN AND THAT WIDE LOADS OVER 12 FT. SHOULD BE ADVISED AND RESTRICTED. UPON COMPLETION OF THE PROJECT, THE RESIDENT ENGINEER SHALL CONTACT THE OKLAHOMA HIGHWAY PATROL AND ADVISE THE OFFICE THAT THE PROJECT IS COMPLETE.

THE CONTRACTOR SHALL PROVIDE A PERSON, 24 HOURS A DAY, SEVEN DAYS A WEEK, AT THE CONSTRUCTION SITE TO MAINTAIN AND KEEP ALL TRAFFIC CONTROL DEVICES IN POSITION ANYTIME TRAFFIC IS DIRECTED AWAY FROM THE NORMAL TRAFFIC LANES OR ANYTIME THE ENGINEER DEEMS IT NECESSARY. THIS PERSON SHALL HOLLD A CURRENT CERTIFICATIOJN FROM THE AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) OR TH OKLAHOMA TRAFFIC ENGINEERING ASSOCIATION (OTEA) AS A TRAFFIC CONTROL TECHNICIAN OR TRAFFIC CONTROL SUPERVISOR.

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 SHALL BE RESPONSIBLE FOR PROPER BARRICADES, LIGHTS, AND SIGNING WITHIN THE LIMITS OF CONSTRUCTION. ALL CONSTRUCTION SIGNING WILL BE IMPLEMENTED ACCORDING TO CONSTRUCTION PLANS. CONSTRUCTION TRAFFIC CONTROL WILL BE 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.

ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL MEET O.D.O.T.'S QUALITY STANDARD FOR TEMPORARY TRAFFIC CONTROL DEVICES.

TRAFFIC LIGHTING GENERAL CONSTRUCTION NOTES

SYMBOLS AND LEGENDS ARE DIAGRAMMATIC ONLY AND LOCATIONS SHALL BE ADJUSTED FOR EXISTING FIELD CONDITIONS, BUT NO MAJOR ALTERATIONS OR RELOCATIONS WILL BE MADE WITHOUT FIRST CONSULTING WITH THE TRAFFIC ENGINEER DIVISION AT (405) 521-2861.

ALL BROKEN CONCRETE, WASTE MATERIAL, AND DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR, AND SHALL BE REMOVED FROM THE LIMITS OF THE PROJECT AND DISPOSED OF IN AN AREA APPROVED BY THE ENGINEER. NO PAYMENT WILL BE MADE FOR THE DISPOSAL OF THIS MATERIAL.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE HE MAY INFLICT TO THE EXISTING UNDERGROUND UTILITIES WITHIN THE PROJECT AREA AS A RESULT OF HIS DIGGING, TRENCHING, BORING, ETC.... PRIOR TO DIGGING NEAR THE UTILITIES, THE CONTRACTOR SHALL CALL FOR A LIST OF ALL UNDERGROUND FACILITIES REGISTERED IN THE AREA OF CONSTRUCTION LISTED WITH THE FOLLOWING AGENCIES:
THE "OKIE" NOTIFICATION CENTER 811 OR 1-800-522-6543 OR WWW.CALLOKIE .COM
OR THE LOCAL COUNTY CLERK'S OFFICE.
DEPTH OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

ALL MATERIALS, EQUIPMENT AND LABOR NECESSARY TO MAKE THE ELECTRICAL CONNECTIONS TO THE EXISTING OVERHEAD SIGN STRUCTURES AND LIGHTS WILL BE PAID FOR AT THE UNIT PRICE BID FOR THE REQUIRED MATERIALS USED TO MAKE THE COMPLETED CONNECTIONS.

THE CONTRACTOR SHALL COOPERATE WITH THE ENGINEER, THE CITY AND THE LOCAL UTILITY CO. TO KEEP THE EXISTING LIGHTING SYSTEM IN SERVICE AS MUCH AS POSSIBLE WHILE DOING THE WORK SPECIFIED BY THIS CONTRACT. IF TEMPORARY CONNECTIONS ARE FEASIBLE AND JUSTIFIABLE, THE ENGINEER MAY REQUIRE THAT THE CONTRACTOR PROVIDE THESE TEMPORARY POWER CONNECTIONS. TEMPORARY CONNECTIONS WILL BE PAID FOR AT THE UNIT BID FOR THE MATERIALS USED.

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.

THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A BOLT CIRCLE TEMPLATE(S). THE TEMPLATE(S) SHALL BE 1/4" THICK STEEL PLATE(S), AND BE PERMANENTLY LABELED WITH THE CONTRACTOR'S COMPANY NAME, BOLT CIRCLE DIAMETER AND THE ANCHOR BOLT DIAMETER. THE COST OF THE TEMPLATE(S) SHALL BE PAID FOR IN OTHER ITEMS OF WORK.

PRIOR TO CONSTRUCTION OF FOOTINGS THE CONTRACTOR SHALL VISUALLY INSPECT THE PLAN LOCATION OF ALL HIGH MAST TOWERS AND CONVENTIONAL LIGHT POLES FOR PROPER OVERHEAD WIRE CLEARANCE. THESE CLEARANCES SHALL BE IN ACCORDANCE TO THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) SECTION 1910. THERE SHALL BE A MINIMUM RADII OF 10 FOOT CLEARANCE OF ANY OVERHEAD LINES FROM THE CLOSEST POINT ON THE LIGHT POLE. ANY NEW FOOTINGS PUT IN CLOSER THAN THIS 10 FOOT MINIMUM SHALL BE RELOCATED AT THE EXPENSE OF THE CONTRACTOR, INCLUDING REMOVAL OF THE FOOTING AND ALL MATERIALS TO CONSTRUCT THE NEW FOOTING.

TRAFFIC SAFETY GENERAL CONSTRUCTION NOTES

ALL FIELD MEASUREMENTS PREVAIL ON INSTALLATION AND REMOVAL.

COMPLETION OF A TREATMENT WILL BE REQUIRED BEFORE BEGINNING WORK AT ANOTHER LOCATION UNLESS DIRECTED OTHERWISE BY THE ENGINEER.

THE COST OF REMOVING ABANDONED LIGHT POLE FOOTINGS TO BE INCLUDED IN BID FOR OTHER ITEMS OF WORK.

GRADE TO DRAIN ALL AREAS WHERE CONCRETE CURB AND ISLAND ARE TO BE REMOVED. REPLACE ISLAND AREAS WITH 6" OF ASPHALT CONCRETE TYPE B AND STRIPE GORE AREAS IN ACCORDANCE WITH STD. PM1-1-(LATEST REVISION). COST OF INCIDENTAL GRADING TO BE INCLUDED IN THE BID FOR OTHER ITEMS OF WORK.

EXISTING GUARDRAIL THAT IS TO BE ELIMINATED SHALL NOT BE REMOVED UNTIL THE PROTECTED OBSTACLE HAS BEEN MODIFIED, REBUILT, OR REMOVED AS REQUIRED BY THE PLANS AND SPECIFICATIONS.

EXISTING GUARDRAIL TO BE REPLACED SHALL NOT BE REMOVED UNTIL ALL MATERIALS, EQUIPMENT AND LABOR ARE AVAILABLE AT THE SITE FOR REPLACEMENT. REPLACEMENT OF THE GUARDRAIL SHALL BEGIN IMMEDIATELY FOLLOWING REMOVAL OF THE EXISTING GUARDRAIL AND CONTINUE UNTIL COMPLETED. NO RAW GUARDRAIL ENDS SHALL REMAIN EXPOSED TO TRAFFIC DURING NON-WORKING HOURS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THE TRAFFIC BENEATH THE BRIDGES DURING THE REMOVAL AND RECONSTRUCTION OF BRIDGE PARAPET WALL. BEFORE ANY REMOVAL IS BEGUN, A PROPOSED METHOD OF PREVENTING DEBRIS FROM FALLING ON THE TRAFFIC BELOW THE BRIDGE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. ALL MATERIAL REMOVED FROM THE EXISTING BRIDGE SHALL BE REMOVED FROM THE WORK AREA PROMPTLY. THE AREA SHALL BE CLEARED AT THE CLOSE OF ANY WORK PERIOD.

ALL DIMENSIONS OF THE EXISTING BRIDGE COMPONENTS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY ALL DIMENSIONS NECESSARY TO CONNECT NEW MATERIAL AND SHALL BE SOLELY RESPONSIBLE FOR THE ACCURACY THEREOF.

THE CONTRACTOR SHALL FURNISH SUCH LIGHTS, SIGNS, BARRIERS, WATCHMEN, ETC. ADJACENT TO THE CURB BEING MODIFIED, AS MAY BE NECESSARY TO PROTECT THE TRAVELING PUBLIC THROUGH THE PORTION UNDER CONSTRUCTION.

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.

CABLE BARRIER GENERAL CONSTRUCTION NOTES

THE STATIONS AND LOCATIONS OF THE CABLE BARRIER SYSTEM AND END ANCHORS PLACEMENT, SHOWN ON THE PLAN AND DETAIL SHEETS, ARE APPROXIMATE. THE ENGINEER SHALL DETERMINE THE EXACT LOCATION OF THE CABLE BARRIER SYSTEM AND OR END ANCHOR UNITS. THE CONTRACTOR SHALL VERIFY THESE LOCATIONS.

DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SURFACE DRAINAGE, SHALL VISUALLY INSPECT AND OR MONITOR IT DURING RAINY OR WET WEATHER AND TAKE NECESSARY STEPS TO ENSURE ALL AREAS IN THE MEDIAN ADEQUATELY DRAIN TO THE SATISFACTION OF THE ENGINEER.

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN		
CHECKED		GENERAL NOTES (TRAFFIC)
APPROVED		
SQUAD		

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. AT01

9/4/2025

9:30:17 AM

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TRAFFIC SIGNING & STRIPING PAY QUANTITY NOTES

(TS-20) QUANTITY SHOWN INCLUDES 7,440 TRAFFIC STRIPE (PLASTIC)(WHITE) AND 3,940 TRAFFIC STRIPE(PLASTIC)(YELLOW) AND WILL BE MEASURED BY THE LINEAR FOOT OF SIX INCH (6") WIDE TRAFFIC STRIPE.

(TS-22) QUANTITY SHOWN INCLUDES 2,555 L.F. TRAFFIC STRIPE (PLASTIC)(WHITE) AND 905 L.F. TRAFFIC STRIPE(PLASTIC)(YELLOW) WILL BE MEASURED BY THE LINEAR FOOT OF TWELVE INCH (12") WIDE TRAFFIC STRIPE.

(TS-23) QUANTITY SHOWN INCLUDES 78 L.F. TRAFFIC STRIPE (PLASTIC)(WHITE) AND WILL BE MEASURED BY THE LINEAR FOOT OF TWENTY-FOUR INCH (24") WIDE TRAFFIC STRIPE.

(TS-33) INCLUDED IN THIS PAY ITEM IS ALL HARDWARE ASSOCIATED WITH PROPERLY ANCHORING AND MOUNTING THE HIGHWAY SIGN IN ACCORDANCE WITH O.D.O.T. PLANS AND STANDARD DRAWINGS SSA1-1 AND SSP1-1-(LATEST REVISION).

(TS-34) INCLUDED IN THIS PAY ITEM IS THE REMOVAL OF ANY EXISTING SIGNS TO BE REPLACED BY NEW ASSEMBLIES AND THE REMOVAL OF ANY EXISTING SIGNS THAT WILL BE IN CONFLICT WITH THE NEW ROADWAY OR NEW SIGNAGE.

(TS-35) SEE STANDARD DRAWING IA1-1 (LATEST REVISION) FOR CONCRETE PAD DESIGN.

(TS-36) PRICE BID FOR SAND FILLED IMPACT ATTENUATOR(S) SHALL INCLUDE THE COST FOR OM1-1 OR OM1-3 SIGN(S) WITH TYPE VIII SHEETING, AND THE REMOVAL OF ANY OM-3, OR OM-3E SIGN(S), POST(S) AND FOOTING(S), IF PRESENT, AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION ACCORDING TO PERTINENT O.D.O.T. STANDARD DRAWINGS.

TRAFFIC CONTROL PAY QUANTITY NOTES

(TC-1) THE CONTRACTOR SHALL FURNISH AND INSTALL SUCH LIGHTS, SIGNS, BARRICADES, AND PROVIDE FLAGGERS NECESSARY FOR THE CONTROL, SAFETY, AND MAINTENANCE OF TRAFFIC WHEN INSTALLING, RELOCATING OR DELIVERING PORTABLE LONGITUDINAL BARRIER.

(TC-2) QUANTITY INCLUDES SUFFICIENT LENGTH OF PORTABLE LONGITUDINAL BARRIER TO PROVIDE FOR THE LONGEST SECTION SHOWN ON THE PLANS. THIS SAME BARRIER WILL BE USED ON OTHER DETOUR PHASES.

(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-17) INCLUDES AN ESTIMATED 7,500 L.F. (PAINT) (4". WIDE) WHITE 7,500 L.F. (PAINT)(4". WIDE) YELLOW STRIPE.

(TC-20) ALL STRIPING TO BE PLACED ON TEMPORARY SURFACES OR ON SURFACES SCHEDULED TO BE REMOVED SHALL BE DONE WITH PAINT UNLESS OTHERWISE NOTED ON THE PLANS OR STANDARD DRAWINGS. TEMPORARY PAVEMENT MARKINGS PLACED ON FINISHED PAVEMENT OR EXISTING PAVEMENT TO REMAIN IN PLACE SHALL USE ONE OF THE FOLLOWING METHODS:
*REMOVABLE PAVEMENT MARKING TAPE
*CLASS A PAVEMENT MARKERS, FLEX TAB MARKERS

(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 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-28) INCLUDED IN THIS ITEM ARE ALL S.C.S. (SPECIAL CONSTRUCTION SIGNING) SIGNS WHICH ARE BETWEEN 0.00 S.F. AND 6.25 S.F. ALSO INCLUDED IN THIS ITEM SHALL BE THE COST OF INSTALLATION, MAINTENANCE, AND REMOVAL OF THESE SIGNS.

(TC-29) INCLUDED IN THIS ITEM ARE ALL S.C.S. (SPECIAL CONSTRUCTION SIGNING) SIGNS WHICH ARE BETWEEN 6.26 S.F. AND 15.99 S.F. ALSO INCLUDED IN THIS ITEM SHALL BE THE COST OF INSTALLATION, MAINTENANCE, AND REMOVAL OF THESE SIGNS.

TRAFFIC CONTROL PAY QUANTITY NOTES (CONT.)

(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-31) INCLUDED IN THIS ITEM ARE ALL S.C.S. (SPECIAL CONSTRUCTION SIGNING) SIGNS WHICH ARE 33.0 S.F. AND OVER. ALSO INCLUDED IN THIS ITEM SHALL BE THE COST OF INSTALLATION, MAINTENANCE, AND REMOVAL OF THESE SIGNS.

(TC-32) SPECIAL CONSTRUCTION SIGNS 33.0 S.F. AND OVER SHALL BE CONSTRUCTED OF EXTRUDED ALUMINUM TO THE DIMENSIONS SHOWN ON THE PLANS. THE SIGNS SHALL BE INSTALLED EITHER ON WIDE FLANGE BEAM POSTS OR OVERHEAD SIGN STRUCTURES IN A MANNER APPROVED BY THE ENGINEER.

(TC-33) ALL CONSTRUCTION WORK ZONE SIGNS SHALL HAVE FLUORESCENT SHEETING. THE FLUORESCENT SHEETING SHALL MEET THE REQUIREMENTS OF ASTM D4956 (LATEST REVISION).

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

(TC-52) ANY USED CHANGEABLE MESSAGE SIGN OR CONSTRUCTION ZONE IMPACT ATTENUATOR 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.

(TC-61) ANY DAMAGE TO A FINISHED OR EXISTING SURFACE RESULTING FROM THE CONTRACTORS 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.

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

(TC-73) QUANTITY SHOWN INCLUDES 1,500 EA. (WHITE) AND 1,500 EA. (YELLOW) CONSTRUCTION ZONE PAVEMENT MARKERS (FLEX TABS). THESE CONSTRUCTION ZONE PAVEMENT MARKERS SHALL BE EITHER "DAVIDSON PLASTICS: MODEL TOM", APEX UNIVERSAL, MODEL 932 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) 275 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.

△3 (TC-80) INCLUDED IN THIS ITEM SHALL BE ONE (1) ADDITIONAL UNIT TO BE USED AS A STAND-BY OR REPLACEMENT. THIS STAND-BY UNIT SHALL BE IMMEDIATELY ACCESSIBLE TO RELACE A DAMAGED, STOLEN, OR MALFUNCTIONING UNIT AND THE INSTALLATION OF THE STAND-BY UNIT SHALL BE NO MORE THAN TWENTY-FOUR (24) HOURS.

(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

(SP-1) WARNING LIGHTS TYPE 'C' ARE NOT REQUIRED.

(SP-2) SIGN PLACEMENT LOCATIONS SHALL BE DETERMINED BY THE ENGINEER.

(SP-3) ATTENUATORS SHALL BE QUADGUARD ELITE, SCI-100 GM, (SMART CUSION), OR APPROVED EQUAL WITHIN THE SAME CATEGORY OF THE OKLAHOMA DEPARTMENT OF TRANSPORTATION'S IMPACT ATTENUATOR GUIDELINE MATRIX. THE IMPACT ATTENUATOR GUIDELINE MATRIX CAN BE FOUND AT http://www.okladot.state.ok.us/traffic/pdfs/AttenuatorGuideline.pdf

(SP-4) THIS ITEM IS TO BE USED ON NEW BRIDGE CONSTRUCTION.

△2 (201) PRICE BID SHALL INCLUDE TWO (2) TEMPORARY TRAFFIC SIGNAL TRAILERS (TAPCO MODEL SQ3TS OR APPROVED EQUAL) TO SUPPORT 1-LANE, 2-WAY TRAFFIC OVER THE NEW US-281 SPUR BRIDGE FOR AN ESTIMATED 14 CALENDAR DAYS FOR THE INSTALLATION OF SCREED RAIL, PORTABLE LONGITUDINAL BARRIER, AN ESTIMATED QUANTITY TO BE USED AS NECESSARY DURING CONSTRUCTION.

QUANTITY INCLUDES PAYMENT FOR TWO (2) SIGNAL TRAILER PER SD DEPLOYED FOR BOTH UNITS.

OKLAHOMA DEPARTMENT OF TRANSPORTATION

FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

	REVISIONS	DATE
△1	REMOVED PAY QUANTITY NOTE	07/10/25
△2	ADDED PAY ITEM AND NOTE	08/15/25
△3	ADDED PAY ITEM AND NOTE	09/04/25

TRAFFIC CONTROL PAY ITEMS

0300 TRAFFIC CONTROL

ITEM NO.	CODE NO.	ITEM DESCRIPTION	NOTES	UNIT	QUANTITY
△2 823	6100	(SP) PORTABLE TRAFFIC SIGNAL SYSTEM	(201)	SD	14.00
857(A)	9200	CONSTRUCTION TRAFFIC STR. (PAINT)(4" WIDE)	(TC-17)(TC-20)(TC-21)(TC-61)(TC-75)	LF	15,000.00
857(E)	9620	(PL) CONST.ZONE PAV.MKRS(FLEX TAB)TYP.2-1	(TC-20)(TC-61)(TC-70)(TC-75)(TC-73)(SP-4)	EA	3,000.00
857(F)	9700	PAVEMENT MRKNG.REMOVAL(TRAF.STRP)	(TC-22)(TC-70)(TC-75)	LF	3,000.00
871(B)	2300	CONST.ZONE IMPACT ATTEN.	(TC-52)(SP-3)	SD	550.00
877(B)	4300	DELIVER PORTABLE LONGITUDINAL BARRIER	(TC-1)(TC-2)	LF	1,150.00
877(C)	4400	RELOCATION OF PORT. LONGITUDINAL BARRIER	(TC-1)	LF	5,300.00
△3 880(A)	6220	ARROW DISPLAY(TYPE C)	(TC-26)(TC-70)(TC-80)	SD	300.00
880(B)	6300	CONSTRUCTION SIGNS 0 TO 6.25 SF	(TC-23)(TC-26)(TC-28)(TC-33)(TC-84)	SD	9,075.00
880(B)	6310	CONSTRUCTION SIGNS 6.26 SF TO 15.99 SF	(TC-26)(TC-29)(TC-33)(TC-84)	SD	11,000.00
880(B)	6320	CONSTRUCTION SIGNS 16.0 SF TO 32.99 SF	(TC-26)(TC-30)(TC-33)(TC-84)	SD	3,850.00
880(B)	6330	CONSTRUCTION SIGNS 33.0 SF & OVER	(TC-26)(TC-31)(TC-32)(TC-33)(TC-84)	SD	825.00
880(C)	6410	CONSTRUCTION BARRICADES (TYPE III)	(TC-26)(TC-84)	SD	7,150.00
880(E)	6607	WARNING LIGHTS (TYPE B)	(TC-26)(TC-84)	SD	12,375.00
880(F)	6700	DRUMS △1	(TC-26)(TC-84)(SP-1)	SD	29,700.00
880(L)	7310	(SP) TRAFFIC SURVEILLANCE, OHP (NON-BID)	(TC-70)	HOUR	100.00
882(A)	8210	PORT.CHANGEABLE MESSAGE SIGN	(TC-52)(TC-84)(TC-85)(SP-2)	SD	825.00

TRAFFIC SIGNING & STRIPING PAY ITEMS

0310 TRAFFIC SIGNING & STRIPING

ITEM NO.	CODE NO.	ITEM DESCRIPTION	NOTES	UNIT	QUANTITY
509(D)	0500	CLASS C CONCRETE	(TS-35)	CY	14.00
511(A)	2200	REINFORCING STEEL	(TS-35)	LB	562.00
804(A)	2200	STRUCTURAL CONCRETE		CY	1.50
804(B)	2300	REINFORCING STEEL		LB	260.00
850(A)	1200	SHEET ALUMINUM SIGNS	(TS-34)	SF	157.48
850(B)	1310	EXTRUDED ALUMINUM PANEL SIGNS		SF	72.00
851(A)	2200	4" @ 13 GALV. STL. WD. FLANGE BM. POST		LF	71.00
851(C)	2430	2 1/2" SQUARE TUBE POST	(TS-33)	LF	296.50
855(A)	7205	(SP) TRAFFIC STRIPE (PLASTIC) (6" WIDE)	(TS-20)(TC-14)	LF	11,380.00
855(A)	7213	(SP) TRAFFIC STRIPE (PLASTIC) (12" WIDE)	(TS-22)(TC-14)	LF	3,460.00
855(A)	7217	(SP) TRAFFIC STRIPE (PLASTIC) (24" WIDE)	(TS-23)(TC-14)	LF	78.00
855(B)	7305	(SP) TRAFFIC STRIPE (PLASTIC) (ARROWS)	(TC-14)	EA	11.00
870(A)	1100	SAND FILLED IMPACT ATTEN.MODULE	(TS-35)(TS-36)	EA	38.00

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN		
CHECKED		SUMMARY OF PAY QUANTITIES & NOTES (TRAFFIC)
APPROVED		(SHEET 1 OF 2)
SQUAD		

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. AT02

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE
1 REVISED LIGHTING QUANTITIES & ADDED NOTES	08/25/25

TRAFFIC CABLE BARRIER PAY QUANTITY NOTES

(TP-57) PRICE BID FOR THIS ITEM CONSISTS OF INSTALLATION OF CABLE BARRIER SYSTEM AND ITS HARDWARE (CAPS, POST, TURN BUCKLE, ETC.). CONTRACTOR SHALL USE THE MATERIAL REMOVED FROM THE EXISTING CABLE BARRIER SYSTEM WITH THE EXCEPTION OF CONCRETE FOOTINGS. COST TO INCLUDE ANY ADDITIONAL HARDWARE NEEDED TO COMPLETE THE INSTALLATION. CONTRACTOR SHALL SWAGE NEW FITTINGS FOR THE INSTALLATION OF NEW SECTION IF DEEMED NECESSARY BY THE ENGINEER. PRICE BID FOR THIS ITEM ALSO INCLUDES COST OF NEW SWAGING FOR CABLE BARRIER SYSTEM.

(TP-58) COST TO INCLUDE ANY ADDITIONAL HARDWARE NEEDED TO COMPLETE THE INSTALLATION. CONTRACTOR SHALL SWAGE NEW FITTINGS FOR THE INSTALLATION OF EXISTING SECTION IF NECESSARY BY THE ENGINEER. PRICE BID FOR THIS ITEM ALSO INCLUDES COST OF NEW SWAGING FOR CABLE BARRIER SYSTEM.

(TP-59) TURNBUCKLES SHALL BE NO CLOSER THAN 1' TO A CABLE POST, IF IT INTERFERES WITH THE TENSIONING OPERATION OF THE SYSTEM. THE HEIGHTS FOR ALL ROWS OF CABLES SHALL CONFORM TO THE MANUFACTURER'S RECOMMENDED SPECIFICATIONS. THE BOTTOM CABLE MUST BE WITHIN THE TOLERANCE LIMITS RECOMMENDED BY THE MANUFACTURER.

(TP-60) PRICE BID FOR THIS ITEM INCLUDES THE REMOVAL OR RELOCATION / RESET OF ANY EXISTING SIGNS OR DELINEATORS WITHIN THE MEDIAN WITH THE APPROVAL OF THE ENGINEER, AS WELL AS, RESHAPING THE DITCHES AS DIRECTED BY THE ENGINEER WITHIN THIS AREA PRIOR TO INSTALLATION OF THE CABLE BARRIER SYSTEM. RELOCATION OF ANY EXISTING SIGN OR DELINEATOR SHALL BE DETERMINED BY THE ENGINEER.

(TP-62) INCLUDED IN THIS PAY ITEM WILL BE TWO (2) DAYS OF TRAINING FROM THE MANUFACTURER'S REPRESENTATIVE FOR MAINTAINING WIRE ROPE SAFETY FENCE SYSTEM. THE TRAINING SESSION(S) SHALL INCLUDE TRAINING TO PERTINENT ODOT AND LOCAL EMERGENCY PERSONNEL. PARTICIPANT SELECTION AND TRAINING LOCATION SHALL BE APPROVED BY THE ENGINEER

(TP-63) CABLE WILL BE MEASURED FROM BEGINNING OF WIRE ROPE CABLE TO END OF WIRE ROPE CABLE.

(TP-66) INCLUDED IN THIS PAY ITEM IS ALL MISCELLANEOUS HARDWARE REQUIRED BY THE MANUFACTURER TO BE USED FOR INSTALLATION OF SOCKETED CABLE BARRIER SYSTEM. ALSO INCLUDED SHALL BE CABLE BARRIER POSTS, CAPS, PLASTIC HARDWARE, GROUND COVER, ETC.

(TP-67) THE EXISTING CABLE BARRIER SYSTEM IS UNKNOWN. CONTRACTOR SHALL CONTACT THE ENGINEER FOR EXISTING END ANCHOR AND FOOTINGS DESIGN AND CONSTRUCT THE CABLE BARRIER SYSTEM ACCORDING TO THE MANUFACTURER RECOMMENDED INSTALLATION. ALL INSTALLATION OF CABLE BARRIERS ON THIS SECTION SHALL BE PER JP# 26224(04) PROJ# IMG-0040-4(424) 111TR.

(TP-68) PRICE BID FOR THIS ITEM CONSISTS OF REMOVAL OF EXISTING CABLE BARRIER SYSTEM, ITS CONCRETE FOOTINGS, AND/OR ANCHOR UNITS. CONTRACTOR SHALL REMOVE, SPOOL, COLLECT, AND STORE ALL CABLE BARRIER HARDWARE. THE MATERIALS SHALL BE STORED AT A LOCATION DETERMINED BY THE ENGINEER TO BE USED ON THIS PROJECT. ALL CONCRETE FOOTINGS ARE TO BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER.

(TP-69) PRICE BID FOR THIS ITEM SHALL INCLUDE THE FILLING AND TAMPING OF HOLES LEFT AFTER THE REMOVAL OF POST FOOTINGS DURING CABLE BARRIER REMOVAL OPERATION. WORK SHALL BE PERFORMED IN A MANNER APPROVED BY THE ENGINEER.

(TP-73) THIS IS AN ESTIMATED QUANTITY TO BE USED FOR POST FOOTINGS AND ANCHOR UNITS FOR THIS PROJECT. THIS ITEM SHALL ALSO INCLUDE REINFORCING STEEL BARS REQUIRED FOR POST FOOTINGS AND ANCHOR UNITS AS SHOWN BY THE MANUFACTURER'S DESIGN.

(TP-74) THIS ITEM INCLUDES AN ESTIMATED QUANTITY OF CLASS AA CONCRETE BASED ON 12" DIAMETER AND 36" DEPTH MINIMUM FOOTING DESIGN. THIS ITEM INCLUDES A SOIL REPORT TO BE PROVIDED BY THE CONTRACTOR FROM THE EXISTING PROJECT NO. IMG-0040-4(424)111TR, J/P # 26224(04) TO THE CABLE MANUFACTURER INDICATING ALL NECESSARY SOIL INFORMATION REQUIRED FOR THE MANUFACTURER TO DESIGN POST FOOTINGS AND ANCHOR UNITS FOR THIS PROJECT. THE FOUNDATION FOOTING DESIGN SHALL BE COMPLETED AND APPROVED BY THE ENGINEER, PRIOR TO EXCAVATION OF END ANCHOR AND POST FOOTINGS. ALL POSTS AND ANCHOR UNIT FOUNDATION DESIGNS RECOMMENDED BY THE MANUFACTURER FOR THIS PROJECT SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER. THE POST FOOTINGS SHALL NOT BE LESS THAN 12" DIAMETER BY 36" DEEP. FOOTINGS SHALL NOT EXTEND ABOVE GROUND MORE THAN 1".

TRAFFIC LIGHTING PAY ITEMS

0320 TRAFFIC LIGHTING

ITEM NO.	CODE NO.	ITEM DESCRIPTION	NOTES	UNIT	QUANTITY
802(B)	0320	2" PVC SCH.40 PLASTIC CONDUIT BORED	(TP-1)	LF	120.00
802(B)	0324	2" PVC SCH.40 PLASTIC CONDUIT TRENCHED	(TP-1)	LF	320.00
803(A)	1210	PULL BOX(SIZE I)		EA	4.00
804(A)	2200	STRUCTURAL CONCRETE	(TL-9)	CY	3.50
804(B)	2300	REINFORCING STEEL	(TL-10)	LB	568.00
805(D)	3504	(PL)REMOVE & RESET LIGHT POLE	(TL-35)(TL-43)(TL-44)	EA	2.00
1 806(C)	4490	30' MTG & 6' HLMA(G.STL.)	(151)	EA	2.00
807	5120	BREAKAWAY BASE (DES. B)		EA	2.00
1 811	9115	1/C NO.4 ELECT.COND.	(TP-1)(152)	LF	880.00
811	9135	1/C NO.12 ELECT.COND.	(TP-1)	LF	180.00

TRAFFIC CABLE BARRIER PAY ITEMS

0330 CABLE BARRIER

ITEM NO.	CODE NO.	ITEM DESCRIPTION	NOTES	UNIT	QUANTITY
509(A)	0200	CLASS AA CONCRETE	(TP-73)(TP-74)	CY	24.50
619(B)	6432	REMOVAL OF CABLE BARRIER	(TP-63(TP-68)(TP-69)	LF	900.00
628	7100	INSTALLATION OF CABLE BARRIER SYSTEM	(TP-57)(TP-58)(TP-59)(TP-60)(TP-63)(TP-67)	LF	900.00
628(C)	7400	END ANCHORS	(TP-62)(TP-66)(TP-67)	EA	4.00

TRAFFIC LIGHTING PAY QUANTITY NOTES

(TP-1) PAYMENT FOR THIS ITEM WILL BE BASED ON PLAN QUANTITY. SEE THE 2019 SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

(TL-9) QUANTITIES INCLUDE STRUCTURAL CONCRETE TO BE USED FOR THE FOLLOWING:

GROUND MOUNTED FOOTINGS..... = 3.28 C.Y.
BARRIER MOUNTED FOOTINGS..... = 0.0 C.Y.
BLOCKOUTS FOR FOOTINGS..... = 0.0 C.Y.
==========
TOTAL OF STRUCTURAL CONCRETE..... = 3.28 C.Y.

(TL-10) QUANTITIES INCLUDE REINFORCING STEEL TO BE USED FOR THE FOLLOWING:

GROUND MOUNTED FOOTINGS..... = 568.0 LBS.
BARRIER MOUNTED FOOTINGS..... = 0.0 LBS.
BLOCKOUTS FOR FOOTINGS.....= 0.0 LBS.
==========
TOTAL OF REINFORCING STEEL..... = 568.0 LBS.

(TL-35) SEE SERVICE POLE SCHEDULE; FOR ADDITIONAL INFORMATION CONCERNING THE SERVICE POLE, CONTACT THE FOLLOWING PRIOR TO INSTALLATION:

PERSON'S NAME . . . . . BRYAN POTTS
WITH THE COMPANY/CITY OF . . . CK ENERGY ELECTRIC COOPERATIVE
COMPANY'S/CITY'S TELEPHONE NO. (405)656-2322

(TL-43) ALL REMOVED SERVICE POLES, LIGHT POLES, MAST ARMS, LUMINAIRES, BREAKAWAY BASES AND PERTINENT EQUIPMENT SHALL BECOME THE PROPERTY OF THE O.D.O.T. THE CONTRACTOR SHALL NEATLY STACK THE REMOVED ITEMS IN AN AREA DESIGNATED BY THE ENGINEER WITHIN THE PROJECT LIMITS. THE ITEMS THAT ARE TO BE REMOVED SHALL BE HANDLED WITH CARE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE OCCURRING DURING THESE OPERATIONS.

(TL-44) INCLUDED IN THE COST OF THIS ITEM, THE CONTRACTOR SHALL EITHER COMPLETELY REMOVE THE EXISTING CONCRETE LIGHT POLE FOOTING(S) OR CUT OFF THE TOP PORTION OF THE FOOTING(S) TO A MINIMUM OF ONE FOOT BELOW GRADE. THE RESULTING HOLE(S) SHALL BE BACKFILLED, COMPACTED AND ALL DEBRIS DISPOSED OF IN A MANNER APPROVED BY THE ENGINEER.

1 (151) INCLUDES THE COST OF REMOVING AND RESETTING EXISTING LUMINAIRE ON NEW LIGHT POLES.

1 (152) ELECTRICAL CONDUCTORS SHALL BE XHHW ALUMINUM.

DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN			
CHECKED			SUMMARY OF PAY QUANTITIES & NOTES (TRAFFIC) (SHEET 2 OF 2)
APPROVED			
SQUAD			

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. AT03

8/26/2025

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OKLAHOMA DEPARTMENT OF TRANSPORTATION

FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

	DESCRIPTION (REVISIONS)	DATE
1	REVISED LIGHTING SUMMARY FOR NEW LIGHT POLES	08/25/25

SUMMARY OF SIGNS

SIGN NO.	APPROXIMATE STATION LOCATION	ROADWAY ALIGNMENT	SIGN TYPE	SIGNS		POSTS					FOOTING			REMARKS	SIGN NO.
				SHEET ALUMINUM SIGNS	EXTRUDED ALUMINUM SIGNS	4" @ 13 G. STL WIDE FL. BEAMS "A"	4" @ 13 G. STL WIDE FL. BEAMS "B"	2-1/2" SQUARE TUBE "A"	2-1/2" SQUARE TUBE "B"	POST SPACING	TYPE	STRUC. CONC.	REIN. STEEL		
				850(A)	850(B)	851(A)	851(A)	851(C)	851(C)			804(A)	804(B)		
				SF	SF	LF	LF	LF	LF	FT		CY	LBS		
1	STA. 047+60.00 41' LT.	US-281	R1-1E	7.46				15.50	15.50	2.00					1
2	STA. 047+55.00 34' LT.	US-281	R5-1E	9.00				13.00							2
3	STA. 047+60.00 41' LT.	US-281	R6-1(R)	3.00										SIGN MOUNTED ON POST SHOWN FOR SIGN 1	3
4	STA. 047+60.00 41' LT.	US-281	R6-1(L)	3.00										SIGN MOUNTED ON POST SHOWN FOR SIGN 1	4
5	STA. 047+60.00 39' RT.	US-281	RTE. ASSY. 01	8.19				12.50	13.00	2.33					5
6	STA. 048+08.00 61' LT.	US-281	R1-1E	7.46				15.50	15.50	2.00					6
7	STA. 048+06.00 57' LT.	US-281	R5-1E	9.00				13.00							7
8	STA. 048+08.00 61' LT.	US-281	R6-1(R)	3.00										SIGN MOUNTED ON POST SHOWN FOR SIGN 6	8
9	STA. 048+08.00 61' LT.	US-281	R6-1(L)	3.00										SIGN MOUNTED ON POST SHOWN FOR SIGN 6	9
10	STA. 049+35.00 26' RT.	US-281	RTE. ASSY. 02	17.38				12.00	13.00	2.33					10
11	STA. 049+38.00 55' LT.	US-281	SP. SIGN 3		36.00	17.10	18.40			3.90	KC-0	0.72	130	"I-40 EAST OKLA. CITY"	11
12	STA. 052+60.00 54' LT.	US-281	RTE. ASSY. 03	8.19				12.00	13.00	2.33					12
13	STA. 053+85.00 38' RT.	US-281	SP. SIGN 2		36.00	17.10	18.40			3.90	KC-0	0.72	130	"I-40 WEST AMARILLO"	13
14	STA. 054+53.00 52' RT.	US-281	R1-1E	7.46				15.50	15.50	2.00					14
15	STA. 054+50.00 42' RT.	US-281	R5-1E	9.00				13.00							15
16	STA. 054+53.00 52' RT.	US-281	R6-1(R)	3.00										SIGN MOUNTED ON POST SHOWN FOR SIGN 14	16
17	STA. 054+53.00 52' RT.	US-281	R6-1(L)	3.00										SIGN MOUNTED ON POST SHOWN FOR SIGN 14	17
18	STA. 055+08.00 56' RT.	US-281	R1-1E	7.46				15.50	15.50	2.00					18
19	STA. 055+12.00 48' RT.	US-281	R5-1E	9.00				13							19
20	STA. 055+08.00 56' RT.	US-281	R6-1(R)	3.00										SIGN MOUNTED ON POST SHOWN FOR SIGN 18	20
21	STA. 055+08.00 56' RT.	US-281	R6-1(L)	3.00										SIGN MOUNTED ON POST SHOWN FOR SIGN 18	21
22	STA. 055+70.00 44' LT.	US-281	R3-7(R)	6.25				10.00							22
23	STA. 056+08.00 44 LT.	US-281	RTE. ASSY. 04	16.38				12.00	13.00	2.33					23
24	STA. 057+00.00 44 LT.	US-281	R3-7(R)	6.25				10.00							24
25	STA. 057+70.00 44 LT.	US-281	R8-3(A)	5.00											25
		TOTALS		157.48	72.00	71.00		296.50				1.44	260.00		

SUMMARY OF STRIPING

PLAN SHEET NO.	STATION TO STATION	TRAFFIC STRIPE (PLASTIC) (6" WIDE) 855(A) FT		TRAFFIC STRIPE (PLASTIC) (12" WIDE) 855(A) FT		TRAFFIC STRIPE (PLASTIC) (24" WIDE) 855(A) FT	TRAFFIC STRIPE (PLASTIC) (ARROWS) 855(B) EA
		WHITE	YELLOW	WHITE	YELLOW	WHITE	WHITE
SAS(01)	STA. 45+93.34 to STA. 52+40.00	1,720	1,930	1,820	410	36	3
SAS(01)	STA. 52+40.00 to STA. 58+50.00	1,920	2,010	735	495	42	8
TC	EB I-40 CLOSURE	700					
TC	WB I-40 CLOSURE	700					
TC	EB I-40 LANE CLOSURE	1,200					
TC	WB I-40 LANE CLOSURE	1,200					
TOTALS		7,440	3,940	2,555	905	78	11
		11,380		3,460			

LIGHTING SUMMARY

PLAN SHEET NO.	LOCATION STATION TO STATION	ALIGNMENT	2" PVC SCH. 40 PLASTIC CONDUIT BORED	2" PVC SCH. 40 PLASTIC CONDUIT TRENCHED	PULL BOX (SIZE I)	1/C NO. 4 ELECTRICAL CONDUCTOR
			802(B)	802(B)	803(A)	811
			LF	LF	EA	LF
LGT(01)	STA. 47+50.00 TO STA. 54+50.00	US-281 (SPUR)	120	320	4	880
			120.00	320.00	4.00	880.00

LIGHT POLE SCHEDULE

LOCATION							FOOTING			POLE ASSEMBLY									
SHEET NO.	POLE NO.	ALIGNMENT	STATION	OFFSET (1)	DISTANCE FROM EDGE OF TRAVEL LANE	GROUND MOUNTED	TYPE	STRUCTURAL CONCRETE	REINFORCING STEEL	BREAKAWAY BASE (DES. B)	MOUNTING HT. (1)	ARM LENGTH (ARM NO. 1) (1)	ARM LENGTH (ARM NO. 2)	NO. OF LUMS./ WATTS PER LUMINAIRE	ROADWAY LUMINAIRE	IES DIST. TYPE	30' MTG & 6' HLMA(G.STL.) (1)	REMOVE & RESET LIGHT POLE	1/C NO. 12 ELECTRICAL CONDUCTOR
								804(A)	804(B)	807							806(C)	805(D)	811
					FT.	EA.		CY	LB	EA	FT.	FT.	FT.	EA. X WATT	EA.		EA	EA	LF
LGT(1)	01	US-281 SPUR	49+00	51' LT.	7.0	1	GMF30X108	1.64	284	1	30 (EXIST.)	6 (EXIST.)	-	EXIST.	1 (EXIST.)	EXIST.	1.00	1	90
LGT(1)	02	US-281 SPUR	53+41	51' LT.	7.0	1	GMF30X108	1.64	284	1	30 (EXIST.)	6 (EXIST.)	-	EXIST.	1 (EXIST.)	EXIST.	1.00	1	90
TOTALS						2.00		3.28	568.00	2.00							2.00	2.00	180.00

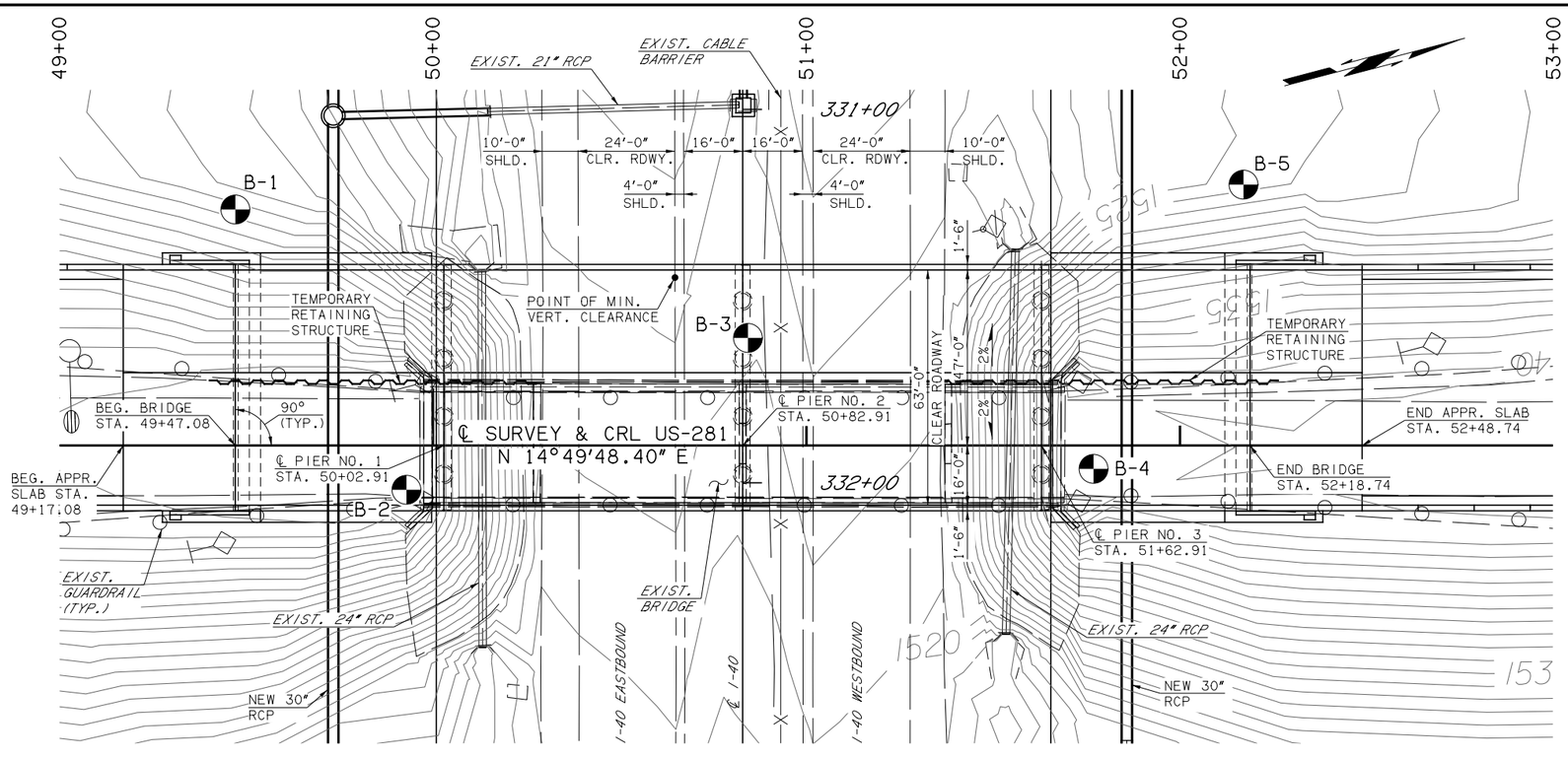
SUMMARY OF IMPACT ATTENUATORS

PLAN SHEET NO.	LOCATION	SIDE	DESIGN	SAND FILLED IMPACT ATTENUATOR 870(A)
				EA
18	STA. 331+41 (I-40)	MD	TCS13-1-00E	19
18	STA. 332+10 (I-40)	MD	TCS13-1-00E	19
TOTALS				38

DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN			
CHECKED			SUMMARY SHEET (TRAFFIC)
APPROVED			
SQUAD			

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. AT04

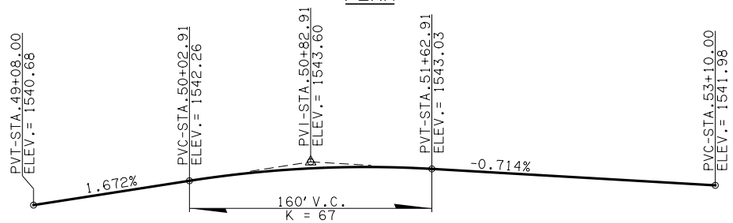
8/20/2024



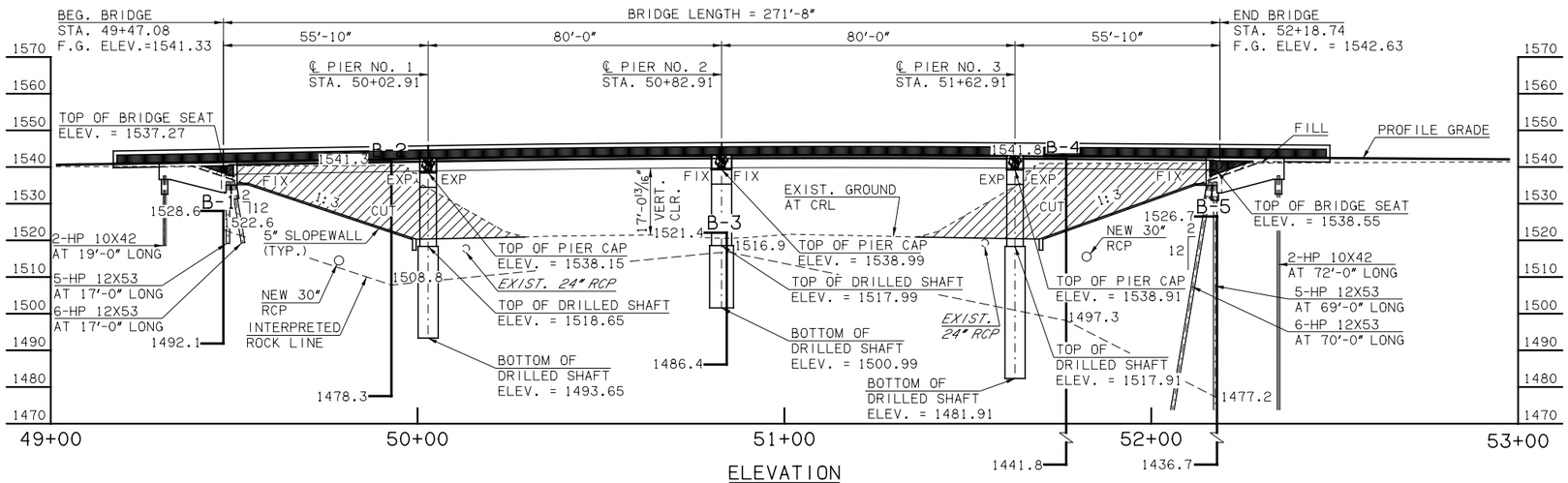
PLAN

B.M. 103
CUT 'X' ON SW WINGWALL OF BRIDGE
STA. 49+96, 19' LT.
ELEV. = 1540.95

B.M. 104
CUT "X" SW COR CONC PAD
STA. 57+03, 93' RT.
ELEV. = 1545.32



US-281 VERTICAL CURVE DATA



ELEVATION

DESIGN DATA

MATERIAL

CLASS AA CONCRETE	f'c = 4 KSI
CLASS A CONCRETE	f'c = 3 KSI
REINFORCING STEEL (GRADE 60)	fy = 60 KSI
STRUCTURAL STEEL M270 (GRADE 50W)	Fy = 50 KSI
STAINLESS STEEL A240 (TYPE 316)	Fy = 30 KSI

LOADING

HL-93 OR OKLAHOMA OVERLOAD TRUCK
20 PSF FUTURE WEARING SURFACE
5 PSF STAY-IN-PLACE FORMS

DESIGN

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 7TH EDITION.
ANSI/AASHTO/AWS D1.5 BRIDGE WELDING CODE
ANSI/AWS D1.6 STRUCTURAL WELDING CODE - STAINLESS STEEL

HL-93 INVENTORY RATING FACTOR: 1.13
HL-93 OPERATING RATING FACTOR: 1.47

FOUNDATION DATA

ABUTMENTS (HP 12 X 53 PILING)

FACTORED PILE REACTION = 75.8 TONS/PILE

ALL ABUTMENT PILING SHALL BE DRIVEN THROUGH THE COMPACTED FILL. PILING SHALL BE DRIVEN TO POINT BEARING ON SOLID FOUNDATION MATERIAL AT THE APPROXIMATE ELEVATION SHOWN ON THE PLANS. IF THE REQUIRED AXIAL LOAD RESISTANCE IS NOT OBTAINED AT THIS ELEVATION, DRIVING SHALL CONTINUE UNTIL THE REQUIRED AXIAL LOAD RESISTANCE IS OBTAINED. THE LENGTH OF STEEL PILING SHOWN ON THE PLANS IS FOR ESTIMATING PURPOSES ONLY.

PIERS (60" DIAMETER DRILLED SHAFTS) — PIER NO. 1 & 3

FACTORED REACTION	= 441.7 TONS/SHAFTS
NORMAL UNIT BEARING RESISTANCE	= 37.5 TSF
BEARING RESISTANCE FACTOR	= 0.7
FACTORED BEARING RESISTANCE	= 515.4 TONS/SHAFT
NORMAL UNIT FRICTION RESISTANCE	= 9.8 TSF
FRICTION RESISTANCE FACTOR	= 0.45
FACTORED FRICTION RESISTANCE	= 692.7 TONS/SHAFT
DEPTH OF ROCK NEGLECTED FOR FRICTION	= 5 FT
MINIMUM DEPTH INTO ROCK	= 15'-0"
TOTAL FACTORED RESISTANCE	= 1208.1 TONS/SHAFT

PIERS (72" DIAMETER DRILLED SHAFTS) — PIER NO. 2

FACTORED REACTION	= 476.0 TONS/SHAFTS
NORMAL UNIT BEARING RESISTANCE	= 37.5 TSF
BEARING RESISTANCE FACTOR	= 0.7
FACTORED BEARING RESISTANCE	= 742.2 TONS/SHAFT
NORMAL UNIT FRICTION RESISTANCE	= 9.8 TSF
FRICTION RESISTANCE FACTOR	= 0.45
FACTORED FRICTION RESISTANCE	= 831.3 TONS/SHAFT
DEPTH OF ROCK NEGLECTED FOR FRICTION	= 5 FT
MINIMUM DEPTH INTO ROCK	= 15'-0"
TOTAL FACTORED RESISTANCE	= 1573.5 TONS/SHAFT

INDEX OF SHEETS

STANDARDS

FSHP-42-2-00E
EJ-SQ-03E
EJ-DTL-01E
HP1-2-00E
LECS-4-1
PUD-3-2

UTILITIES

CANADIAN COUNTY RWD #1	NO CONTACT (405) 262-2696
GEARY WATER AUTHORITY	RICK (405) 884-5466
ENOGEX	RICHARD HARRIS (405) 530-7490 GRAYCEN MASHBURN (405207-7737
SANDRIDGE ENERGY	JARED FREUND (405) 492-0272
PIONEER TELEPHONE COMPANY	STEVE LIEBL (405) 375-0714
DOBSON TELECOMMUNICATIONS	TERRY WRIGHT (405) 544-8691
CK ENERGY	BRYANT POTTS (405) 656-2322

OKLAHOMA DEPARTMENT OF TRANSPORTATION

FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

DESCRIPTION	REVISIONS	DATE

DESIGN		
DRAWN		
CHECKED		
APPROVED		
SQUAD		

OKLAHOMA DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION

BRIDGE 'A' CANADIAN COUNTY
US-281 SPUR OVER I-40

GENERAL PLAN AND ELEVATION

CONST. 55.83'-80'-80'-55.83' PLATE GIRDER SPANS X 63' CLEAR ROADWAY WITH 42" F-SHAPED PARAPET ℄ STA. 50+82.91

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. B001

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OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE

SUMMARY OF QUANTITIES

	ITEM	UNIT	PHASE I						PHASE II						TOTAL
			ABUTMENT	PIERS	SUPER-STRUCTURE	APPROACH SLAB	SLOPE WALLS	SUBTOTAL	ABUTMENT	PIERS	SUPER-STRUCTURE	APPROACH SLAB	SLOPE WALLS	SUBTOTAL	
	SUBSTRUCTURE EXCAVATION COMMON	CY	155.00					155.00	165.00					165.00	320.00
	CLSM BACKFILL	CY	171.70					171.70	205.90					205.90	377.60
	TEMPORARY EARTH RETAINAGE	LSUM													1.00
	APPROACH SLAB	SY				193.40		193.40				246.80		246.80	440.20
	SAW-CUT GROOVING	SY			830.10	183.40		1013.50			1071.60	236.80		1308.40	2321.90
	42" F-SHAPED PARAPET	LF			271.70	60.00		331.70			271.70	60.00		331.70	663.40
	STRUCTURAL STEEL	LB			164290.00			164290.00			171410.00			171410.00	335700.00
	STAINLESS STEEL FIXED BEARING ASSEMBLY	EA			12.00			12.00			12.00			12.00	24.00
	STAINLESS STEEL EXP. BEARING ASSEMBLY	EA			12.00			12.00			12.00			12.00	24.00
	CLASS AA CONCRETE	CY			206.20			206.20			261.20			261.20	467.40
	CLASS A CONCRETE	CY	56.60	133.30				189.90	65.50	147.50				213.00	402.90
	SLOPE WALL (5")	SY					464.80	464.80					467.20	467.20	932.00
	MECHANICAL SPLICES	EA			1126.00			1126.00	56.00	60.00				116.00	1242.00
	REINFORCING STEEL	LB		1690.00				1690.00		1690.00				1690.00	3380.00
	EPOXY COATED REINFORCING STEEL	LB	7160.00	24160.00	63240.00			94560.00	7930.00	25570.00	79760.00			113260.00	207820.00
	PILES, FURNISHED (HP 10 x 42)	LF	91.00					91.00	91.00					91.00	182.00
	PILES, FURNISHED (HP 12 x 53)	LF	433.00					433.00	519.00					519.00	952.00
	PILES, DRIVEN (HP 10 x 42)	LF	91.00					91.00	91.00					91.00	182.00
	PILES, DRIVEN (HP 12 x 53)	LF	433.00					433.00	519.00					519.00	952.00
	PILE SPLICE, H-PILE (NON-BIDDABLE)	EA													1.00
	WATER REPELLENT (VISUALLY INSPECTED)	SY	47.00	121.00	236.00	30.00		519.00	58.00	117.00	236.00	30.00		558.00	1077.00
	DRILLED SHAFTS 60" DIAMETER	LF		122.00				122.00		122.00				122.00	244.00
	DRILLED SHAFTS 72" DIAMETER	LF		34.00				34.00		34.00				34.00	68.00
	CROSSHOLE SONIC LOGGING	EA													4.00
(1)	ELASTOMERIC COATING	SF							526.30	1127.00				1653.30	1654.00
	SEALED EXPANSION JOINTS	LF			59.00			59.00			75.00			75.00	134.00
	SEALER CRACK PREPARATION	LF			27.50			27.50			307.20			307.20	334.70
	SEALER RESIN	GAL			0.50			0.50			3.50			3.50	4.00
	6" PERFORATED PIPE UNDERDRAIN ROUND	LF						60.00	74.00					74.00	134.00
	6" NON-PERF. PIPE UNDERDRAIN RND.	LF							79.00				90.00	169.00	169.00
	REMOVAL OF EXISTING BRIDGE STRUCTURE	LSUM													1.00

(1) ELASTOMERIC COATING IS TO BE APPLIED TO PIERS AND ABUTMENTS AFTER THE COMPLETION OF PHASE II CONSTRUCTION.

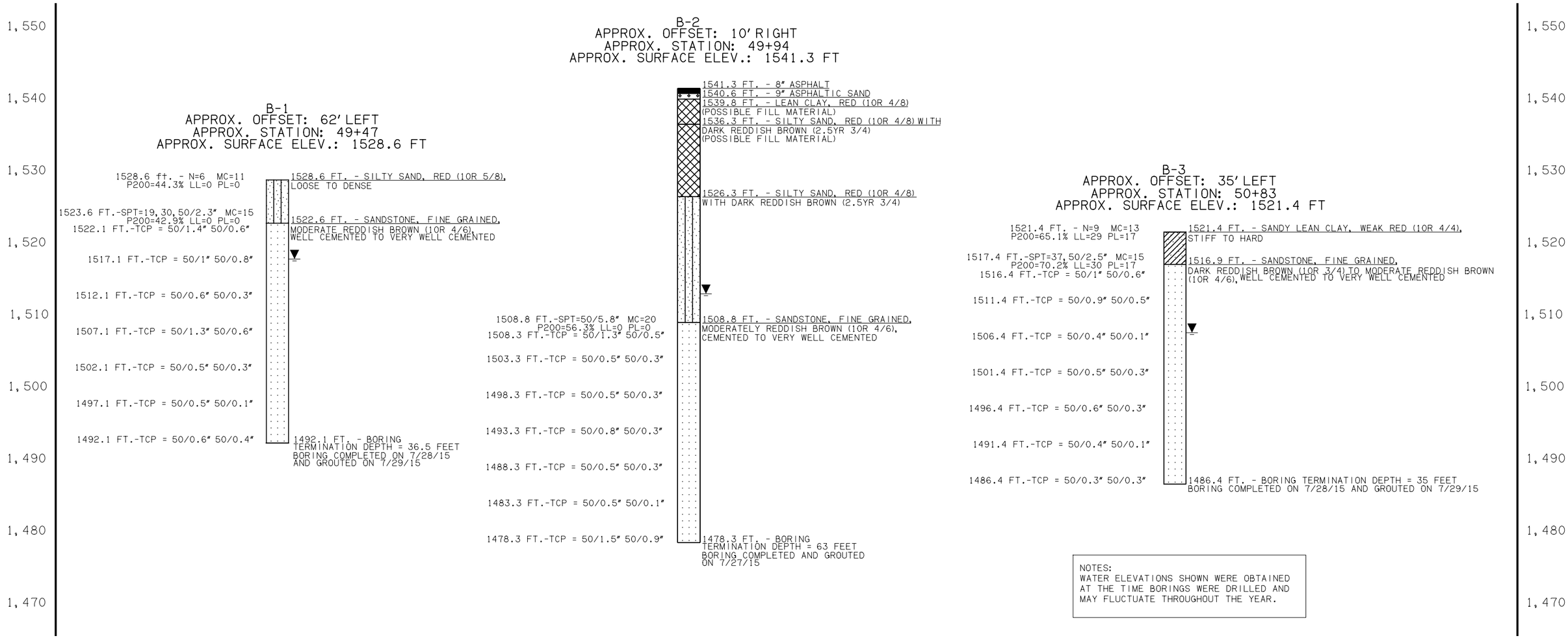
DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN		BRIDGE 'A' CANADIAN COUNTY US-281 SPUR OVER I-40
CHECKED		SUMMARY OF BRIDGE QUANTITIES
APPROVED		
SQUAD		

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. B002

8/20/2024

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE



NOTES:
WATER ELEVATIONS SHOWN WERE OBTAINED AT THE TIME BORINGS WERE DRILLED AND MAY FLUCTUATE THROUGHOUT THE YEAR.

SITE GEOLOGY

DIVISION FOUR OF THE "ENGINEERING CLASSIFICATION OF GEOLOGICAL MATERIALS", PUBLISHED BY THE OKLAHOMA DEPARTMENT OF TRANSPORTATION (ODOT), INDICATES THE PROJECT SITE IS UNDERLAIN BY THE RUSH SPRINGS UNIT (PRS).

THE RUSH SPRINGS UNIT CONSISTS OF A FRIABLE REDDISH-BROWN, CROSS-BEDDED TO REGULAR-BEDDED, SOFT, MASSIVE SANDSTONE. THESE SANDSTONES WEATHER RAPIDLY, PRODUCING A SANDY SOIL THAT IS EASILY BLOWN ABOUT BY THE WIND AND IN SOME LOCALITIES IS PILED INTO SAND DUNES. IT IS QUITE SIMILAR IN ROCK CHARACTER TO THE MARLOW UNIT BUT IS GENERALLY COARSER GRAINED, AND THE SOILS ASSOCIATED WITH THE UNIT APPEAR TO BE MORE RED IN COLOR AND MORE ERODIBLE. THE SAND GRAINS ARE SUBROUNDED TO SUBANGULAR AND FINE TO VERY FINE SAND SIZE. THE TOTAL THICKNESS OF THE UNIT IS ABOUT 300 FEET BUT ONLY THE LOWER 200 TO 250 FEET IS PRESENT IN DIVISION FOUR.

THE OUTCROP OF THE RUSH SPRINGS UNIT OCCURS ONLY IN SOUTHWESTERN CANADIAN COUNTY OF DIVISION FOUR AND GENERALLY SOUTHWEST OF THE CANADIAN RIVER WITH ONLY EROSIONAL OUTLIERS PRESENT NORTH OF THE RIVER.

THE TOPOGRAPHY OF THE UNIT IS VARIABLE; IT CHANGES FROM A GENTLY ROLLING LANDSCAPE TO DEEP CANYONS WITHIN SHORT DISTANCES.

THE BASAL PORTION GENERALLY FORMS PRONOUNCED HILLS OR BLUFFS OVERLOOKING THE MARLOW UNIT AND NUMEROUS SPRINGS OCCUR NEAR THE CONTACT BETWEEN THE UNITS. THE RUSH SPRINGS UNIT IS GENERALLY GRASS COVERED BUT SUPPORTS NUMEROUS CEDAR TREES IN THE MORE RUGGED LANDSCAPES.

ACCORDING TO THE GEOLOGIC MAP OF THE "HYDROLOGIC ATLAS 5 OF OKLAHOMA," RECONNAISSANCE OF THE WATER RESOURCES OF THE CLINTON QUADRANGLE, WEST-CENTRAL OKLAHOMA," BY JERRY E. CARR AND DEROY L. BERGMAN U.S. GEOLOGICAL SURVEY, 1976, INDICATES THAT THE PROJECT SITE IS UNDERLAIN BY THE RUSH SPRINGS FORMATION (PR) OF THE WHITEHORSE GROUP.

THE RUSH SPRINGS FORMATION CONSISTS OF ORANGE-BROWN, CROSS-BEDDED, FINE-GRAINED SANDSTONE WITH SOME DOLOMITE AND GYPSUM BEDS. THICKNESS, ABOUT 300 FEET, THINNING NORTHWARD TO ABOUT 186 FEET.

SOLUBLE SULFATES

SOILS CONTAINING HIGH LEVELS OF SOLUBLE SULFATES ARE KNOWN TO BE IN THE SURROUNDING AREA. ANY MATERIAL IMPORTED TO THE SITE DURING CONSTRUCTION SHOULD BE TESTED FOR SOLUBLE SULFATES.

NOTES:

N	DENOTES STANDARD PENETRATION NUMBER
SPT	DENOTES STANDARD PENETRATION TESTS
TCP	DENOTES TEXAS CONE PENETRATION TESTS
MC	DENOTES MOISTURE CONTENT TESTS
P200	DENOTES PERCENT PASSING NO 200 SIEVE
LL	DENOTES LIQUID LIMIT TESTS
PL	DENOTES PLASTIC LIMIT TESTS
▼	DENOTES WATER ELEVATION AFTER 0 HOURS OF DRILLING

DESIGN		
DRAWN		
CHECKED		
APPROVED		
SQUAD		

OKLAHOMA DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION

BRIDGE 'A' CANADIAN COUNTY
US-281 SPUR OVER I-40

SUBSURFACE PROFILE
(SHEET 1 OF 2)

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. B003

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8/20/2024

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE

B-4
APPROX. OFFSET: 9' RIGHT
APPROX. STATION: 51+74
APPROX. SURFACE ELEV.: 1541.8 FT

1,540
1541.8 FT. - 8" ASPHALT
1541.1 FT. - 10" ASPHALTIC SAND
1540.3 FT. - LEAN CLAY, WEAK RED (10R 4/4), VERY STIFF (POSSIBLE FILL MATERIAL)
1536.8 FT. - N=23 MC=17 P200=85.5% LL=28 PL=19
1531.8 FT. - N=23 MC=18 P200=24.6% LL=0 PL=0
1531.8 FT. - SILTY SAND, WEAK RED (10R 4/4) TO DARK REDDISH BROWN (2.5YR 3/4), LOOSE TO MEDIUM DENSE (POSSIBLE FILL MATERIAL)
1,530
1526.8 FT. - N=5 MC=21 P200=23.6% LL=0 PL=0
1521.8 FT. - N=25 MC=16 P200=64.0% LL=27 PL=19
1521.8 FT. - SANDY LEAN CLAY, DARK REDDISH BROWN (2.5YR 3/4), VERY STIFF (POSSIBLE FILL MATERIAL)
1,520
1516.8 FT. - N=18 MC=16 P200=50.7% LL=26 PL=19
1516.8 FT. - SANDY SILTY CLAY, DARK REDDISH BROWN (2.5YR 3/4), VERY STIFF
1511.8 FT. - N=10 MC=15 P200=44.4% LL=0 PL=0
1511.8 FT. - SILTY SAND, DARK REDDISH BROWN (2.5YR 3/4), LOOSE
1,510
1506.8 FT. - N=48 MC=20 P200=79.2% LL=0 PL=0
1506.8 FT. - SILT WITH SAND, RED (10R 4/8), DENSE
1502.8 FT. - N=45 MC=18 P200=% LL= PL=
1,500
1497.8 FT. - SPT=35,50/4.5" MC=22 P200=71.2% LL=0 PL=0
1496.8 FT. - TCP = 50/1" 50/0.4"
1497.3 FT. - SANDSTONE, FINE GRAINED, INTERBEDDED WITH SHALE, MODERATE REDDISH BROWN (10R 4/6), POORLY CEMENTED TO VERY WELL CEMENTED
1491.8 FT.-TCP = 50/1" 50/0.4"
1,490
1486.8 FT.-TCP = 50/0.8" 50/0.6"
1481.8 FT.-TCP = 50/2.1" 50/1.1"
1,480
1476.8 FT.-TCP = 50/2" 50/0.8"
1471.8 FT.-TCP = 50/0.3" 50/0.3"
1,470
1466.8 FT.-TCP = 50/0.5" 50/0.4"
1461.8 FT.-TCP = 50/0.3" 50/0.3"
1,460
1456.8 FT.-TCP = 50/0.5" 50/0.3"
1451.8 FT.-TCP = 50/0.5" 50/0.1"
1,450
1446.8 FT.-TCP = 50/0.3" 50/0.3"
1441.8 FT.-TCP = 50/0.3" 50/0.1"
1,440
1441.8 FT. - BORING TERMINATION DEPTH = 100 FEET
BORING COMPLETED AND GROUTED ON 7/27/15

B-5
APPROX. OFFSET: 68' LEFT
APPROX. STATION: 52+18
APPROX. SURFACE ELEV.: 1526.7 FT

1526.7 FT. - N=13 MC=15 P200=50.9% LL=29 PL=18
1526.7 FT. - SANDY LEAN CLAY, DUSKY RED (10R 3/3) TO WEAK RED (10R 4/4), SOFT TO STIFF
1521.7 FT. - N=3 MC=19 P200=65.4% LL=27 PL=19
1516.7 FT. - N=7 MC=14 P200=58.5% LL=25 PL=17
1511.7 FT. - N=3 MC=22 P200=61.8% LL=26 PL=15
1506.7 FT. - N=5 MC=17 P200=39.7% LL=0 PL=0
1506.7 FT. - SILTY SAND, WEAK RED (10R 4/4) TO RED (10R 4/6), LOOSE
1501.7 FT. - N=7 MC=17 P200=19.8% LL=0 PL=0
1496.7 FT. - N=4 MC=15 P200=27.6% LL=0 PL=0
1494.7 FT. - SANDY SILT, RED (10R 4/6), VERY LOOSE
1491.7 FT. - N=3 MC=23 P200=52.9% LL=0 PL=0
1486.7 FT. - N=0 MC=25 P200=54.1% LL=0 PL=0
1486.7 FT. - *N=0, WEIGHT OF HAMMER AT 40 FEET*
1481.7 FT. - N=5 MC=27 P200=72.6% LL=0 PL=0
1481.7 FT. - SILT WITH SAND, RED (10R 4/8), LOOSE
1477.2 FT. - SPT=50/5" MC=16 P200=65.5% LL=0 PL=0
1476.7 FT.-TCP = 50/1" 50/0.5"
1477.2 FT. - SANDSTONE, FINE GRAINED, MODERATE REDDISH BROWN (10R 4/6), VERY POORLY CEMENTED TO VERY WELL CEMENTED
1471.7 FT.-TCP = 16/6" 17/6"
1471.7 FT. - *FAILED TEXAS CONE AT 55 FEET*
1466.7 FT.-TCP = 50/0.6" 50/0.3"
1461.7 FT.-TCP = 50/0.3" 50/0.1"
1456.7 FT.-TCP = 50/0.1" 50/0.1"
1451.7 FT.-TCP = 50/0.1" 50/0.1"
1446.7 FT.-TCP = 50/0.8" 50/0.5"
1441.7 FT.-TCP = 50/0.4" 50/0.1"
1436.7 FT.-TCP = 50/0.4" 50/0.1"
1436.7 FT. - BORING TERMINATION DEPTH = 90 FEET
BORING COMPLETED ON 7/28/15 AND GROUTED ON 7/29/15

1,540 1,530 1,520 1,510 1,500 1,490 1,480 1,470 1,460 1,450 1,440 1,430

NOTES:

N	DENOTES STANDARD PENETRATION NUMBER
SPT	DENOTES STANDARD PENETRATION TESTS
TCP	DENOTES TEXAS CONE PENETRATION TESTS
MC	DENOTES MOISTURE CONTENT TESTS
P200	DENOTES PERCENT PASSING NO 200 SIEVE
LL	DENOTES LIQUID LIMIT TESTS
PL	DENOTES PLASTIC LIMIT TESTS
▼	DENOTES WATER ELEVATION AFTER 0 HOURS OF DRILLING

NOTES:
N=0 CORRESPONDS TO A 12 INCH PENETRATION DUE TO THE WEIGHT OF THE HAMMER ONLY.

WATER ELEVATIONS SHOWN WERE OBTAINED AT THE TIME BORINGS WERE DRILLED AND MAY FLUCTUATE THROUGHOUT THE YEAR.

DESIGN		
DRAWN		
CHECKED		
APPROVED		
SQUAD		

OKLAHOMA DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
BRIDGE 'A' CANADIAN COUNTY
US-281 SPUR OVER I-40
SUBSURFACE PROFILE
(SHEET 2 OF 2)

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. B004

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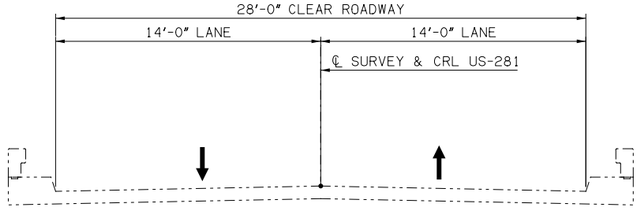
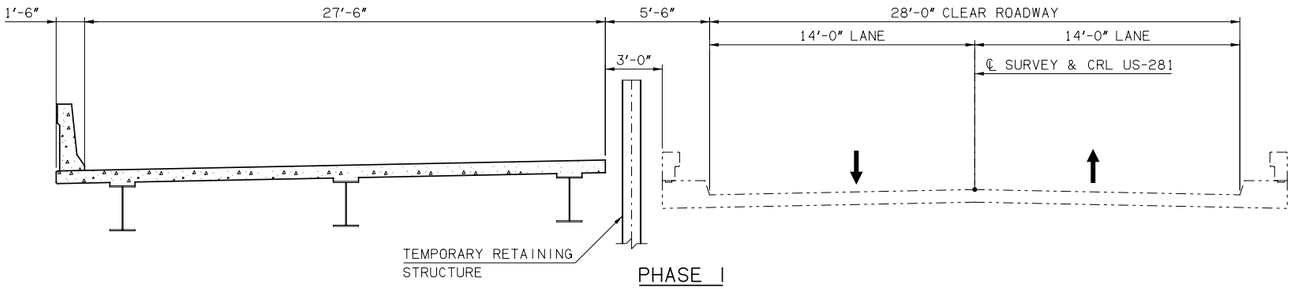
OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

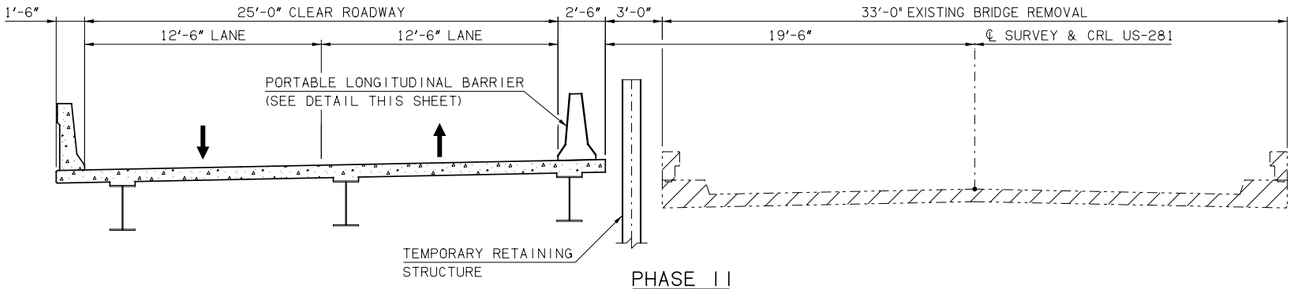
REVISIONS		
	DESCRIPTION	DATE
1	REVISED BARRIER DETAIL	08/15/25
2	REVISE CALL OUT	09/03/25



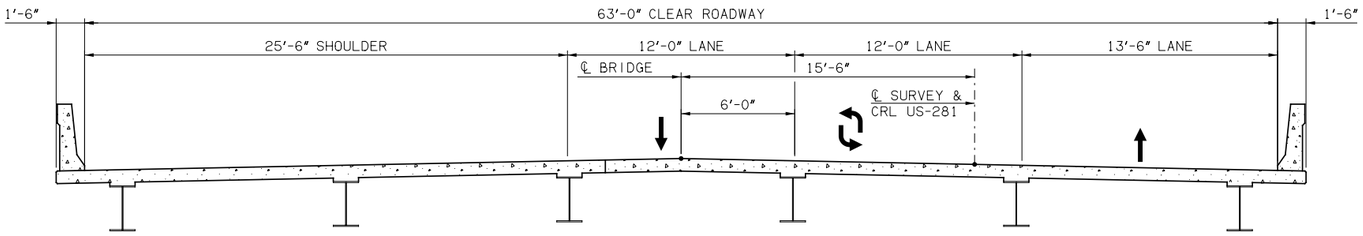
EXISTING BRIDGE



PHASE I



PHASE II



FINISHED BRIDGE

BRIDGE CONSTRUCTION SEQUENCE NOTES

MAINTAIN AT LEAST ONE 12' WIDE LANE TRAFFIC AT ALL TIMES IN EACH DIRECTION.

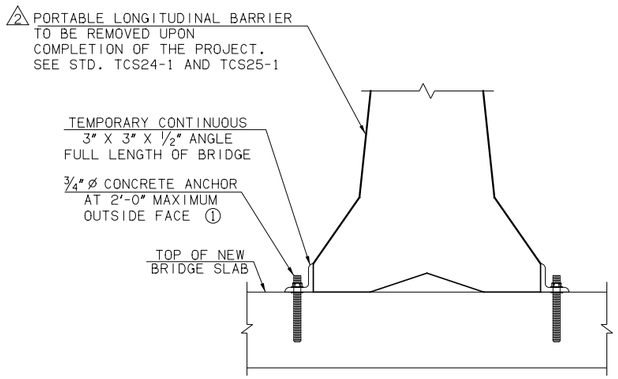
PHASE I

1. REMOVE EXISTING ABUTMENT WINGS AS NEEDED AND INSTALL TEMPORARY RETAINING STRUCTURE AS SHOWN IN PLANS.
2. CONSTRUCT NEW PORTION OF BRIDGE ABUTMENTS, PIERS, DECK, PARAPET, AND APPROACH SLABS AS SHOWN ON PLANS WITHOUT AFFECTING EXISTING TRAFFIC OPERATIONS.
3. INSTALL PORTABLE LONGITUDINAL BARRIER AND TEMPORARY TRAFFIC CONTROL AS INDICATED.

PHASE II

1. RELOCATE ALL TRAFFIC FROM EXISTING STRUCTURE TO NEW STRUCTURE CONSTRUCTED DURING PHASE I.
2. REMOVE ALL EXISTING BRIDGE COMPONENTS.
3. CONSTRUCT REMAINING PORTION OF BRIDGE ABUTMENTS, PIERS, DECK, PARAPET, AND APPROACH SLABS AS SHOWN ON THE PLANS WITHOUT AFFECTING EXISTING TRAFFIC OPERATIONS.
4. REMOVE TEMPORARY RETAINING STRUCTURE AS REQUIRED TO CONSTRUCT BRIDGE.
5. REMOVE PORTABLE LONGITUDINAL BARRIER AND GROUT THE ANCHOR HOLES TO THE SATISFACTION OF THE ENGINEER.
6. RELOCATE ALL TRAFFIC TO FINAL TRAFFIC CONFIGURATION.

FOR ADDITIONAL DETAILS SEE TRAFFIC CONTROL PLAN.



1 PORTABLE LONGITUDINAL BARRIER DETAIL NEW BRIDGE SLAB

(1) THE CONTRACTOR SHALL SUBMIT THE TYPE OF CONCRETE ANCHOR TO THE BRIDGE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION OF ANCHORS. ANCHORS SHALL HAVE A MINIMUM ULTIMATE PULLOUT CAPACITY OF 20 KSI AND A MINIMUM YIELD STRENGTH OF 55 KSI. WHEN THE TEMPORARY ANGLE IS REMOVED FROM THE NEW CONCRETE DECK, THE REMAINING HOLES SHALL BE FILLED IN A MANNER APPROVED BY THE ENGINEER. ALL COSTS OF ANGLES, ¾" DIA. CONCRETE ANCHORS WITH WASHERS, SHALL BE PAID FOR IN THE ROADWAY UNIT PRICE OF "PORTABLE LONGITUDINAL BARRIER" PER ROADWAY PLANS.

DESIGN		
DRAWN		
CHECKED		
APPROVED		
SQUAD		

OKLAHOMA DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION

BRIDGE 'A' CANADIAN COUNTY
US-281 SPUR OVER I-40

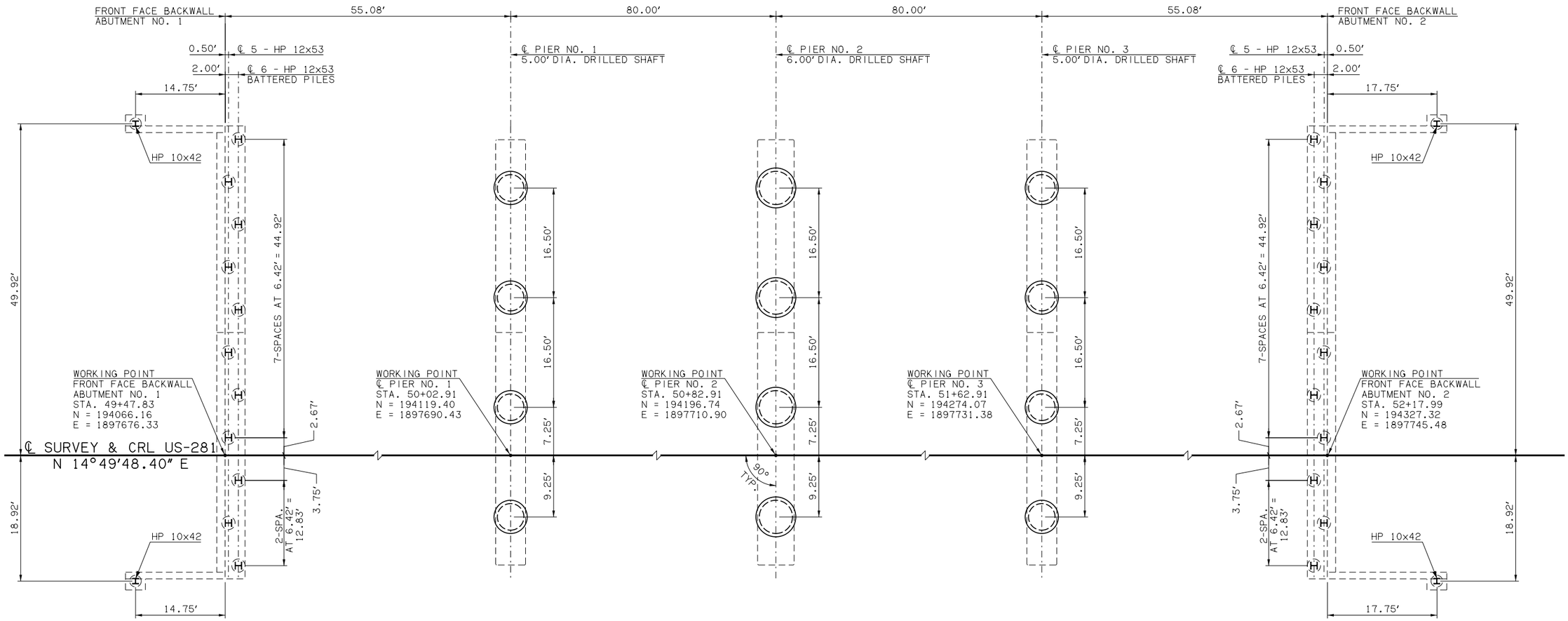
BRIDGE CONSTRUCTION SEQUENCE

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. B005

8/20/2024

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE



SUBSTRUCTURE STAKING DIAGRAM

			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DESIGN			BRIDGE 'A' CANADIAN COUNTY US-281 SPUR OVER I-40
DRAWN			SUBSTRUCTURE STAKING DIAGRAM
CHECKED			
APPROVED			
SQUAD			

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. B006

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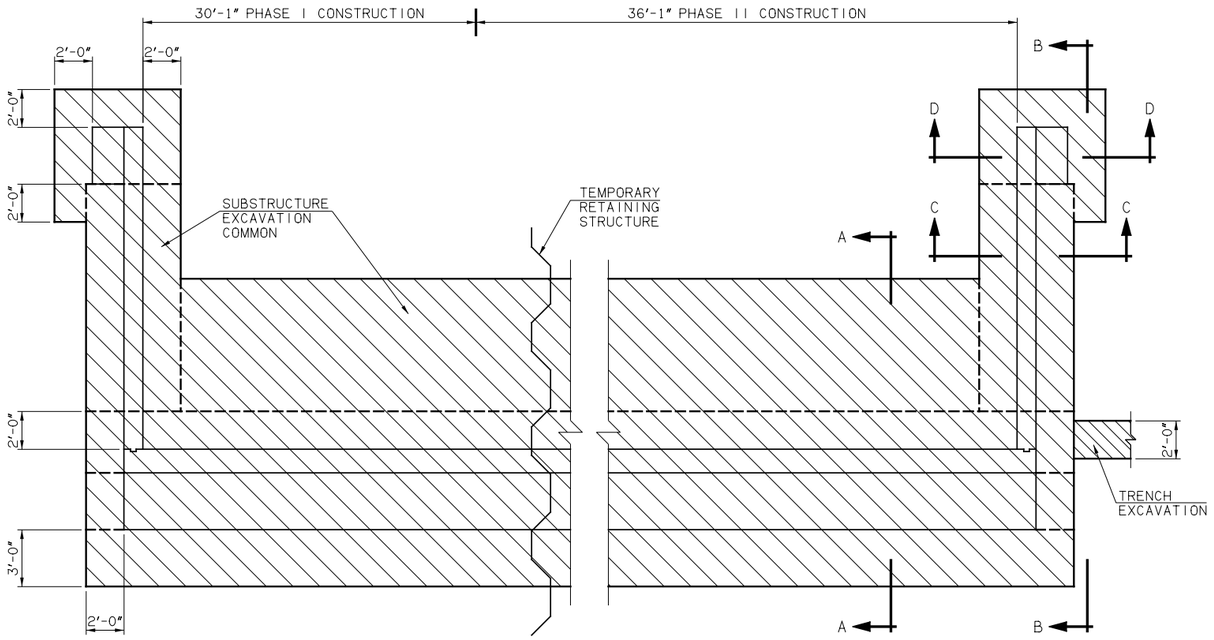
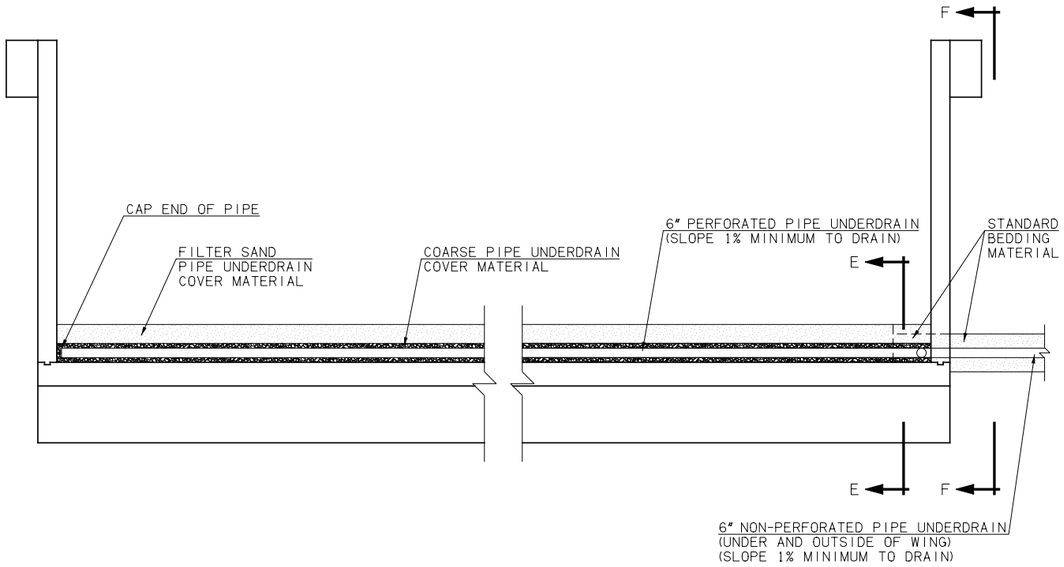
8/20/2024

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

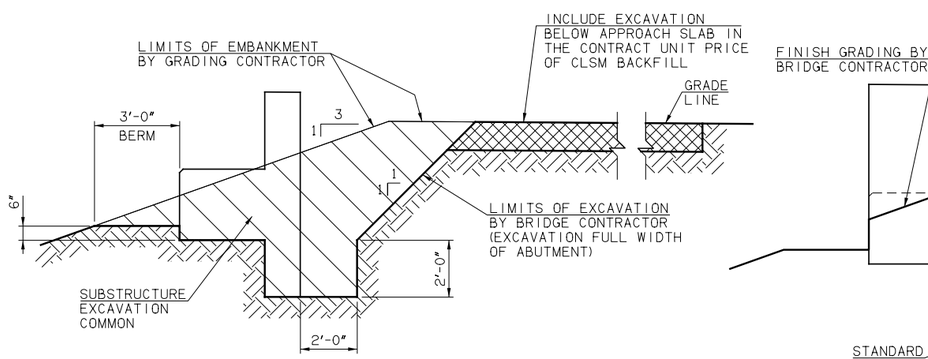
REVISIONS	
DESCRIPTION	DATE



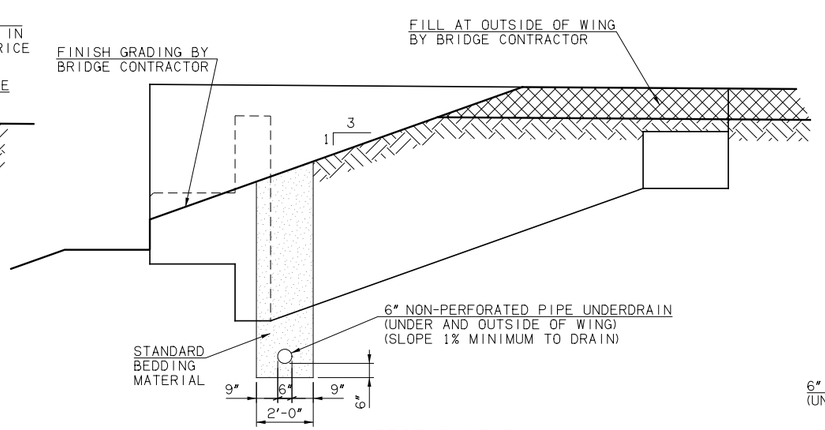
EXCAVATION PLAN



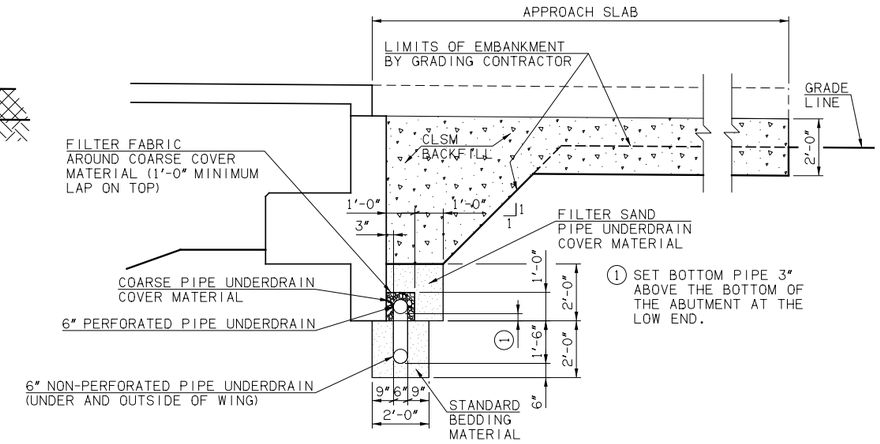
PIPE UNDERDRAIN PLAN



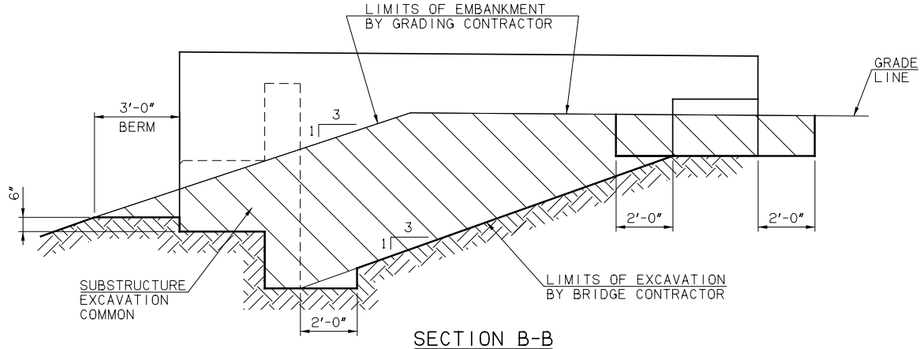
SECTION A-A



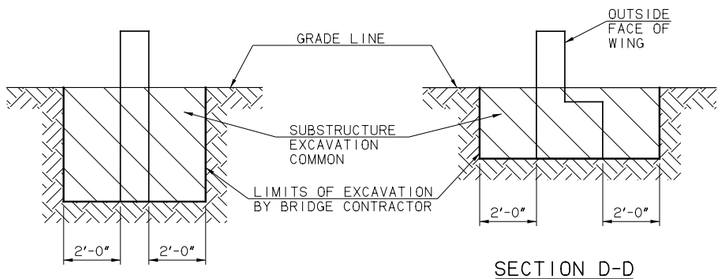
SECTION F-F



SECTION E-E



SECTION B-B



SECTION C-C

SECTION D-D

DO NOT PLACE CLSM BACKFILL UNTIL SUPERSTRUCTURE IS IN PLACE AND THE ABUTMENT WING CONCRETE HAS ATTAINED A STRENGTH OF 3,000 PSI.

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN		
CHECKED		BRIDGE 'A' CANADIAN COUNTY
APPROVED		US-281 SPUR OVER I-40
SQUAD		SUBSTRUCTURE EXCAVATION AND PIPE UNDERDRAIN

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. B007

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8/20/2024

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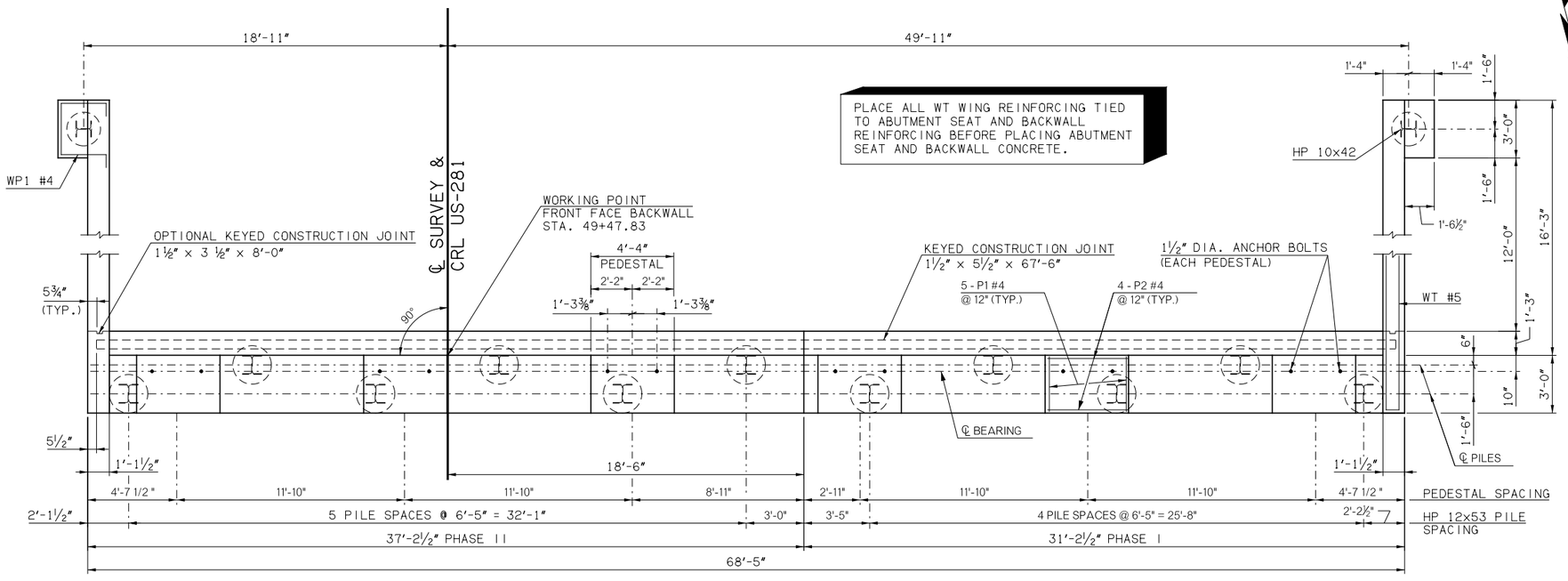
OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

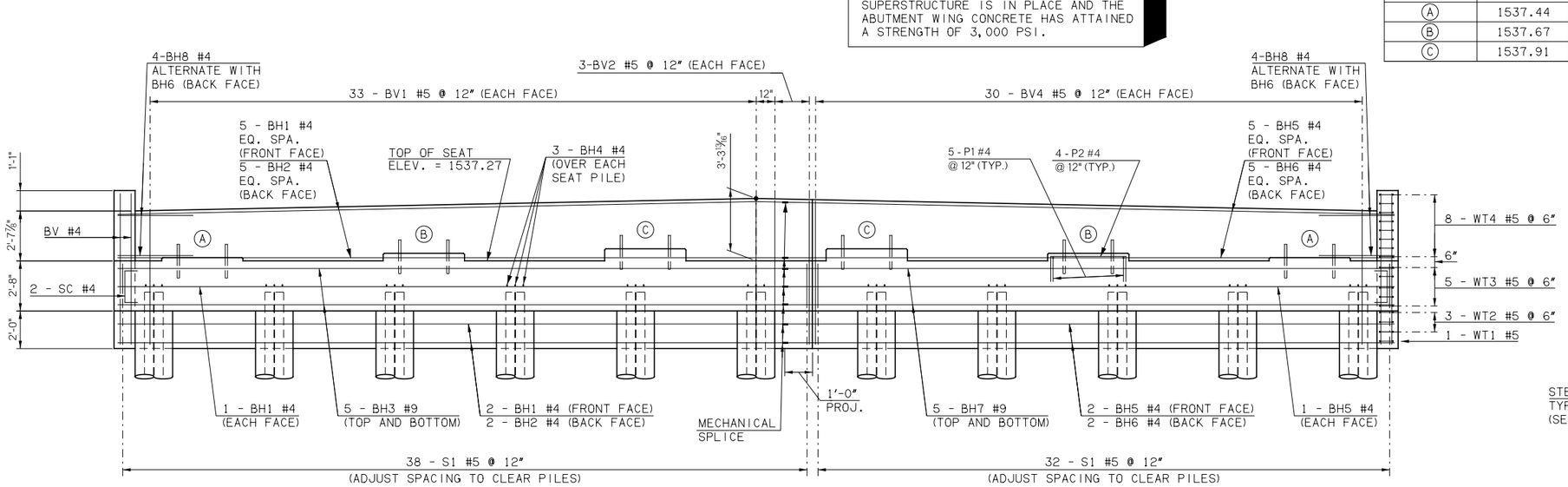
REVISIONS	
DESCRIPTION	DATE



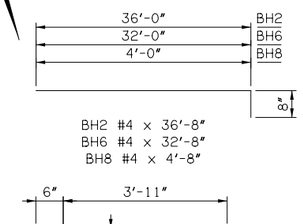
PLAN

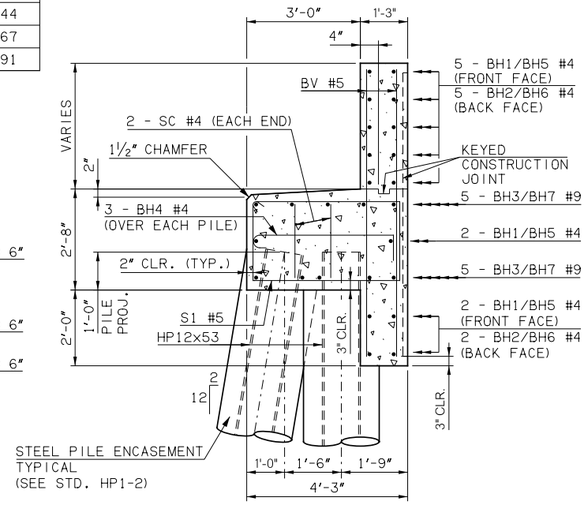
PEDESTAL ELEVATIONS	
PEDESTAL	ELEVATION
Ⓐ	1537.44
Ⓑ	1537.67
Ⓒ	1537.91

DO NOT PLACE CLSM BACKFILL UNTIL SUPERSTRUCTURE IS IN PLACE AND THE ABUTMENT WING CONCRETE HAS ATTAINED A STRENGTH OF 3,000 PSI.



ELEVATION





TYPICAL SECTION THRU SEAT

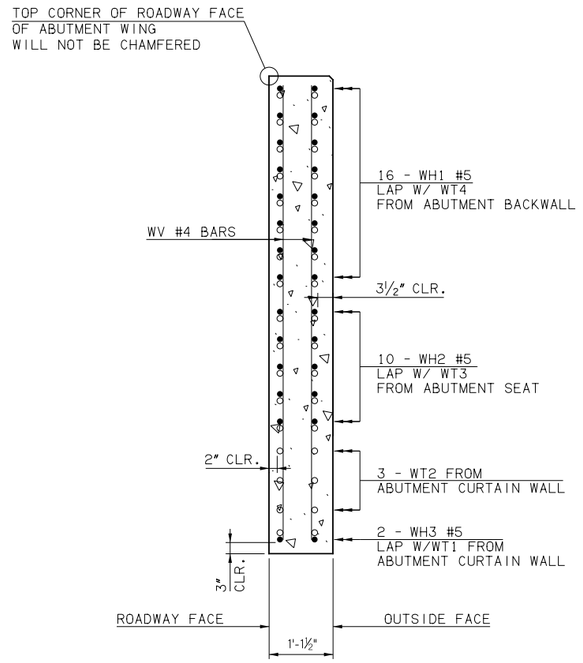
DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN			BRIDGE 'A' CANADIAN COUNTY US-281 SPUR OVER I-40
CHECKED			DETAILS OF ABUTMENT NO. 1 (SHEET 1 OF 2)
APPROVED			
SQUAD			

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. B008

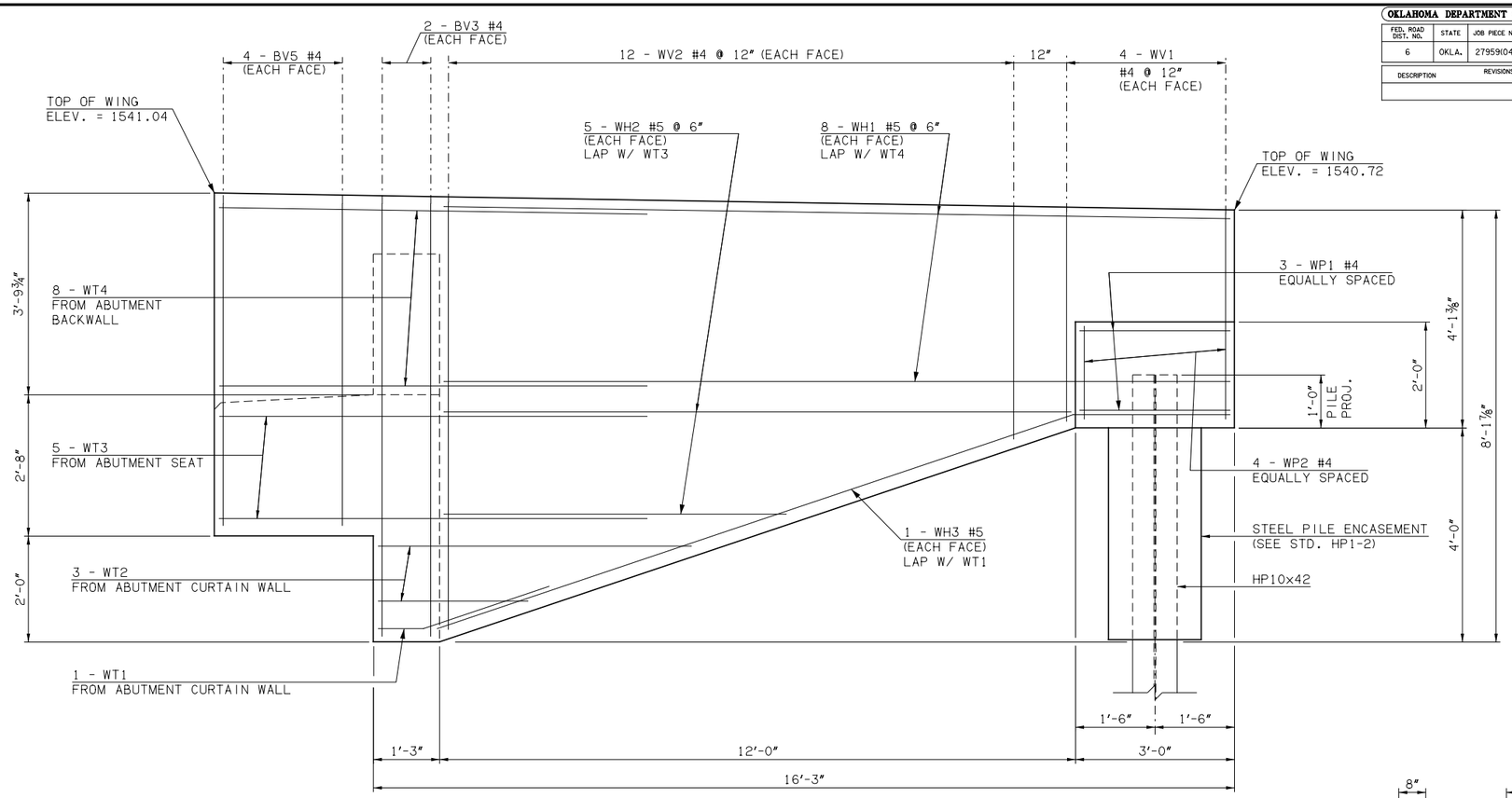
OKLAHOMA DEPARTMENT OF TRANSPORTATION

FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

DESCRIPTION	REVISIONS	DATE



SECTION THRU WING AT
BACK FACE OF ABUTMENT SEAT



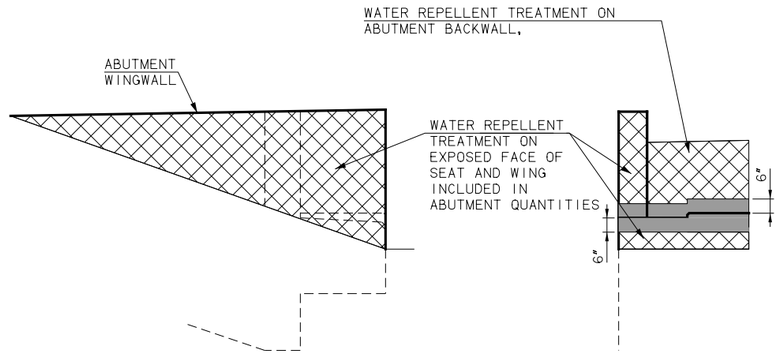
ELEVATION

ABUTMENT NO. 1 BAR LIST - PHASE I					
EPOXY COATED REINFORCING					
MARK	SIZE	QTY.	FORM	LENGTH	REMARKS
BH4	#4	15	BNT.	5'-1"	
BH5	#4	9	STR.	32'-0"	
BH6	#4	7	BNT.	32'-8"	
BH7	#9	10	STR.	32'-0"	
BH8	#4	4	BNT.	4'-8"	
BV3	#4	4	STR.	7'-11"	
(1) BV4	#5	60	STR.	7'-2" AVG.	7'-0" TO 7'-4"
BV5	#4	8	STR.	6'-0"	
P1	#4	15	BNT.	5'-8"	
P2	#4	12	BNT.	7'-0"	
S1	#5	32	BNT.	12'-11"	
SC	#4	2	BNT.	3'-5"	
WT1	#5	1	BNT.	8'-2"	
WT2	#5	3	BNT.	8'-8" AVG.	5'-8" TO 11'-8"
WT3	#5	5	BNT.	16'-8"	
WT4	#5	8	BNT.	16'-8"	
WH1	#5	16	STR.	14'-8"	
WH2	#5	10	STR.	8'-9" AVG.	5'-9" TO 11'-9"
WH3	#5	2	BNT.	15'-4"	
WV1	#4	8	STR.	3'-8"	
WV2	#4	24	STR.	6'-0" AVG.	4'-1" TO 7'-11"
WP1	#4	3	BNT.	8'-8"	
WP2	#4	4	STR.	1'-7"	

(1) 2 SETS OF 30

ABUTMENT NO. 1 BAR LIST - PHASE II					
EPOXY COATED REINFORCING					
MARK	SIZE	QTY.	FORM	LENGTH	REMARKS
BH1	#4	9	STR.	36'-0"	
BH2	#4	7	BNT.	36'-8"	
BH3	#9	10	STR.	36'-0"	
BH4	#4	18	BNT.	5'-1"	
BH8	#4	4	BNT.	4'-8"	
(2) BV1	#5	66	STR.	7'-3" AVG.	7'-0" TO 7'-6"
BV2	#5	6	STR.	7'-6"	
BV3	#4	4	STR.	7'-11"	
BV5	#4	8	STR.	6'-0"	
P1	#4	15	BNT.	5'-8"	
P2	#4	12	BNT.	7'-0"	
S1	#5	38	BNT.	12'-11"	
SC	#4	2	BNT.	3'-5"	
WT1	#5	1	BNT.	8'-2"	
WT2	#5	3	BNT.	8'-8" AVG.	5'-8" TO 11'-8"
WT3	#5	5	BNT.	16'-8"	
WT4	#5	8	BNT.	16'-8"	
WH1	#5	16	STR.	14'-8"	
WH2	#5	10	STR.	8'-9" AVG.	5'-9" TO 11'-9"
WH3	#5	2	BNT.	15'-4"	
WV1	#4	8	STR.	3'-8"	
WV2	#4	24	STR.	6'-0" AVG.	4'-1" TO 7'-11"
WP1	#4	3	BNT.	8'-8"	
WP2	#4	4	STR.	1'-7"	

(2) 2 SETS OF 33



ELASTOMERIC COATING &
WATER REPELLENT DETAILS

NOTE:
APPLY WATER REPELLENT TREATMENT TO SIDE WALLS AND BACKWALL. EXCLUDING AREAS COATED WITH ELASTOMERIC COATING.

ELASTOMERIC COATING &
WATER REPELLENT DETAIL

WATER REPELLENT COVERAGE

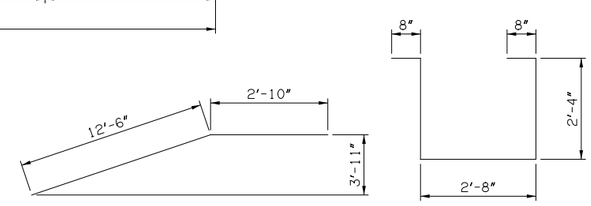
ELASTOMERIC COATING COVERAGE

LEGEND

NOTE: APPLY ELASTOMERIC COATING TO TOP AND SIDES OF BRIDGES SEAT AND PEDESTALS. FRONT OF BRIDGE SEAT, 6"AND BACKWALL EXTENDING 6" ABOVE BRIDGE SEAT AND PEDESTALS.

NOTE: BEARING PADS SHALL BE PLACED PRIOR TO APPLICATION OF ELASTOMERIC COATING. EXTEND COATING 1" VERTICALLY ON SIDES OF BEARING PADS.

NOTE: ALL EDGES OF ELASTOMERIC COATING SHALL BE TAPED PRIOR TO APPLICATION TO PRODUCE A STRAIGHT EDGE.



ABUTMENT NO. 1 QUANTITIES			
ITEM	UNIT	PHASE I	PHASE II
SUBSTRUCTURE EXCAVATION COMMON	CY	75.00	80.00
CLSM BACKFILL	CY	81.10	97.30
CLASS A CONCRETE	CY	24.30	28.10
MECHANICAL SPLICES	EA		26.00
EPOXY COATED REINFORCING STEEL	LB	3320.00	3690.00
PILES, FURNISHED (HP10x42)	LF	19.00	19.00
PILES, FURNISHED (HP12x53)	LF	85.00	102.00
PILES, DRIVEN (HP10x42)	LF	19.00	19.00
PILES, DRIVEN (HP12x53)	LF	85.00	102.00
WATER REPELLENT (VISUALLY INSPECTED)	SY	19.00	28.00
ELASTOMERIC COATING	SF		263.15
6" PERFORATED PIPE UNDERDRAIN ROUND	LF	30.00	37.00
6" NON-PERF. PIPE UNDERDRAIN RND.	LF		37.00

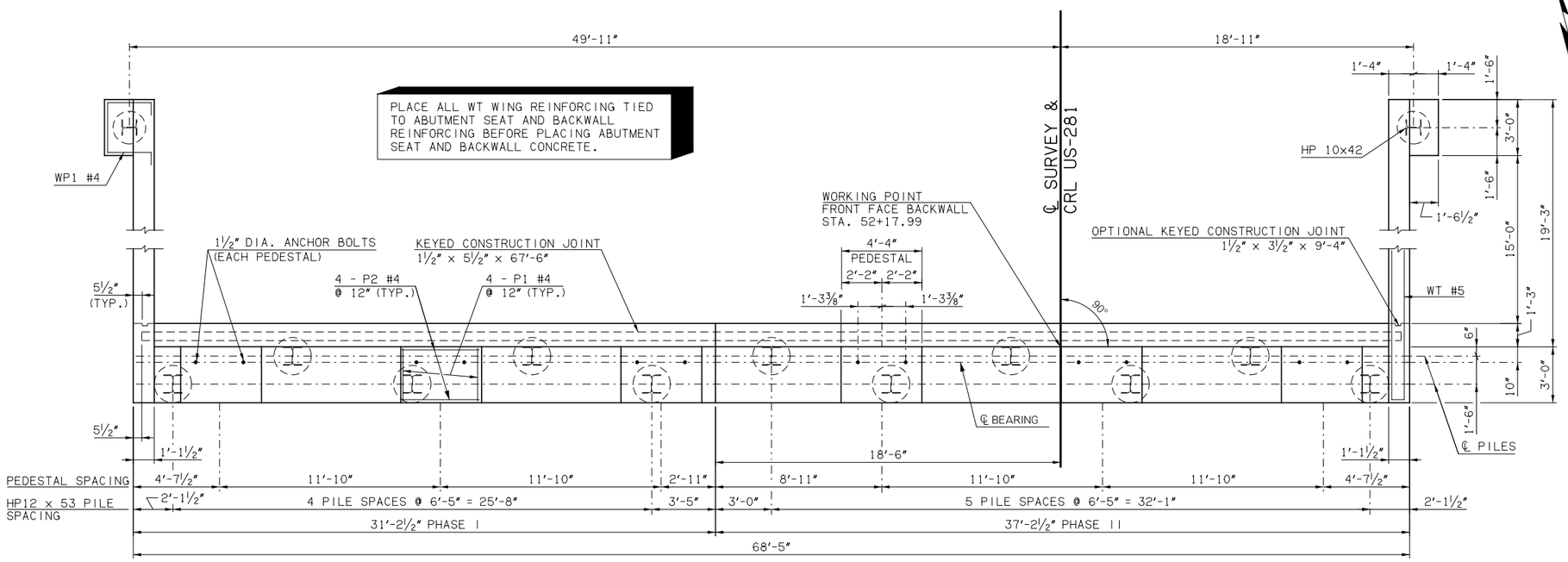
DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION
DRAWN		ROADWAY DESIGN DIVISION
CHECKED		BRIDGE 'A' CANADIAN COUNTY
APPROVED		US-281 SPUR OVER I-40
SQUAD		DETAILS OF ABUTMENT NO. 1 (SHEET 2 OF 2)

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. B009

8/20/2024

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

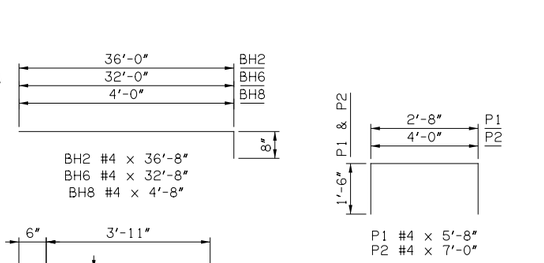
REVISIONS	
DESCRIPTION	DATE

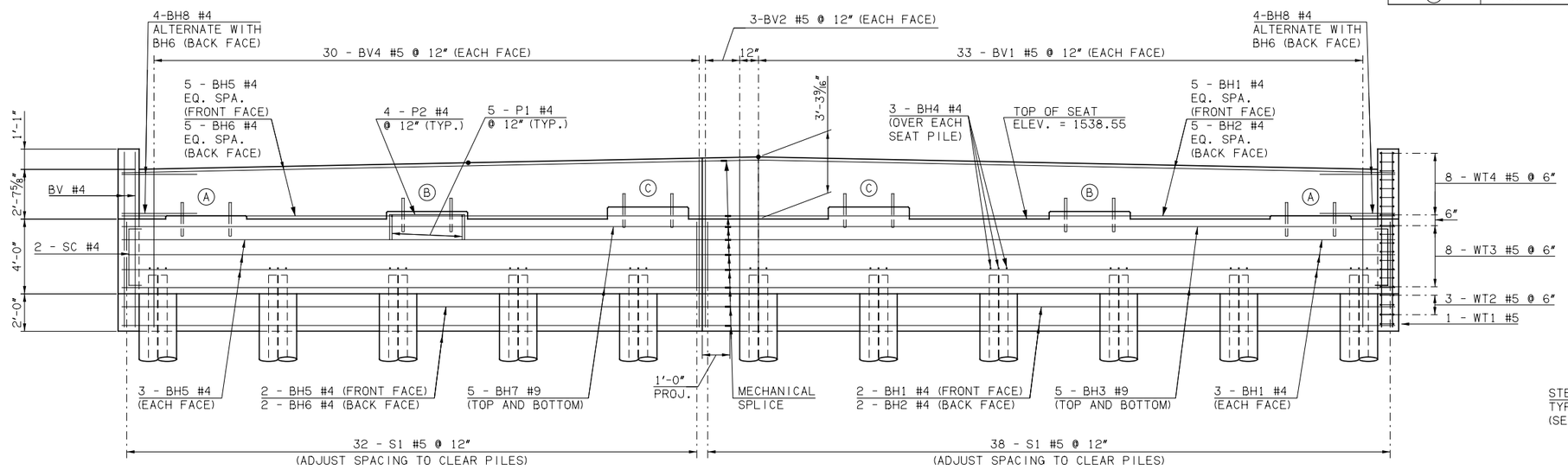


PLAN

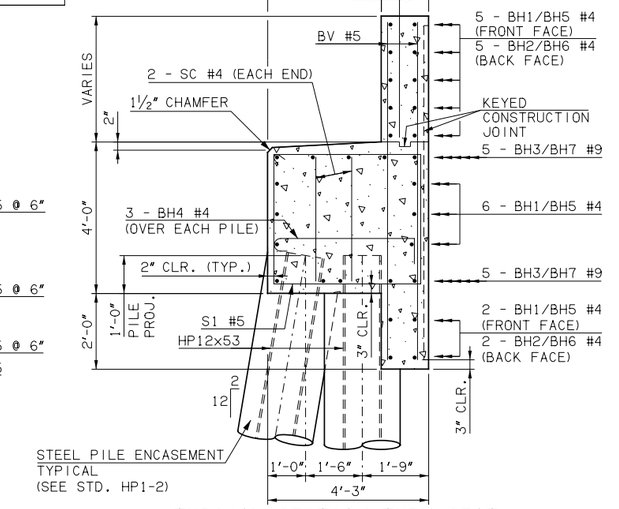
DO NOT PLACE CLSM BACKFILL UNTIL SUPERSTRUCTURE IS IN PLACE AND THE ABUTMENT WING CONCRETE HAS ATTAINED A STRENGTH OF 3,000 PSI.

PEDESTAL ELEVATIONS	
PEDESTAL	ELEVATION
Ⓐ	1538.72
Ⓑ	1538.96
Ⓒ	1539.20





ELEVATION



TYPICAL SECTION THRU SEAT

DESIGN		
DRAWN		
CHECKED		
APPROVED		
SQUAD		

OKLAHOMA DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION

BRIDGE 'A' CANADIAN COUNTY
US-281 SPUR OVER I-40

DETAILS OF ABUTMENT NO. 2
(SHEET 1 OF 2)

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. B010

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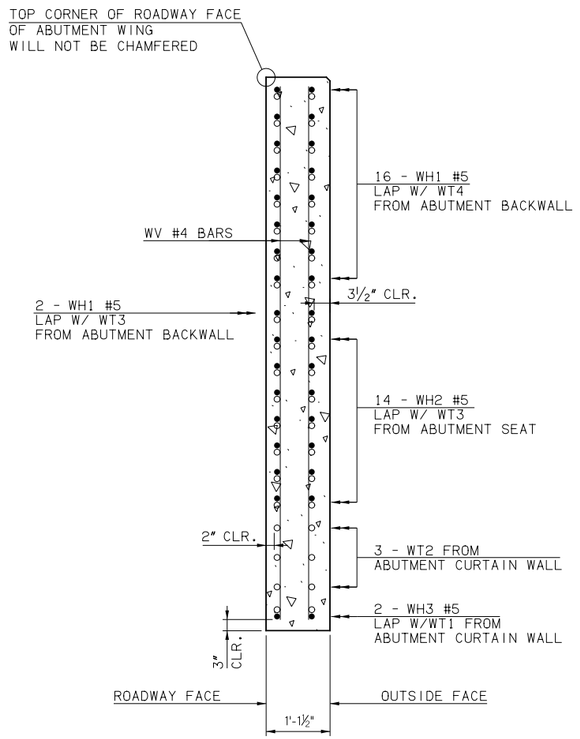
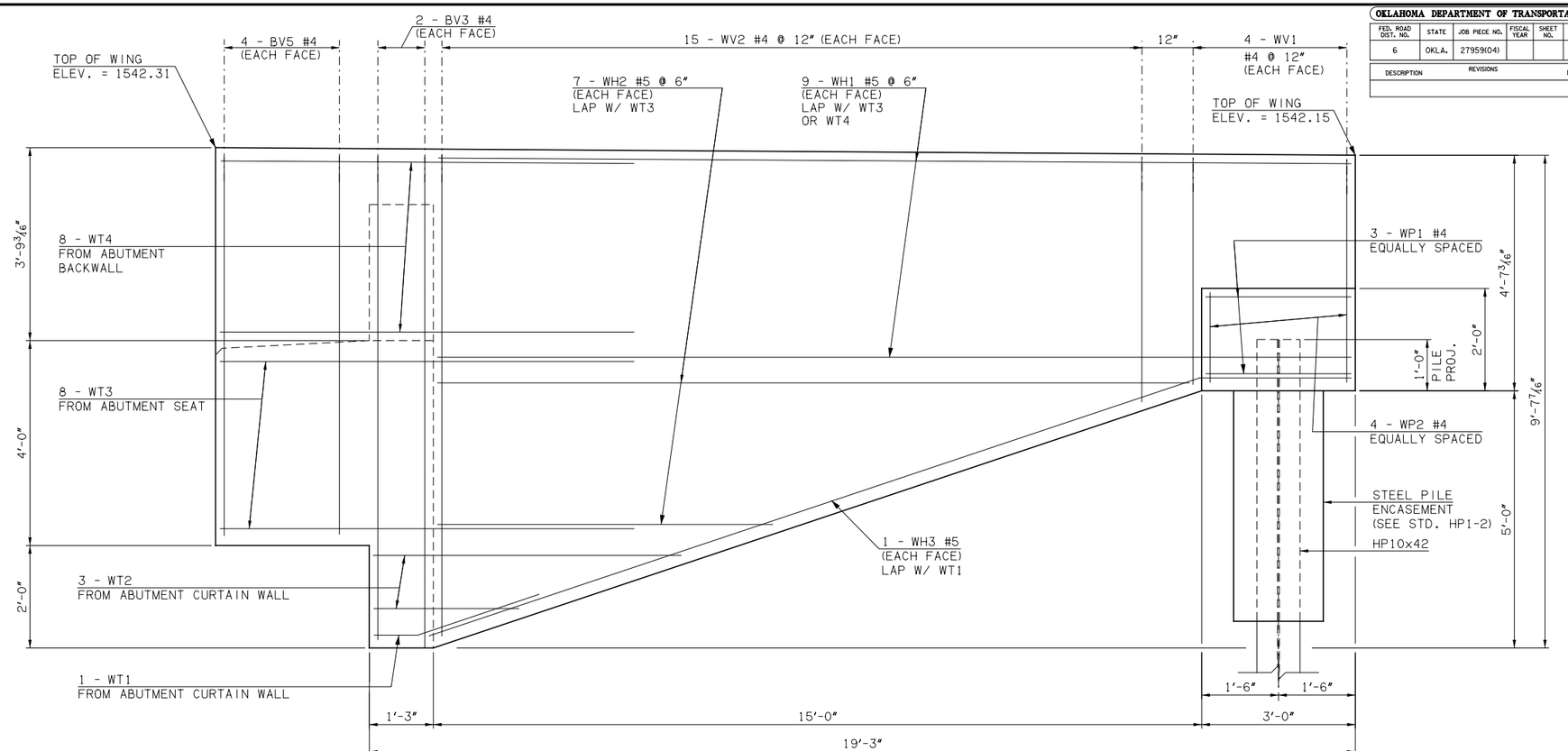


SECTION THRU WING AT
BACK FACE OF ABUTMENT SEAT



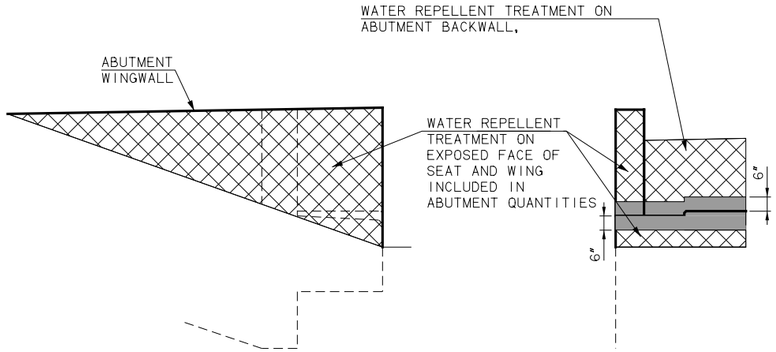
ELEVATION

ABUTMENT NO. 2 BAR LIST - PHASE I					
EPOXY COATED REINFORCING					
MARK	SIZE	QTY.	FORM	LENGTH	REMARKS
BH4	#4	15	BNT.	5'-1"	
BH5	#4	13	STR.	32'-0"	
BH6	#4	7	BNT.	32'-8"	
BH7	#9	10	STR.	32'-0"	
BH8	#4	4	BNT.	4'-8"	
BV3	#4	4	STR.	9'-3"	
(1) BV4	#5	60	STR.	8'-6" AVG.	8'-2" TO 8'-10"
BV5	#4	8	STR.	7'-5"	
P1	#4	15	BNT.	5'-8"	
P2	#4	12	BNT.	7'-0"	
S1	#5	32	BNT.	15'-7"	
SC	#4	2	BNT.	4'-9"	
WT1	#5	1	BNT.	8'-2"	
WT2	#5	3	BNT.	8'-9" AVG.	5'-10" TO 11'-8"
WT3	#5	8	BNT.	16'-8"	
WT4	#5	8	BNT.	16'-8"	
WH1	#5	18	STR.	17'-8"	
WH2	#5	14	STR.	10'-3" AVG.	5'-9" TO 14'-9"
WH3	#5	2	BNT.	18'-6"	
WV1	#4	8	STR.	4'-2"	
WV2	#4	30	STR.	6'-10" AVG.	4'-6" TO 9'-2"
WP1	#4	3	BNT.	8'-8"	
WP2	#4	4	STR.	1'-7"	

(1) 2 SETS OF 30

ABUTMENT NO. 2 BAR LIST - PHASE II					
EPOXY COATED REINFORCING					
MARK	SIZE	QTY.	FORM	LENGTH	REMARKS
BH1	#4	13	STR.	36'-0"	
BH2	#4	7	BNT.	36'-8"	
BH3	#9	10	STR.	36'-0"	
BH4	#4	18	BNT.	5'-1"	
BH8	#4	4	BNT.	4'-8"	
(2) BV1	#5	66	STR.	8'-6" AVG.	8'-2" TO 8'-10"
BV2	#5	6	STR.	8'-10"	
BV3	#4	4	STR.	9'-3"	
BV5	#4	8	STR.	7'-5"	
P1	#4	15	BNT.	5'-8"	
P2	#4	12	BNT.	7'-0"	
S1	#5	38	BNT.	15'-7"	
SC	#4	2	BNT.	4'-9"	
WT1	#5	1	BNT.	8'-2"	
WT2	#5	3	BNT.	8'-9" AVG.	5'-10" TO 11'-8"
WT3	#5	8	BNT.	16'-8"	
WT4	#5	8	BNT.	16'-8"	
WH1	#5	18	STR.	17'-8"	
WH2	#5	14	STR.	10'-3" AVG.	5'-9" TO 14'-9"
WH3	#5	2	BNT.	18'-6"	
WV1	#4	8	STR.	4'-2"	
WV2	#4	30	STR.	6'-10" AVG.	4'-6" TO 9'-2"
WP1	#4	3	BNT.	8'-8"	
WP2	#4	4	STR.	1'-7"	

(2) 2 SETS OF 33



ELASTOMERIC COATING &
WATER REPELLENT DETAILS

NOTE:
APPLY WATER REPELLENT
TREATMENT TO SIDE WALLS
AND BACKWALL. EXCLUDING
AREAS COATED WITH
ELASTOMERIC COATING.

ELASTOMERIC COATING &
WATER REPELLENT DETAIL

WATER REPELLENT COVERAGE

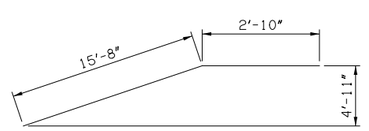
ELASTOMERIC COATING COVERAGE

LEGEND

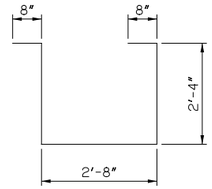
NOTE: APPLY ELASTOMERIC COATING TO TOP AND SIDES OF BRIDGES SEAT AND PEDESTALS. FRONT OF BRIDGE SEAT, 6"AND BACKWALL EXTENDING 6" ABOVE BRIDGE SEAT AND PEDESTALS.

NOTE: BEARING PADS SHALL BE PLACED PRIOR TO APPLICATION OF ELASTOMERIC COATING. EXTEND COATING 1" VERTICALLY ON SIDES OF BEARING PADS

NOTE: ALL EDGES OF ELASTOMERIC COATING SHALL BE TAPED PRIOR TO APPLICATION TO PRODUCE A STRAIGHT EDGE.



WH3 #5 x 18'-6"



WP1 #4 x 8'-8"

ABUTMENT NO. 2 QUANTITIES			
ITEM	UNIT	PHASE 1	PHASE II
SUBSTRUCTURE EXCAVATION COMMON	CY	80.00	85.00
CLSM BACKFILL	CY	90.60	108.60
CLASS A CONCRETE	CY	32.30	37.40
MECHANICAL SPLICES	EA		30.00
EPOXY COATED REINFORCING STEEL	LB	3840.00	4240.00
PILES, FURNISHED (HP10x42)	LF	72.00	72.00
PILES, FURNISHED (HP12x53)	LF	348.00	417.00
PILES, DRIVEN (HP10x42)	LF	72.00	72.00
PILES, DRIVEN (HP12x53)	LF	348.00	417.00
WATER REPELLENT (VISUALLY INSPECTED)	SY	28.00	30.00
ELASTOMERIC COATING	SF		263.15
6" PERFORATED PIPE UNDERDRAIN ROUND	LF	30.00	37.00
6" NON-PERF. PIPE UNDERDRAIN RND.	LF		42.00

OKLAHOMA DEPARTMENT OF TRANSPORTATION

FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

DESCRIPTION	REVISIONS	DATE

DESIGN		
DRAWN		
CHECKED		
APPROVED		
SQUAD		

OKLAHOMA DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION

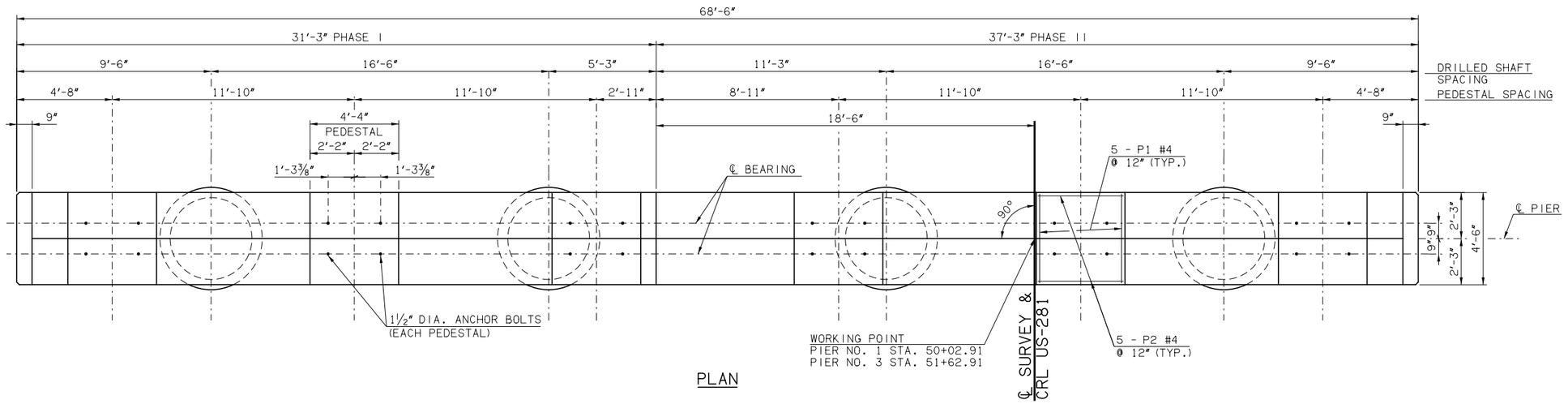
BRIDGE 'A' CANADIAN COUNTY
US-281 SPUR OVER I-40

DETAILS OF ABUTMENT NO. 2
(SHEET 2 OF 2)

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. B011

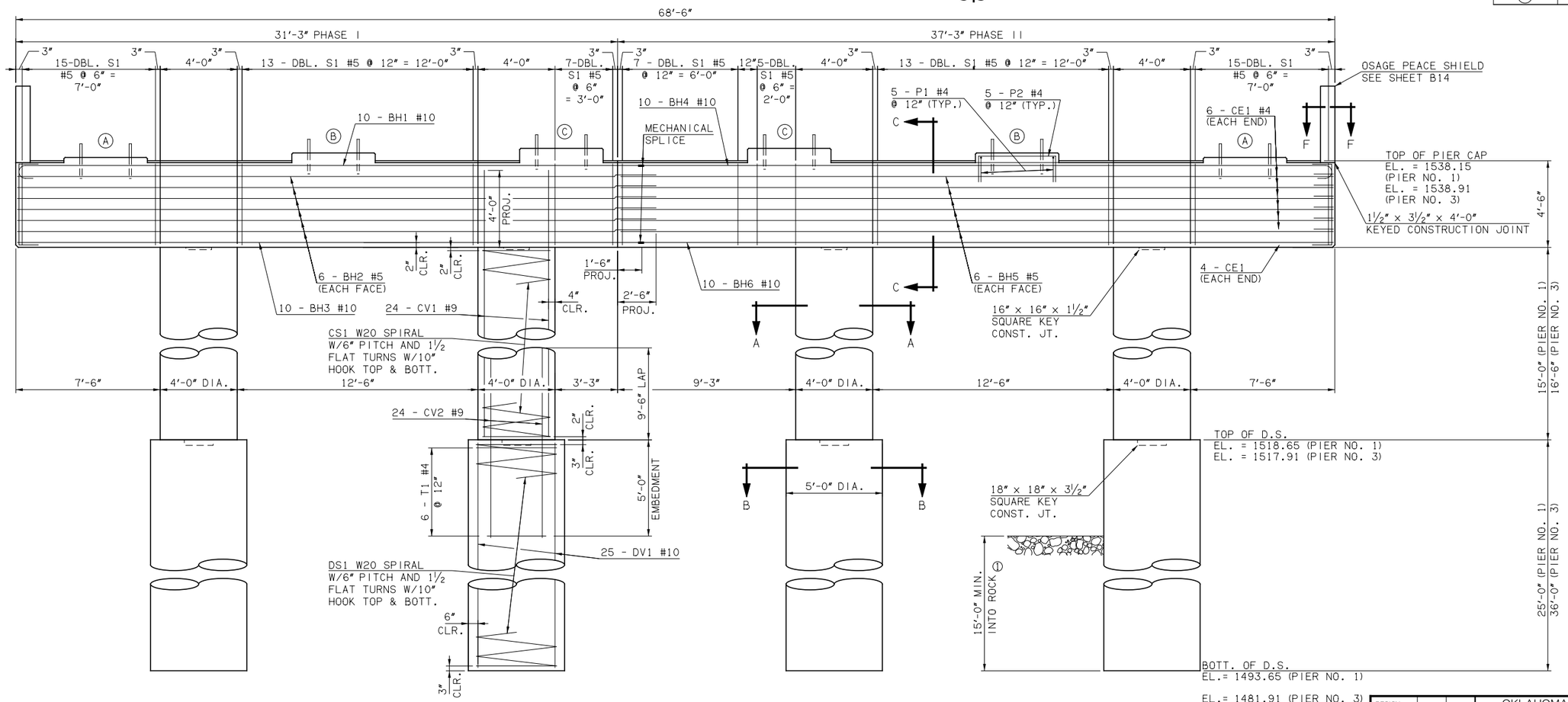
8/20/2024

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			
DESCRIPTION	REVISIONS				DATE



PLAN

PEDESTAL ELEVATIONS		
PEDESTAL	PIER NO. 1	PIER NO. 3
Ⓐ	1538.32	1539.08
Ⓑ	1538.55	1539.31
Ⓒ	1538.79	1539.55



ELEVATION

① INSTALL DRILLED SHAFTS THE SPECIFIED MINIMUM DISTANCE INTO ROCK, BUT IN NO CASE HIGHER THAN THE BOTTOM OF DRILLED SHAFT ELEVATION SHOWN IN THE PLANS.

DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN			BRIDGE 'A' CANADIAN COUNTY US-281 SPUR OVER I-40
CHECKED			DETAILS OF PIERS PIER NO. 1 AND 3 (SHEET 1 OF 4)
APPROVED			
SQUAD			

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. B012

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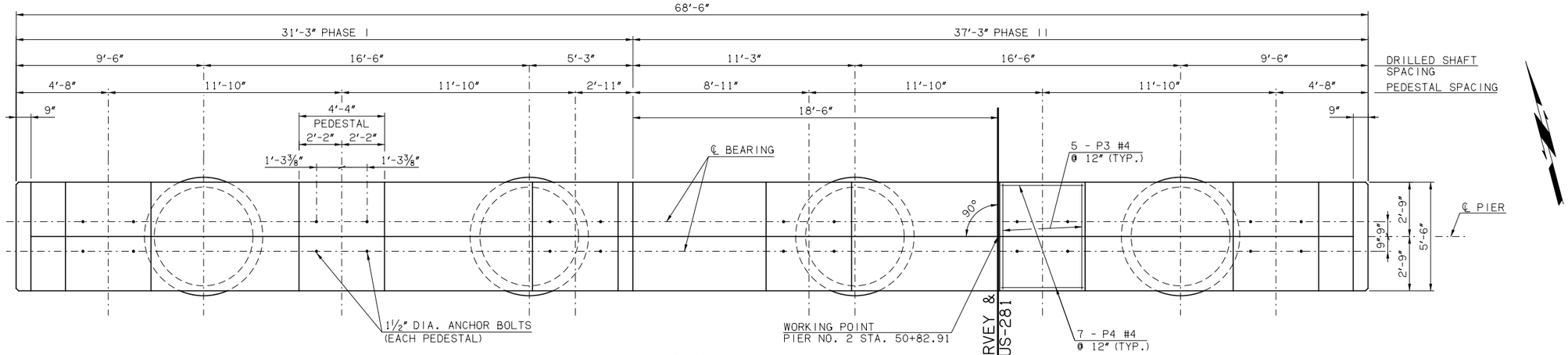
8/20/2024

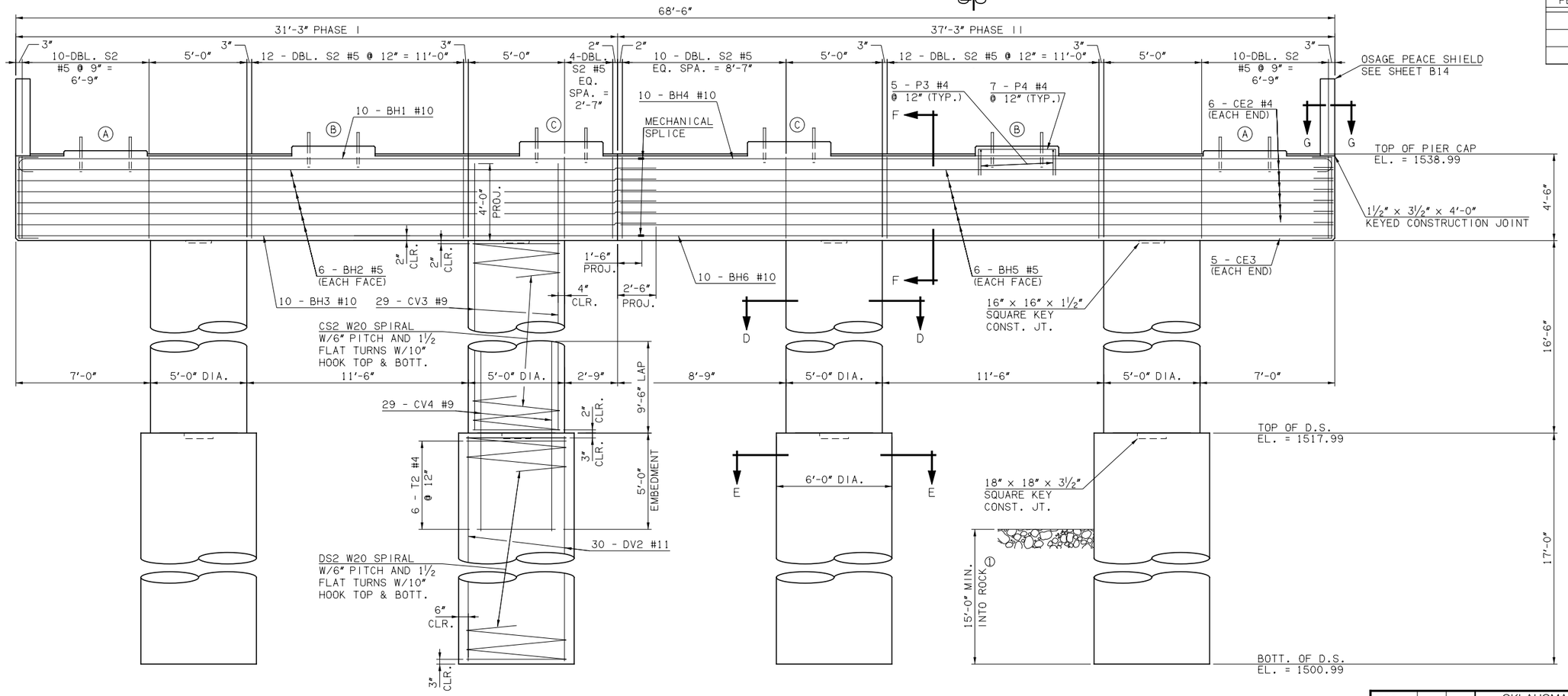
OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE



PLAN

PEDESTAL ELEVATIONS	
PEDESTAL	PIER NO. 2
Ⓐ	1539.16
Ⓑ	1539.40
Ⓒ	1539.63



ELEVATION

① INSTALL DRILLED SHAFTS THE SPECIFIED MINIMUM DISTANCE INTO ROCK, BUT IN NO CASE HIGHER THAN THE BOTTOM OF DRILLED SHAFT ELEVATION SHOWN IN THE PLANS.

DESIGN		
DRAWN		
CHECKED		
APPROVED		
SQUAD		

OKLAHOMA DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION

BRIDGE 'A' CANADIAN COUNTY
US-281 SPUR OVER I-40

DETAILS OF PIERS

PIER NO. 2
(SHEET 2 OF 4)

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. B013

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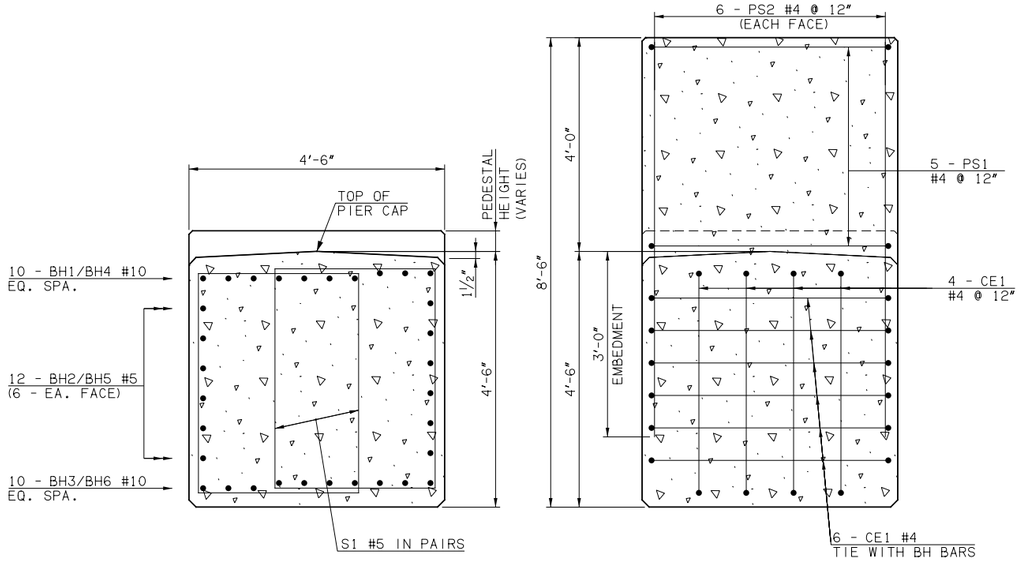
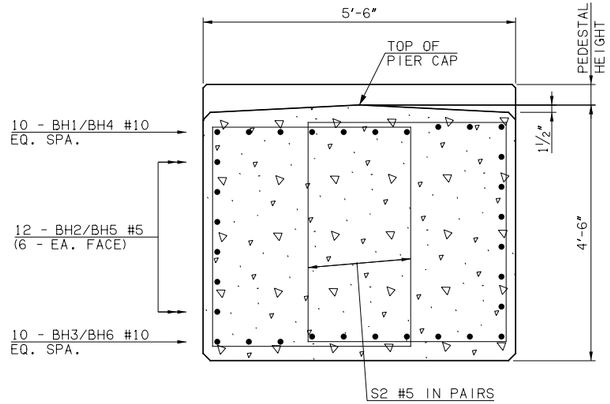
OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE

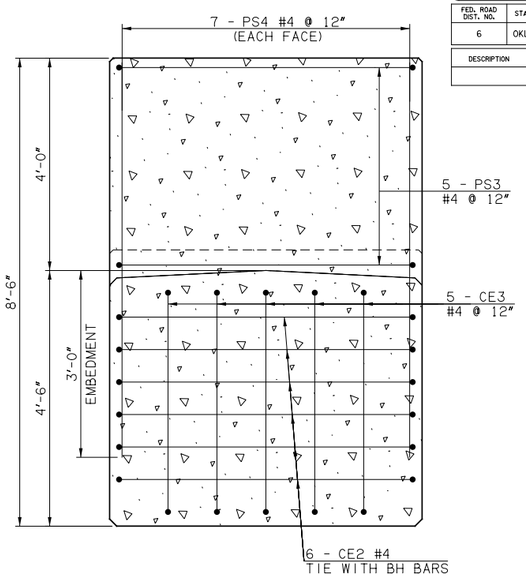


SECTION C-C

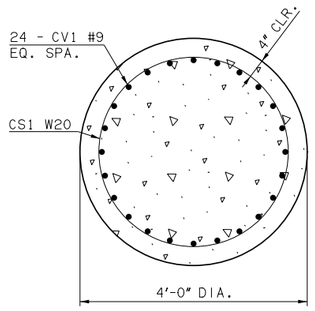
END VIEW



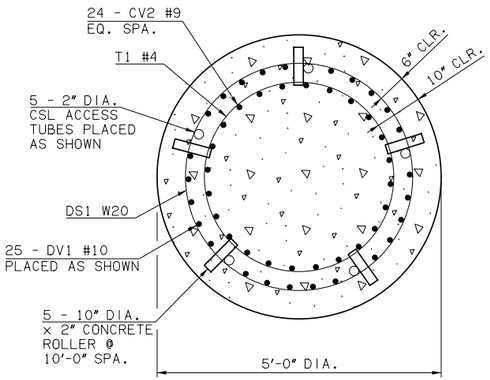
SECTION F-F



END VIEW

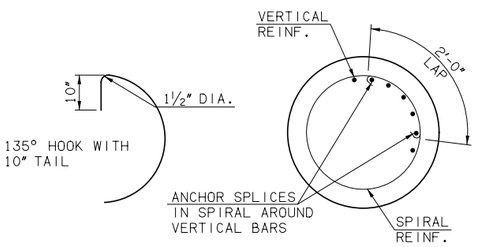


SECTION A-A

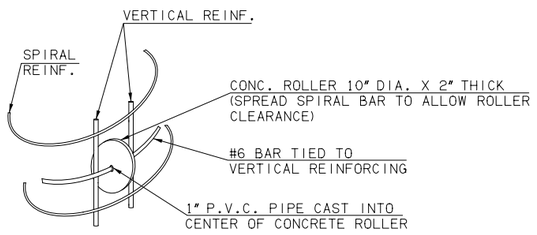


SECTION B-B

PIER NO. 1 AND 3 DETAILS

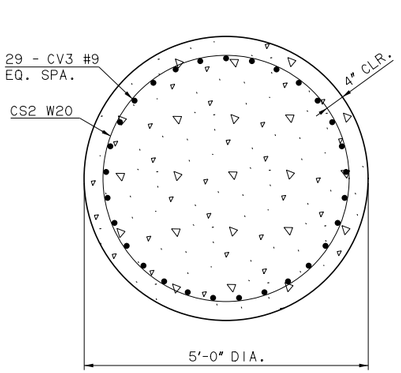


SPIRAL SPLICE

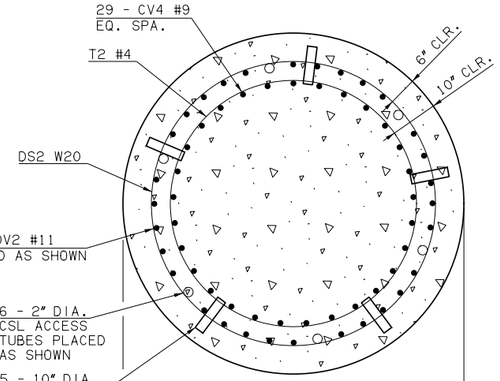


DETAIL OF DRILL SHAFT ROLLER INSTALLATION

NOTE:
CONCRETE USED IN CONCRETE ROLLERS SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI. SLAB BOLSTERS, HIGH CHAIRS AND PLASTIC ROLLERS SHALL NOT BE SUBSTITUTED FOR THE CONCRETE ROLLERS.

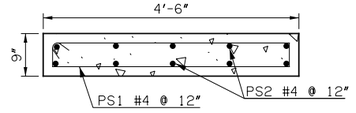


SECTION D-D

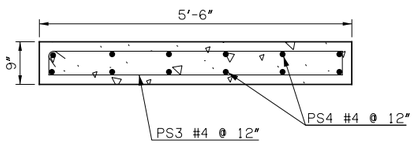


SECTION E-E

PIER NO. 2 DETAILS



SECTION F-F



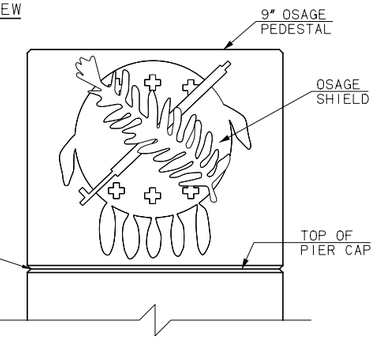
SECTION G-G

NOTE:
APPLY ELASTOMERIC COATING BEFORE ANY OTHER SURFACE TREATMENTS.

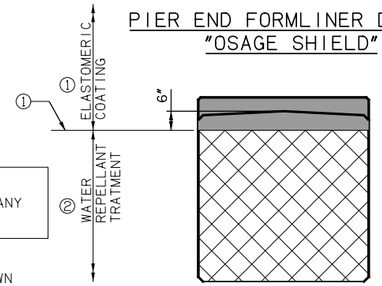
① COAT ALL EXPOSED CONCRETE ON TOP OF PIER CAP AND 6" MIN. DOWN ON VERTICAL FACE OF PIER CAP WITH ELASTOMERIC COATING. SURFACE TO BE SANDBLASTED AND PRIMED AS RECOMMENDED BY THE MAUNFACTURER. MASKING SHALL BE USED TO PROVIDE A CLEAN RESULT.

② TREAT ALL EXTERIOR VERTICAL SURFACES OF THE PIER CAPS WITH A PENETRATING WATER REPELLENT SURFACE TREATMENT.

NOTE:
DO NOT APPLY ELASTOMERIC COATING TO LOCATIONS UNDER BEARING PADS.



PIER END FORMLINER DETAIL "OSAGE SHIELD"



ELASTOMERIC COATING & WATER REPELLENT DETAIL

WATER REPELLENT COVERAGE

ELASTOMERIC COATING COVERAGE

LEGEND

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN		
CHECKED		BRIDGE 'A' CANADIAN COUNTY
APPROVED		US-281 SPUR OVER I-40
SQUAD		DETAILS OF PIERS (SHEET 3 OF 4)

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. B014

8/20/2024

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE

PIER NO. 1 CAP AND COLUMN BAR LIST - PHASE I

EPOXY COATED REINFORCING					
MARK	SIZE	QTY.	FORM	LENGTH	REMARKS
BH1	#10	10	BNT.	34′-0″	
BH2	#5	12	STR.	33′-7″	
BH3	#10	10	STR.	32′-7″	
CE1	#4	10	BNT.	5′-6″	
CV1	#9	48	STR.	18′-10″	
P1	#4	15	BNT.	7′-2″	
P2	#4	15	BNT.	7′-0″	
S1	#5	70	BNT.	14′-10″	
PS1	#4	5	BNT.	9′-11″	
PS2	#4	12	STR.	6′-10″	
PLAIN REINFORCING					
① CS1	W20	2	BNT.	352′-0″	

PIER NO. 1 CAP AND COLUMN BAR LIST - PHASE II

EPOXY COATED REINFORCING					
MARK	SIZE	QTY.	FORM	LENGTH	REMARKS
BH4	#10	10	BNT.	37′-0″	
BH5	#5	12	STR.	36′-11″	
BH6	#10	10	STR.	35′-7″	
CE1	#4	10	BNT.	5′-6″	
CV1	#9	48	STR.	18′-10″	
P1	#4	15	BNT.	7′-2″	
P2	#4	15	BNT.	7′-0″	
S1	#5	80	BNT.	14′-10″	
PS1	#4	5	BNT.	9′-11″	
PS2	#4	12	STR.	6′-10″	
PLAIN REINFORCING					
① CS1	W20	2	BNT.	352′-0″	

PIER NO. 3 CAP AND COLUMN BAR LIST - PHASE I

EPOXY COATED REINFORCING					
MARK	SIZE	QTY.	FORM	LENGTH	REMARKS
BH1	#10	10	BNT.	34′-0″	
BH2	#5	12	STR.	33′-7″	
BH3	#10	10	STR.	32′-7″	
CE1	#4	10	BNT.	5′-6″	
CV1	#9	48	STR.	20′-4″	
P1	#4	15	BNT.	7′-2″	
P2	#4	15	BNT.	7′-0″	
S1	#5	70	BNT.	14′-10″	
PS1	#4	5	BNT.	9′-11″	
PS2	#4	12	STR.	6′-10″	
PLAIN REINFORCING					
① CS1	W20	2	BNT.	383′-10″	

PIER NO. 3 CAP AND COLUMN BAR LIST - PHASE II

EPOXY COATED REINFORCING					
MARK	SIZE	QTY.	FORM	LENGTH	REMARKS
BH4	#10	10	BNT.	37′-0″	
BH5	#5	12	STR.	36′-11″	
BH6	#10	10	STR.	35′-7″	
CE1	#4	10	BNT.	5′-6″	
CV1	#9	48	STR.	20′-4″	
P1	#4	15	BNT.	7′-2″	
P2	#4	15	BNT.	7′-0″	
S1	#5	80	BNT.	14′-10″	
PS1	#4	5	BNT.	9′-11″	
PS2	#4	12	STR.	6′-10″	
PLAIN REINFORCING					
① CS1	W20	2	BNT.	383′-10″	

① LENGTH SHOWN DOES NOT ACCOUNT FOR SPLICES. CONTRACTOR MAY ADD SPLICES AS NECESSARY, BUT PAYMENT WILL NOT BE MADE FOR EXTRA LENGTH REQUIRED FOR SPLICES.

PIER NO. 1 DRILLED SHAFT BAR LIST - PHASE I

EPOXY COATED REINFORCING					
MARK	SIZE	QTY.	FORM	LENGTH	REMARKS
CV2	#9	48	STR.	14′-6″	
PLAIN REINFORCING					
① DS1	W20	2	BNT.	662′-6″	
DV1	#10	50	STR.	24′-6″	
T1	#4	12	BNT.	12′-6″	

PIER NO. 1 DRILLED SHAFT BAR LIST - PHASE II

EPOXY COATED REINFORCING					
MARK	SIZE	QTY.	FORM	LENGTH	REMARKS
CV2	#9	48	STR.	14′-6″	
PLAIN REINFORCING					
① DS1	W20	2	BNT.	662′-6″	
DV1	#10	50	STR.	24′-6″	
T1	#4	12	BNT.	12′-6″	

PIER NO. 3 DRILLED SHAFT BAR LIST - PHASE I

EPOXY COATED REINFORCING					
MARK	SIZE	QTY.	FORM	LENGTH	REMARKS
CV2	#9	48	STR.	14′-6″	
PLAIN REINFORCING					
① DS1	W20	2	BNT.	942′-1″	
DV1	#10	50	STR.	35′-6″	
T1	#4	12	BNT.	12′-6″	

PIER NO. 3 DRILLED SHAFT BAR LIST - PHASE II

EPOXY COATED REINFORCING					
MARK	SIZE	QTY.	FORM	LENGTH	REMARKS
CV2	#9	48	STR.	14′-6″	
PLAIN REINFORCING					
① DS1	W20	2	BNT.	942′-1″	
DV1	#10	50	STR.	35′-6″	
T1	#4	12	BNT.	12′-6″	

PIER NO. 2 CAP AND COLUMN BAR LIST - PHASE I

EPOXY COATED REINFORCING					
MARK	SIZE	QTY.	FORM	LENGTH	REMARKS
BH1	#10	10	BNT.	34′-0″	
BH2	#5	12	STR.	33′-7″	
BH3	#10	10	STR.	32′-7″	
CE2	#4	6	BNT.	6′-6″	
CE3	#4	5	BNT.	5′-6″	
CV3	#9	58	STR.	20′-4″	
P3	#4	15	BNT.	8′-2″	
P4	#4	21	BNT.	7′-0″	
S2	#5	52	BNT.	16′-0″	
PS3	#4	5	BNT.	11′-11″	
PS4	#4	12	STR.	6′-10″	
PLAIN REINFORCING					
① CS2	W20	2	BNT.	496′-10″	

PIER NO. 2 CAP AND COLUMN BAR LIST - PHASE II

EPOXY COATED REINFORCING					
MARK	SIZE	QTY.	FORM	LENGTH	REMARKS
BH4	#10	10	BNT.	37′-0″	
BH5	#5	12	STR.	36′-11″	
BH6	#10	10	STR.	35′-7″	
CE2	#4	6	BNT.	6′-6″	
CE3	#4	5	BNT.	5′-6″	
CV3	#9	58	STR.	20′-4″	
P3	#4	15	BNT.	8′-2″	
P4	#4	21	BNT.	7′-0″	
S2	#5	64	BNT.	16′-0″	
PS3	#4	5	BNT.	11′-11″	
PS4	#4	12	STR.	6′-10″	
PLAIN REINFORCING					
① CS2	W20	2	BNT.	496′-10″	

PIER NO. 2 DRILLED SHAFT BAR LIST - PHASE I

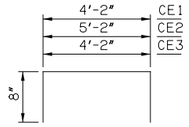
EPOXY COATED REINFORCING					
MARK	SIZE	QTY.	FORM	LENGTH	REMARKS
CV4	#9	58	STR.	14′-6″	
PLAIN REINFORCING					
① DS2	W20	2	BNT.	572′-2″	
DV2	#11	60	STR.	16′-6″	
T2	#4	12	BNT.	15′-8″	

PIER NO. 2 DRILLED SHAFT BAR LIST - PHASE II

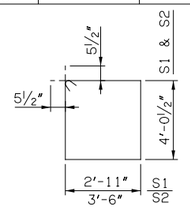
EPOXY COATED REINFORCING					
MARK	SIZE	QTY.	FORM	LENGTH	REMARKS
CV4	#9	58	STR.	14′-6″	
PLAIN REINFORCING					
① DS2	W20	2	BNT.	572′-2″	
DV2	#11	60	STR.	16′-6″	
T2	#4	12	BNT.	15′-8″	

PIER QUANTITIES

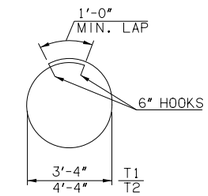
ITEM	UNIT	PHASE I			PHASE II		
		PIER NO. 1	PIER NO. 2	PIER NO. 3	PIER NO. 1	PIER NO. 2	PIER NO. 3
CLASS A CONCRETE	CY	38.80	54.30	40.20	43.20	59.70	44.60
MECHANICAL SPLICES	EA				20.00	20.00	20.00
REINFORCING STEEL	LB	480.00	680.00	530.00	480.00	680.00	530.00
EPOXY COATED REINFORCING STEEL	LB	7710.00	8490.00	7960.00	8170.00	8990.00	8410.00
WATER REPELLENT (VISUALLY INSPECTED)	SY	39.00	43.00	39.00	44.00	29.00	44.00
DRILLED SHAFT 60″ DIAMETER	LF	50.00		72.00	50.00		72.00
DRILLED SHAFT 72″ DIAMETER	LF		34.00			34.00	
ELASTOMERIC COATING	SF				354.50	418.00	354.50



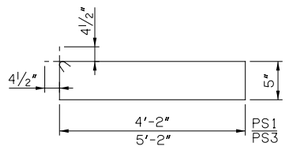
CE1 #4 x 5′-6″
CE2 #4 x 6′-6″
CE3 #4 x 5′-6″



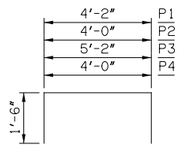
S1 #5 x 14′-10″
S2 #5 x 16′-0″



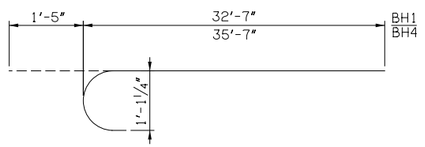
T1 #4 x 12′-6″
T2 #4 x 15′-8″



PS1 #4 x 9′-11″
PS3 #4 x 11′-11″



P1 #4 x 7′-2″
P2 #4 x 7′-0″
P3 #4 x 8′-2″
P4 #4 x 7′-0″



BH1 #10 x 34′-0″
BH4 #10 x 37′-0″

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN		BRIDGE 'A' CANADIAN COUNTY
CHECKED		US-281 SPUR OVER I-40
APPROVED		DETAILS OF PIERS (SHEET 4 OF 4)
SQUAD		
COUNTY CANADIAN	HIGHWAY US-281	STATE JOB NO. 27959(04) SHEET NO. B015

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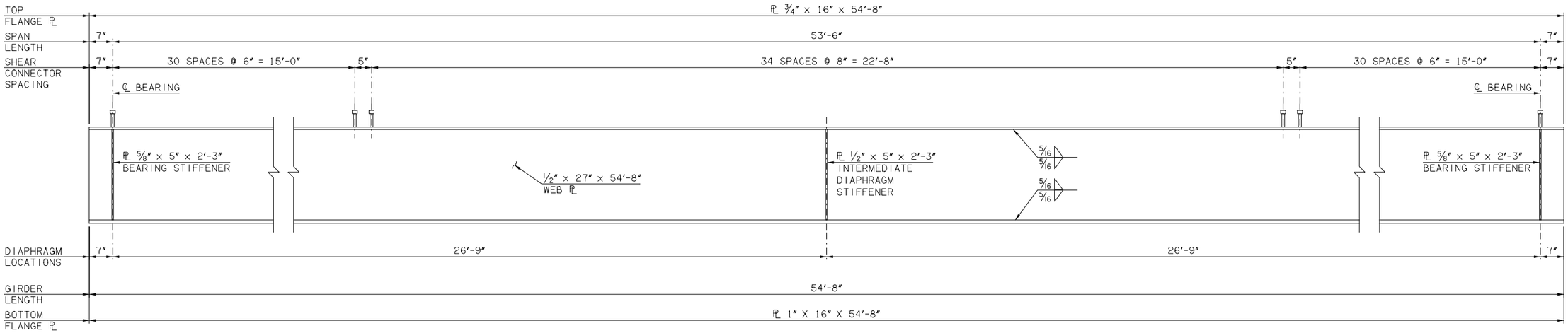
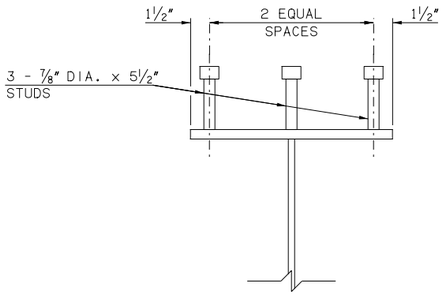
OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

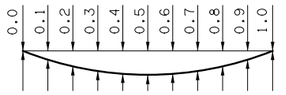
REVISIONS	
DESCRIPTION	DATE



ELEVATION



SHEAR CONNECTOR DETAIL



DEAD LOAD DEFLECTION DIAGRAM

	DEFLECTION SCHEDULE											
		TENTH POINT										
		0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
	GIRDERS 1, 3, & 6											
	GIRDER & DIAPHRAGM DEFLECTION	0.000	0.054	0.102	0.139	0.163	0.171	0.163	0.139	0.102	0.054	0.000
(1)	DECK SLAB, HAUNCH, SIP, & CONCRETE PARAPET DEFLECTION	0.000	0.342	0.636	0.886	1.037	1.090	1.037	0.886	0.636	0.342	0.000
	GIRDERS 2, 4, & 5											
	GIRDER & DIAPHRAGM DEFLECTION	0.000	0.062	0.117	0.160	0.187	0.197	0.187	0.160	0.117	0.062	0.000
(1)	DECK SLAB, HAUNCH, SIP, & CONCRETE PARAPET DEFLECTION	0.000	0.429	0.814	1.114	1.305	1.370	1.305	1.114	0.814	0.429	0.000

(1) THE DEAD LOAD DEFLECTION SHOWN AT THE TENTH POINTS ARE THE DEFLECTIONS DUE TO DECK SLAB + HAUNCH + S.I.P. STEEL DECK FORM ALLOWANCE + CONCRETE PARAPET. IT DOES NOT INCLUDE THE GIRDER WEIGHT, DIAPHRAGMS, OR FUTURE WEARING SURFACE.

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN		BRIDGE 'A' CANADIAN COUNTY US-281 SPUR OVER I-40
CHECKED		DETAILS OF BEAMS SPAN NOS. 1 AND 4 (SHEET 1 OF 2)
APPROVED		
SQUAD		

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. B016

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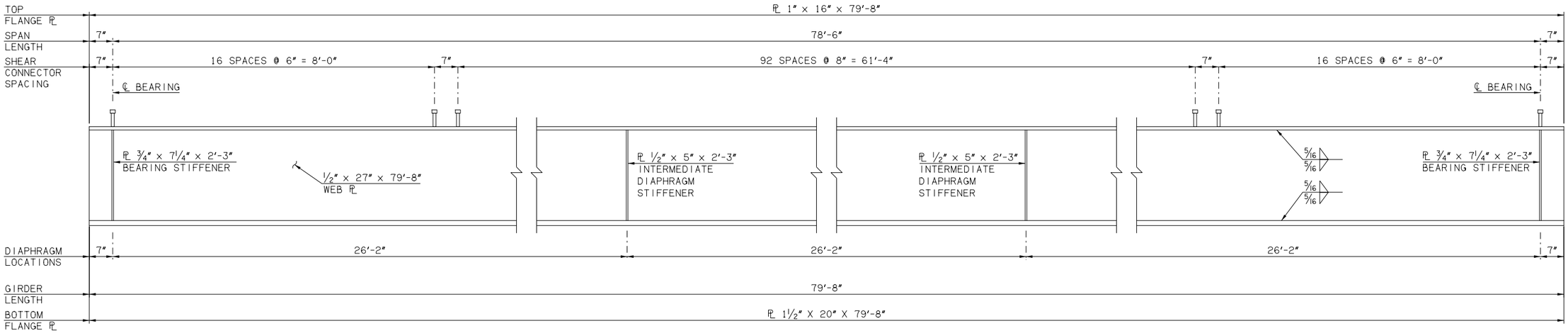
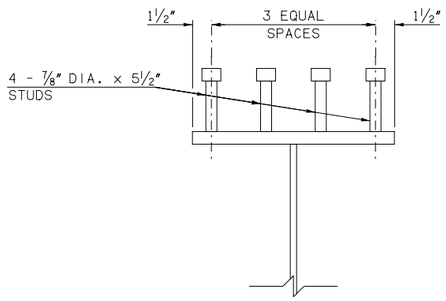
OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

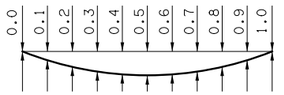
REVISIONS	
DESCRIPTION	DATE



ELEVATION



SHEAR CONNECTOR DETAIL



DEAD LOAD DEFLECTION DIAGRAM

DEFLECTION SCHEDULE												
		TENTH POINT										
		0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
	GIRDERS 1, 3, & 6											
	GIRDER & DIAPHRAGM DEFLECTION	0.000	0.225	0.426	0.583	0.683	0.717	0.683	0.583	0.426	0.225	1.000
(1)	DECK SLAB, HAUNCH, SIP, & CONCRETE PARAPET DEFLECTION	0.000	1.045	1.978	2.708	3.172	3.332	3.172	2.708	1.978	1.045	1.000
	GIRDERS 2, 4, & 5											
	GIRDER & DIAPHRAGM DEFLECTION	0.000	0.250	0.473	0.647	0.758	0.796	0.758	0.647	0.473	0.250	1.000
(1)	DECK SLAB, HAUNCH, SIP, & CONCRETE PARAPET DEFLECTION	0.000	1.313	2.487	3.405	3.990	4.189	3.990	3.405	2.487	1.313	1.000

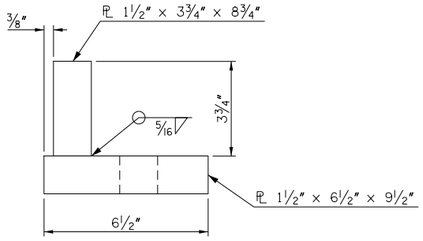
(1) THE DEAD LOAD DEFLECTION SHOWN AT THE TENTH POINTS ARE THE DEFLECTIONS DUE TO DECK SLAB + HAUNCH + S.I.P. STEEL DECK FORM ALLOWANCE + CONCRETE PARAPET. IT DOES NOT INCLUDE THE GIRDER WEIGHT, DIAPHRAGMS, OR FUTURE WEARING SURFACE.

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN		BRIDGE 'A' CANADIAN COUNTY US-281 SPUR OVER I-40
CHECKED		DETAILS OF BEAMS SPAN NOS. 2 AND 3 (SHEET 2 OF 2)
APPROVED		
SQUAD		

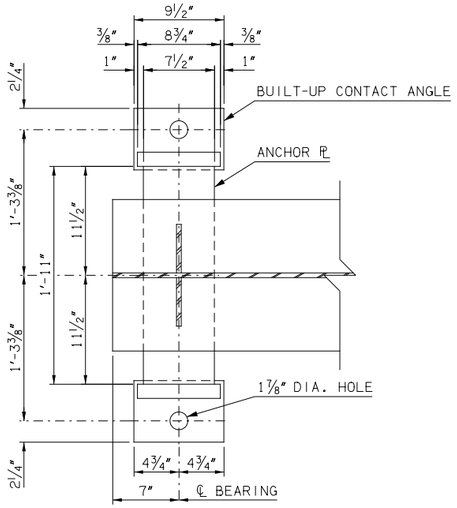
COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. B017

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

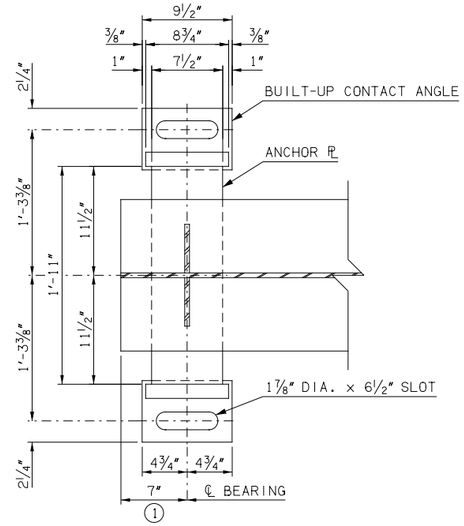
REVISIONS	
DESCRIPTION	DATE



BUILT-UP CONTACT ANGLE DETAIL

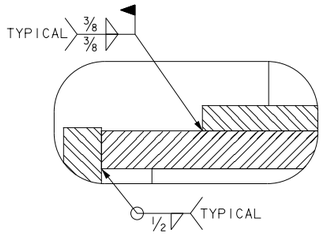


FIXED BEARING PLAN

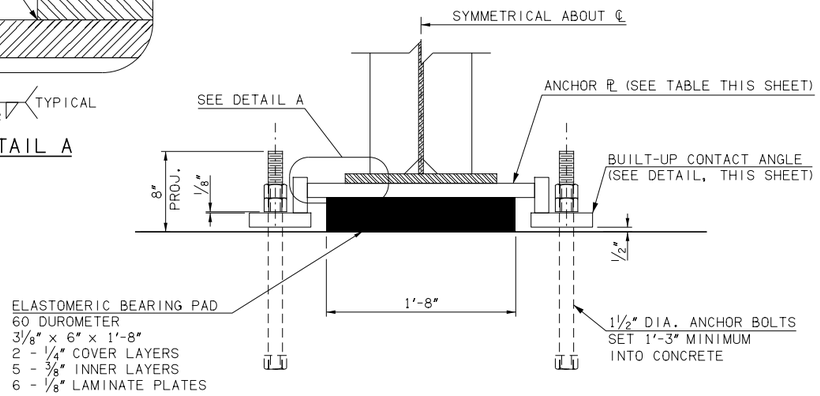


EXPANSION BEARING PLAN

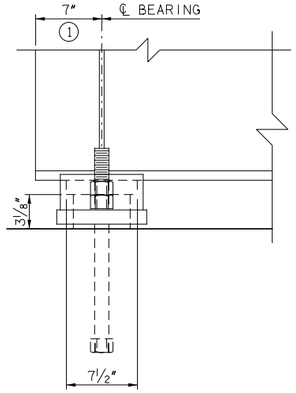
(1) CENTER ANCHOR BOLTS IN SLOTS DURING SETTING OF BEAMS. DIMENSION MAY VARY DEPENDING ON TEMERATURE AT THE TIME OF BEAM SETTING.



DETAIL A



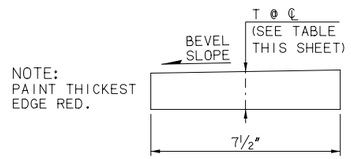
END VIEW



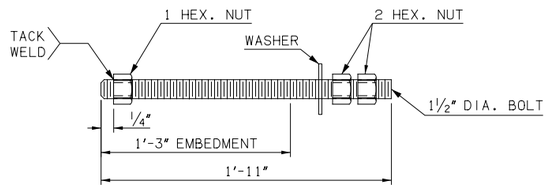
SIDE VIEW

BEARING DETAILS

ANCHOR PLATE TABLE		
LOCATION	BEVEL SLOPE	DIMENSION "T"
ABUTMENT NO. 1, SPAN 1	1.64%	1½"
PIER NO. 1, SPAN 1	1.64%	1¾"
PIER NO. 1, SPAN 2	1.07%	1½"
PIER NO. 2, SPAN 2	1.07%	1½"
PIER NO. 2, SPAN 3	0.00%	1½"
PIER NO. 3, SPAN 3	0.00%	1½"
PIER NO. 3, SPAN 4	0.00%	1⅞"
ABUTMENT NO. 2, SPAN 4	0.00%	1½"



BEVELED ANCHOR PLATE DETAIL



ANCHOR BOLT DETAIL

DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN			BRIDGE 'A' CANADIAN COUNTY
CHECKED			US-281 SPUR OVER I-40
APPROVED			DETAILS OF BEARINGS
SQUAD			

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. B018

8/20/2024

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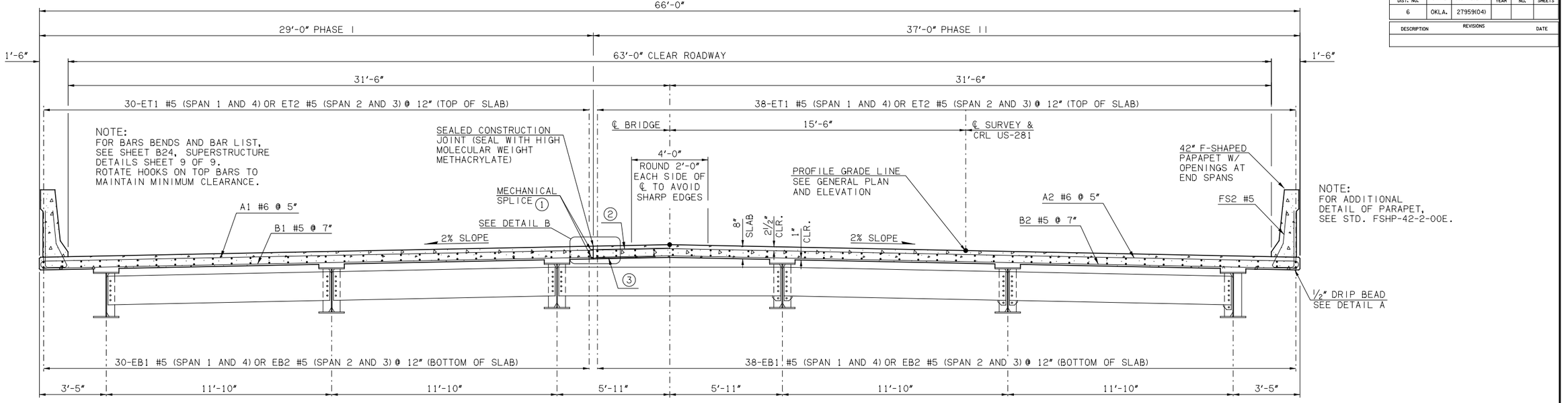
OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

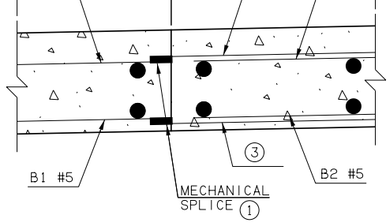
REVISIONS	
DESCRIPTION	DATE



HALF SECTION AT INTERMEDIATE DIAPHRAGM

HALF SECTION AT END DIAPHRAGM

TYPICAL CROSS SECTION

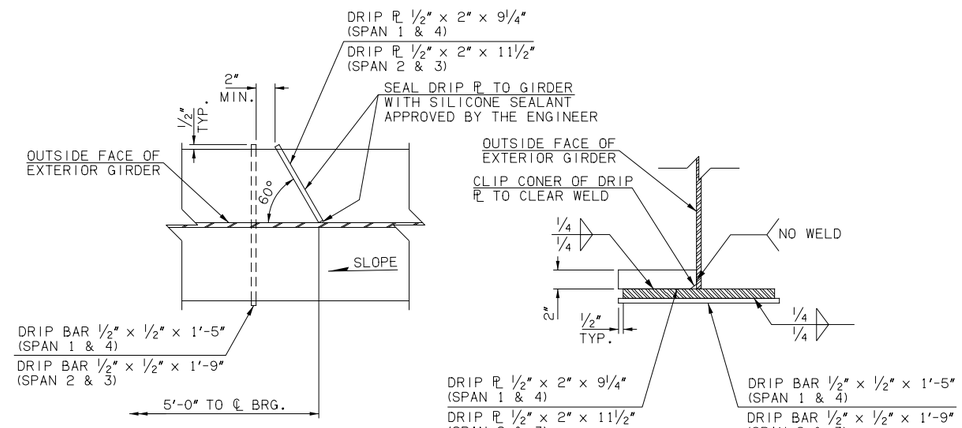


DETAIL B

(1) EPOXY COAT OR GALVANIZE MECHANICAL SPLICE

(2) PROVIDE #6 EPOXY COATED REBAR TO PROVIDE A MINIMUM LAP OF 3'-3" WITH A BARS FOR EACH PHASE AT EACH MECHANICAL SPLICE. INCLUDE ALL COST FOR THE EPOXY COATED REBAR, LABOR, AND INCIDENTALS IN THE CONTRACT UNIT PRICE OF "MECHANICAL SPLICES".

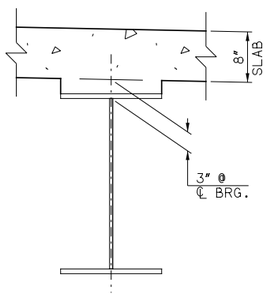
(3) PROVIDE #5 EPOXY COATED REBAR TO PROVIDE A MINIMUM LAP OF 2'-6" WITH B BARS FOR EACH PHASE AT EACH MECHANICAL SPLICE. INCLUDE ALL COST FOR THE EPOXY COATED REBAR, LABOR, AND INCIDENTALS IN THE CONTRACT UNIT PRICE OF "MECHANICAL SPLICE".



PLAN

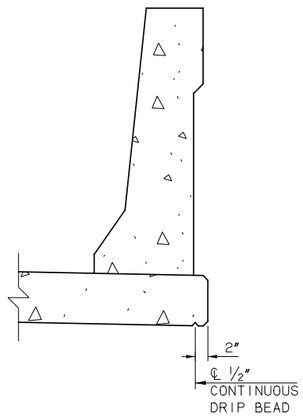
ELEVATION

DRIP PLATE AND DRIP BAR DETAILS

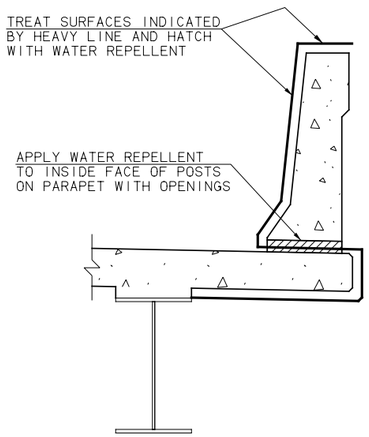


GIRDER HAUNCH DETAIL

NOTE:
PLAN QUANTITIES FOR CLASS AA CONCRETE INCLUDE BEAM HAUNCHES. THE HAUNCH HEIGHT SHOWN IS THE THEORETICAL HAUNCH HEIGHT AT THE CENTERLINE BEARING ONLY, MEASURED FORM THE BOTTOM OF THE DECK SLAB TO THE TOP OF THE GIRDER WEB, AND VARIES ACROSS THE SPAN. DETERMINE THE ACTUAL HAUNCH HEIGHT (ACCOUNTING FOR BEAM CAMBER, DEAD LOAD DEFLECTION AND ROADWAY GRADE) AFTER ERECTION OF THE BEAMS AND SUBMIT TO THE ENGINEER FOR APPROVAL. THE ENGINEER WILL NOT MEASURE DIFFERENCE BETWEEN THE THEORETICAL AND THE ACTUAL HAUNCH HEIGHTS FOR PAYMENTS.



DETAIL A



WATER REPELLENT TREATMENT DETAILS

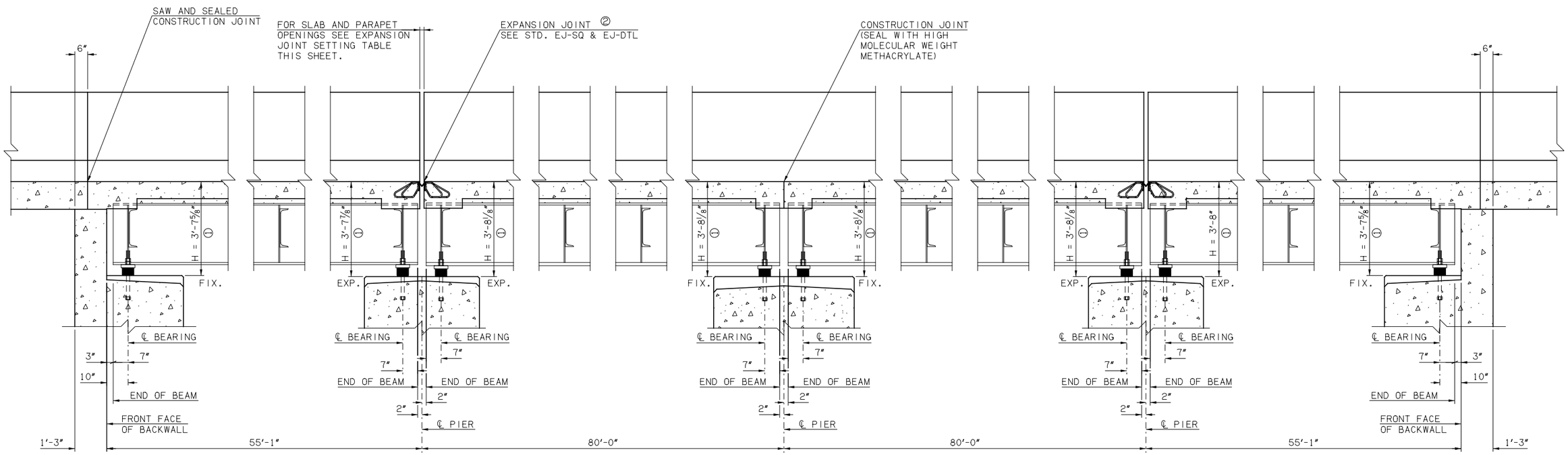
			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DESIGN			BRIDGE 'A' CANADIAN COUNTY
DRAWN			US-281 SPUR OVER I-40
CHECKED			DETAILS OF SUPERSTRUCTURE
APPROVED			(SHEET 1 OF 5)
SQUAD			

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. B019

8/20/2024

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE



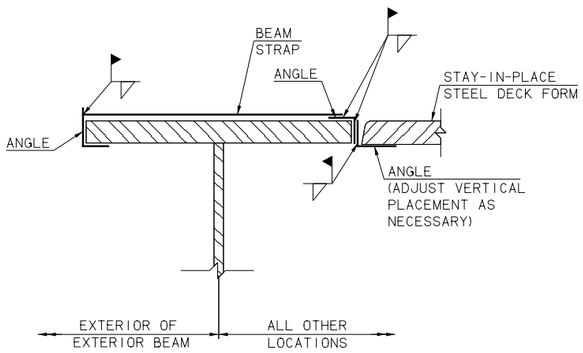
LONGITUDINAL SECTION

① DIMENSION IS FROM TOP OF DECK SLAB TO BOTTOM OF BEARING ASSEMBLY AT ℄ BEARING.

② ITEM "SEALED EXPANSION JOINT" WILL BE FABRICATED AND INSTALLED IN 2 PHASES. DURING THE SECOND PHASE OF CONSTRUCTION THE DEVICE ANGLES OF THE SECOND PHASE WILL BE ALIGNED WITH THE FIRST PHASE ANGLES AND PROPERLY SUPPORTED DURING THE POURING OF THE CONCRETE. THE NEOPRENE GLAND WILL BE FURNISHED FULL LENGTH OF THE COMPLETED EXPANSION JOINT. THE END OF THE ELASTOMERIC SHEET INSTALLED IN THE PHASE I JOINT WILL BE ROLLED UP AND PROTECTED UNTIL IT CAN BE INSTALLED IN PHASE II.

EXPANSION JOINT SETTING TABLE	
TEMPERATURE	JOINT OPENING
11°F	2½"
24°F	2⅜"
36°F	2¼"
48°F	2⅛"
60°F	2"
72°F	1⅞"
84°F	1¾"
96°F	1⅝"
109°F	1½"
121°F	1⅜"

INSTALL ALL DIAPHRAGMS AND TIGHTEN ALL BOLTS BEFORE PLACING CONCRETE FOR THE DECK SLAB OR APPLYING OTHER MASSIVE LOADS TO THE GIRDERS.



STAY-IN-PLACE STEEL DECK FORM FLANGE CONNECTION DETAIL

NOTE:
DO NOT WELD TO THE TOP FLANGE OR STUDS. REPORT ANY ARC STRIKE, WELD SPLATTER OR WELDING ON TOP FLANGE TO BRIDGE ENGINEER IMMEDIATELY.

DESIGN		
DRAWN		
CHECKED		
APPROVED		
SQUAD		

OKLAHOMA DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION

BRIDGE 'A' CANADIAN COUNTY
US-281 SPUR OVER I-40

DETAILS OF SUPERSTRUCTURE
(SHEET 2 OF 5)

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. B020

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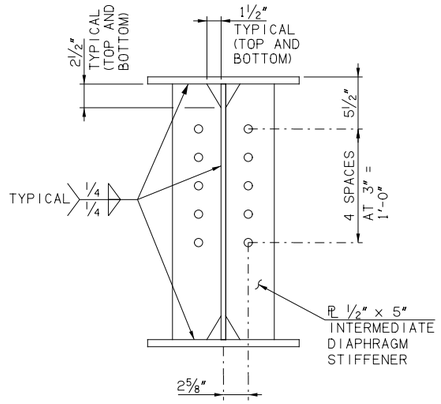
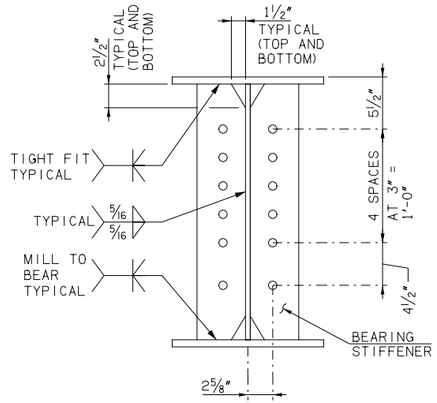
OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

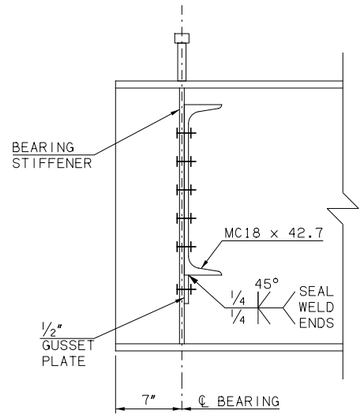
REVISIONS	
DESCRIPTION	DATE



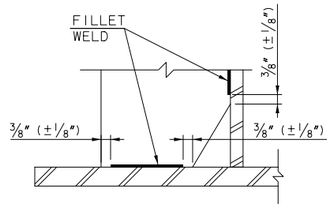
INTERMEDIATE DIAPHRAGM STIFFENER DETAIL



BEARING STIFFENER DETAIL

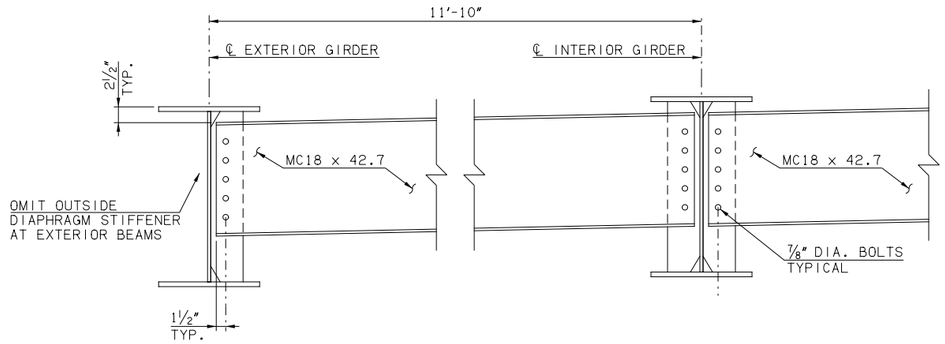


END DIAPHRAGM SECTION

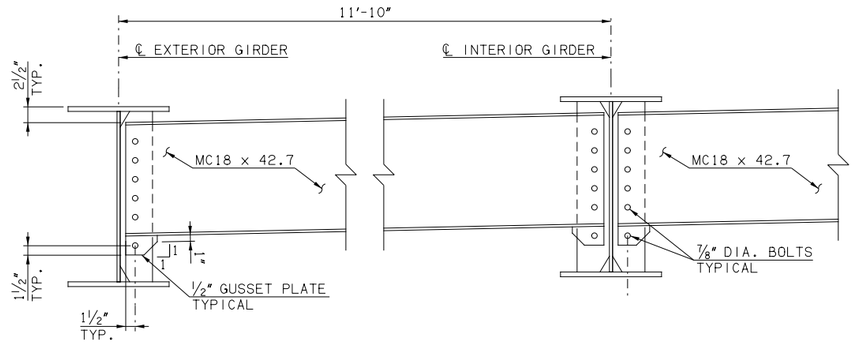


FILLET WELD TERMINATION DETAIL

NOTE:
THE CONTRACTOR MAY SUBSTITUTE A BENT PLATE DIAPHRAGM IN LIEU OF CHANNEL AND GUSSET PLATE SHOWN AT NO ADDITIONAL COST TO THE DEPARTMENT. PROVIDE ½" MINIMUM PLATE THICKNESS FORMED IN THE SHAPE OF THE CHANNEL WITH 4" MINIMUM FLANGES. FABRICATE BENT PLATE DIAPHRAGM TO A DEPTH EQUAL OR GREATER THAN THAT SHOWN FOR THE COMBINED CHANNEL AND GUSSET PLATE.



INTERMEDIATE DIAPHRAGM ELEVATION



END DIAPHRAGM ELEVATION

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN		BRIDGE 'A' CANADIAN COUNTY
CHECKED		US-281 SPUR OVER I-40
APPROVED		DETAILS OF SUPERSTRUCTURE (SHEET 3 OF 5)
SQUAD		

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. B021

8/20/2024

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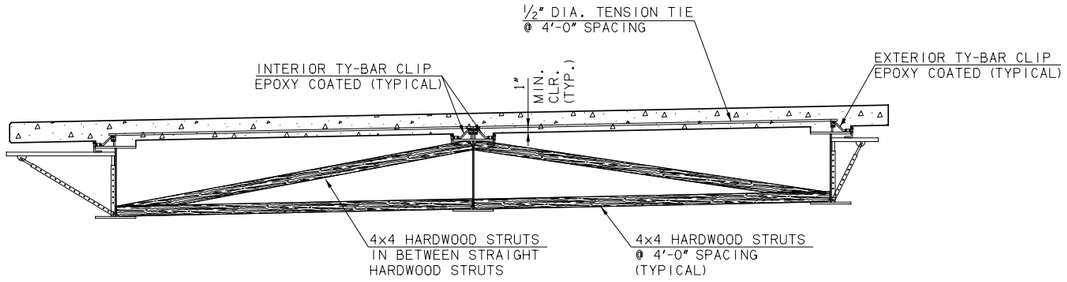
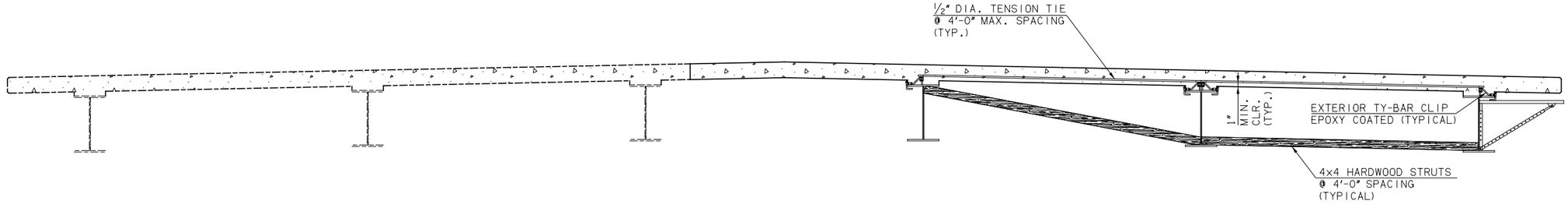
OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE

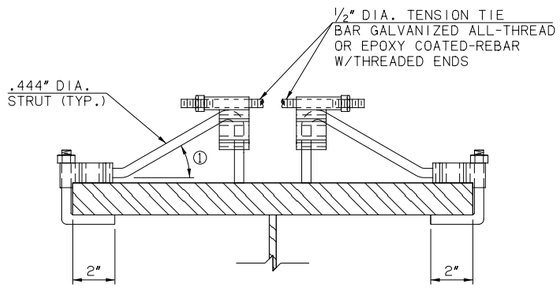


PHASE I

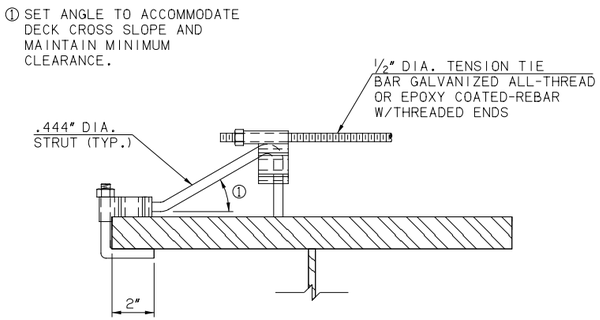


PHASE II

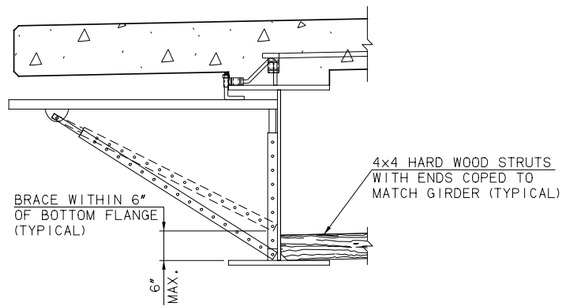
TYPICAL SECTION OF FORMWORK BRACING



TY-BARS CLIPS INTERIOR
EPOXY COATED
CONNECTION DEVICE



TY-BARS CLIPS EXTERIOR
EPOXY COATED
CONNECTION DEVICE



EXTERIOR BRACING
MAXIMUM SETTING DETAIL

DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN			BRIDGE 'A' CANADIAN COUNTY
CHECKED			US-281 SPUR OVER I-40
APPROVED			DETAILS OF SUPERSTRUCTURE (SHEET 4 OF 5)
SQUAD			

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. B022

8/20/2024

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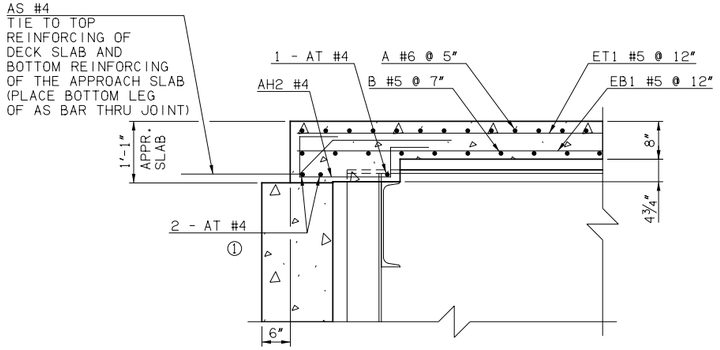
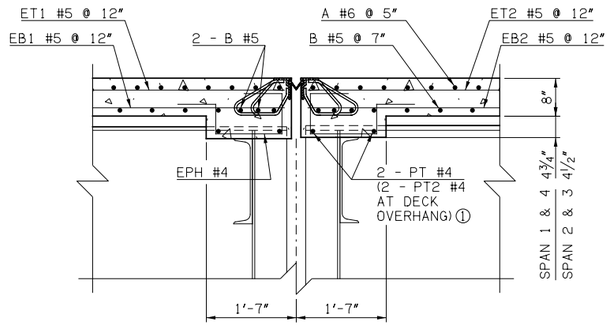
OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

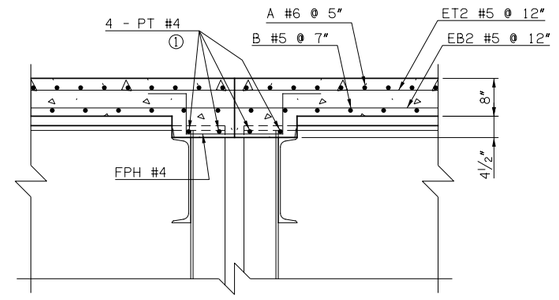
DESCRIPTION	REVISIONS	DATE



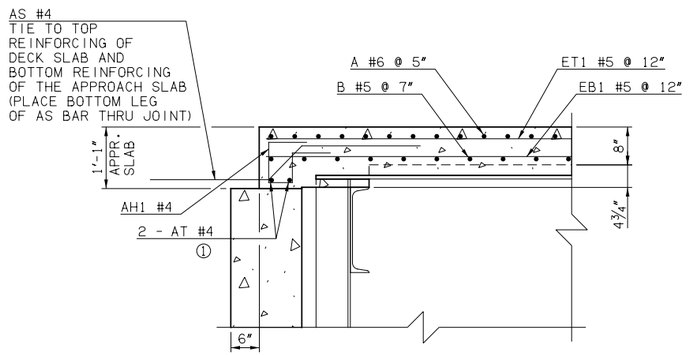
SECTION C



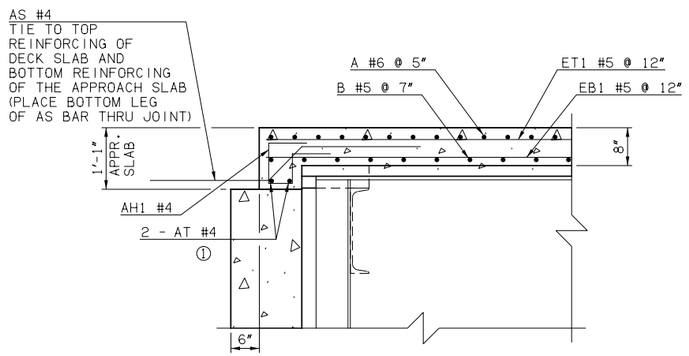
SECTION D



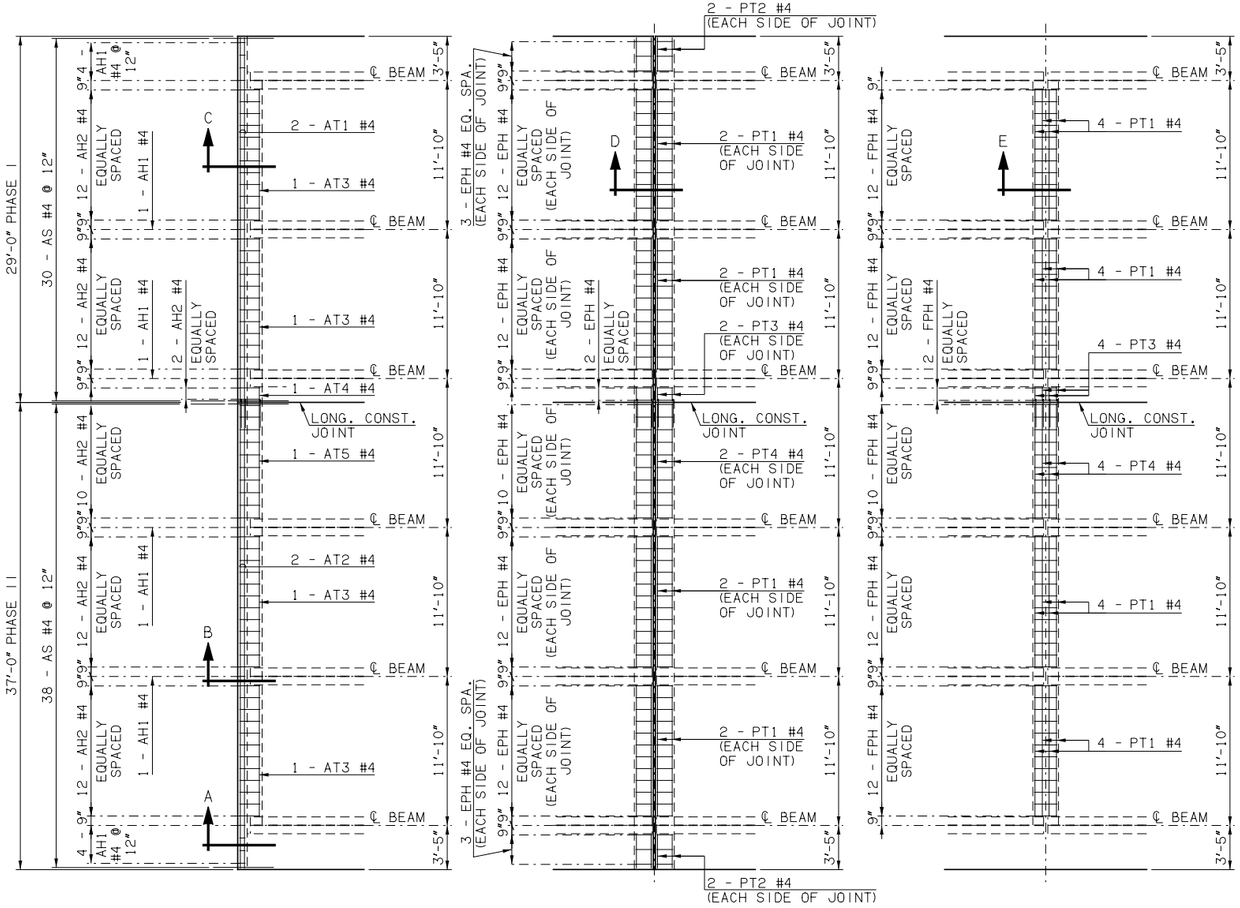
SECTION E



SECTION B



SECTION A



ABUTMENT NO.1 & 2

PIER NO.1 & 3

PIER NO.2

① NO MECHANICAL SPLICES REQUIRED.

DIAPHRAGM REINFORCING PLANS

NOTE:
DECK SLAB REINFORCING
NOT SHOWN FOR CLARITY.

DESIGN		
DRAWN		
CHECKED		
APPROVED		
SQUAD		

OKLAHOMA DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION

BRIDGE 'A' CANADIAN COUNTY
US-281 SPUR OVER I-40

DETAILS OF SUPERSTRUCTURE
(SHEET 5 OF 5)

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. B023

8/20/2024

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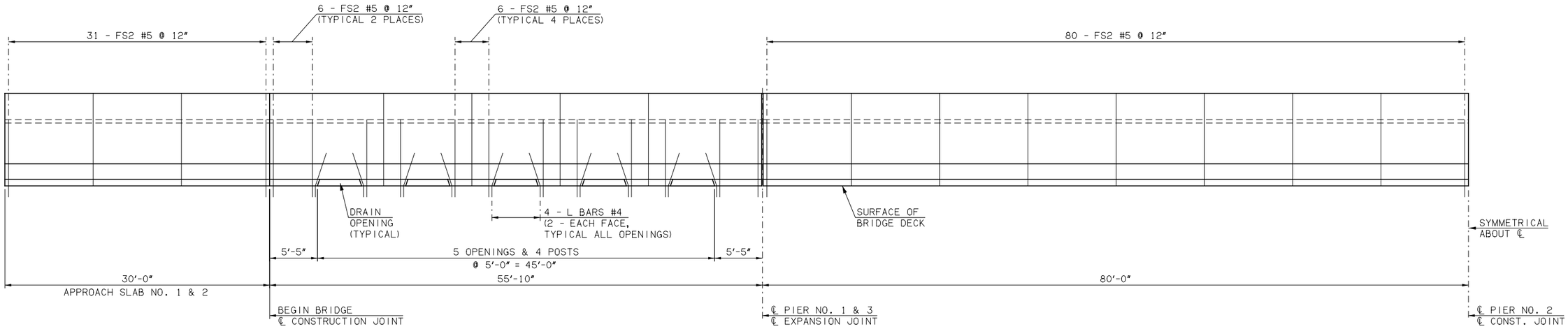
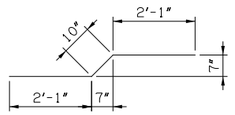
OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE

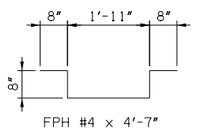


PARAPET ELEVATION

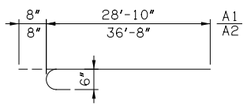
NOTE:
FOR ADDITIONAL DETAIL OF CONCRETE PARAPET, SEE STD. FSHP-42-2.



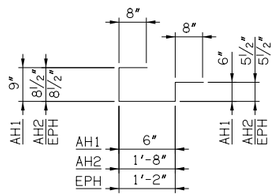
AS #4 x 5'-0"



FPH #4 x 4'-7"



A1 #6 x 29'-6"
A2 #6 x 37'-4"



AH1 #4 x 3'-1"
AH2 #4 x 4'-2"
EPH #4 x 3'-8"

SUPERSTRUCTURE BAR LIST - PHASE I

	EPOXY COATED REINFORCING					
	MARK	SIZE	QTY.	FORM	LENGTH	REMARKS
	A1	#6	656	BNT.	29'-6"	
	AH1	#4	12	BNT.	3'-1"	
	AH2	#4	52	BNT.	4'-2"	
	AS	#4	60	BNT.	5'-0"	
	AT1	#4	4	STR.	30'-10"	
	AT3	#4	4	STR.	10'-3"	
	AT4	#4	2	STR.	3'-1"	
	B1	#5	470	STR.	28'-8"	
	EB1	#5	60	STR.	55'-7"	
(1)	EB2	#5	30	STR.	164'-8"	
	EPH	#4	116	BNT.	3'-8"	
	ET1	#5	60	STR.	55'-7"	
(1)	ET2	#5	30	STR.	164'-8"	
	FPH	#4	26	BNT.	4'-7"	
	L	#4	40	BNT.	1'-3"	
	PT1	#4	24	STR.	10'-3"	
	PT2	#4	8	STR.	2'-7"	
	PT3	#4	12	STR.	3'-1"	
	FS2	#5	232	BNT.	7'-4"	

(1) INCLUDES 2 - 2'-6" MINIMUM LAPS.

SUPERSTRUCTURE BAR LIST - PHASE II

	EPOXY COATED REINFORCING					
	MARK	SIZE	QTY.	FORM	LENGTH	REMARKS
	A2	#6	656	BNT.	37'-4"	
	AH1	#4	12	BNT.	3'-1"	
	AH2	#4	68	BNT.	4'-2"	
	AS	#4	76	BNT.	5'-0"	
	AT2	#4	4	STR.	36'-8"	
	AT3	#4	4	STR.	10'-3"	
	AT5	#4	2	STR.	9'-1"	
	B2	#5	470	STR.	36'-8"	
	EB1	#5	76	STR.	55'-7"	
(1)	EB2	#5	38	STR.	164'-8"	
	EPH	#4	148	BNT.	3'-8"	
	ET1	#5	76	STR.	55'-7"	
(1)	ET2	#5	38	STR.	164'-8"	
	FPH	#4	34	BNT.	4'-7"	
	L	#4	40	BNT.	1'-3"	
	PT1	#4	24	STR.	10'-3"	
	PT2	#4	8	STR.	2'-7"	
	PT4	#4	12	STR.	9'-1"	
	FS2	#5	232	BNT.	7'-4"	

SUPERSTRUCTURE QUANTITIES

ITEM	UNIT	PHASE I	PHASE II
SAW-CUT GROOVING	SY	830.10	1071.60
SEALED EXPANSION JOINT	LF	59.00	75.00
42" F-SHAPED PARAPET	LF	271.70	271.70
STRUCTURAL STEEL	LB	164290.00	171410.00
STAINLESS STEEL FIXED BEARING ASSEMBLY	EA	12.00	12.00
STAINLESS STEEL EXPANSION BEARING ASSEMBLY	EA	12.00	12.00
CLASS AA CONCRETE	CY	206.20	261.20
MECHANICAL SPLICES	EA		1126.00
EPOXY COATED REINFORCING STEEL	LB	63240.00	79760.00
WATER REPELLANT (VISUALLY INSPECTED)	SY	236.00	236.00
SEALER CRACK PREPARATION	LF	27.50	307.20
SEALER RESIN	GAL	0.50	3.50

NOTES:
FOR L AND FS2 BAR BENDS, SEE STD. FSHP-42-2.

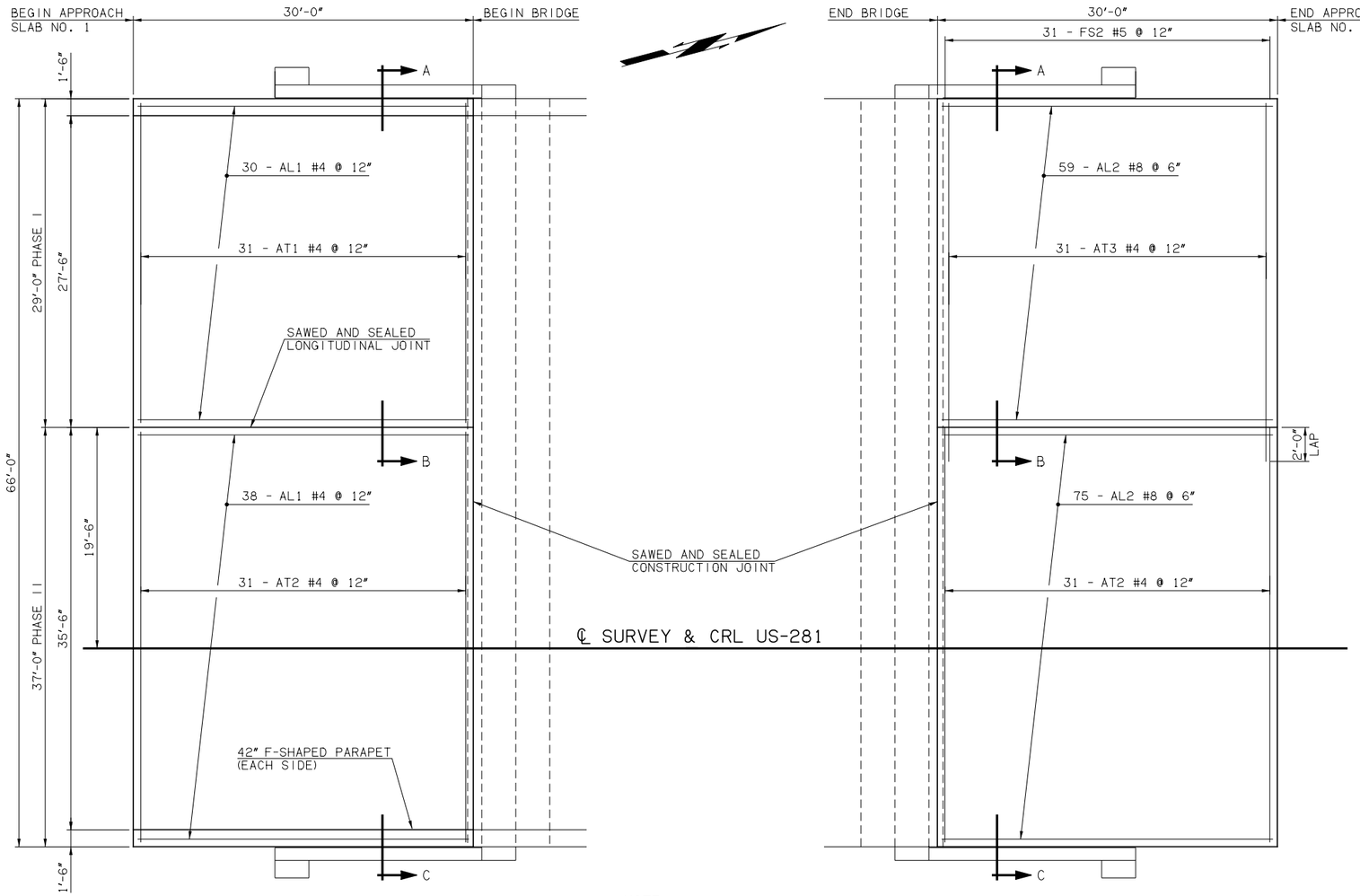
DESIGN		
DRAWN		
CHECKED		
APPROVED		
SQUAD		

OKLAHOMA DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION

BRIDGE 'A' CANADIAN COUNTY
US-281 SPUR OVER I-40

DETAILS OF PARAPET

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. B024



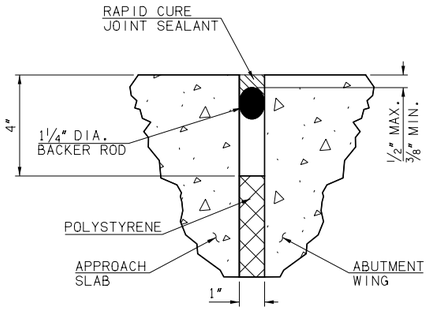
TOP REINFORCING MAT DETAIL

APPROACH SLAB NO. 1

NOTE:
FOR ADDITIONAL DETAIL OF APPROACH SLAB AT ABUTMENT, SEE LONGITUDINAL SECTION AND DIAPHRAGM DETAILS.

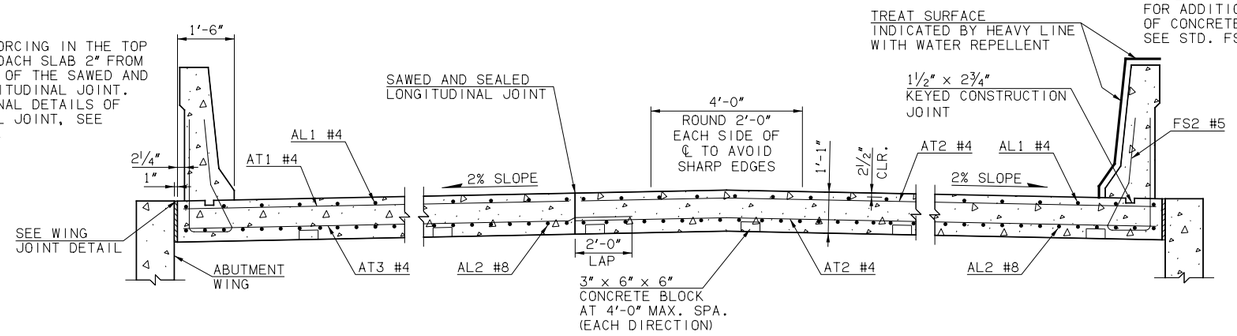
BOTTOM REINFORCING MAT DETAIL

APPROACH SLAB NO. 2



WING JOINT DETAIL

NOTE:
PLACE REINFORCING IN THE TOP OF THE APPROACH SLAB 2" FROM EITHER SIDE OF THE SAWED AND SEALED LONGITUDINAL JOINT. FOR ADDITIONAL DETAILS OF LONGITUDINAL JOINT, SEE STD. LECS-4.



SECTION A

SECTION B

NOTE:
FOR ADDITIONAL DETAIL OF CONCRETE PARAPET, SEE STD. FSHP-42-2.

SECTION C

APPROACH SLAB BAR LIST - PHASE I (ONE SHOWN, TWO REQUIRED)					
EPOXY COATED REINFORCING					
MARK	SIZE	QTY.	FORM	LENGTH	REMARKS
AL1	#4	30	STR.	29'-10"	
AL2	#8	59	STR.	29'-10"	
AT1	#4	31	STR.	28'-8"	
AT3	#4	31	STR.	31'-0"	
FS2	#5	31	BNT.	7'-4"	

APPROACH SLAB BAR LIST - PHASE II (ONE SHOWN, TWO REQUIRED)					
EPOXY COATED REINFORCING					
MARK	SIZE	QTY.	FORM	LENGTH	REMARKS
AL1	#4	38	STR.	29'-10"	
AL2	#8	75	STR.	29'-10"	
AT2	#4	62	STR.	36'-8"	
FS2	#5	31	BNT.	7'-4"	

NOTE:
FOR FS2 BAR BEND, SEE STD. FSHP-42-2.

APPROACH SLAB QUANTITIES					
ITEM	UNIT	PHASE I		PHASE II	
		APPROACH SLAB NO. 1	APPROACH SLAB NO. 2	APPROACH SLAB NO. 1	APPROACH SLAB NO. 2
APPROACH SLAB	SY	96.70	96.70	123.40	123.40
SAW-CUT GROOVING	SY	91.70	91.70	118.40	118.40
42" F-SHAPED PAPRAPET	LF	30.00	30.00	30.00	30.00
WATER REPELLENT (VISUALLY INSPECTED)	SY	15.00	15.00	15.00	15.00

OKLAHOMA DEPARTMENT OF TRANSPORTATION

FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE

DESIGN		
DRAWN		
CHECKED		
APPROVED		
SQUAD		

OKLAHOMA DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION

BRIDGE 'A' CANADIAN COUNTY
US-281 SPUR OVER I-40

DETAILS OF APPROACH SLAB

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. B025

8/20/2024
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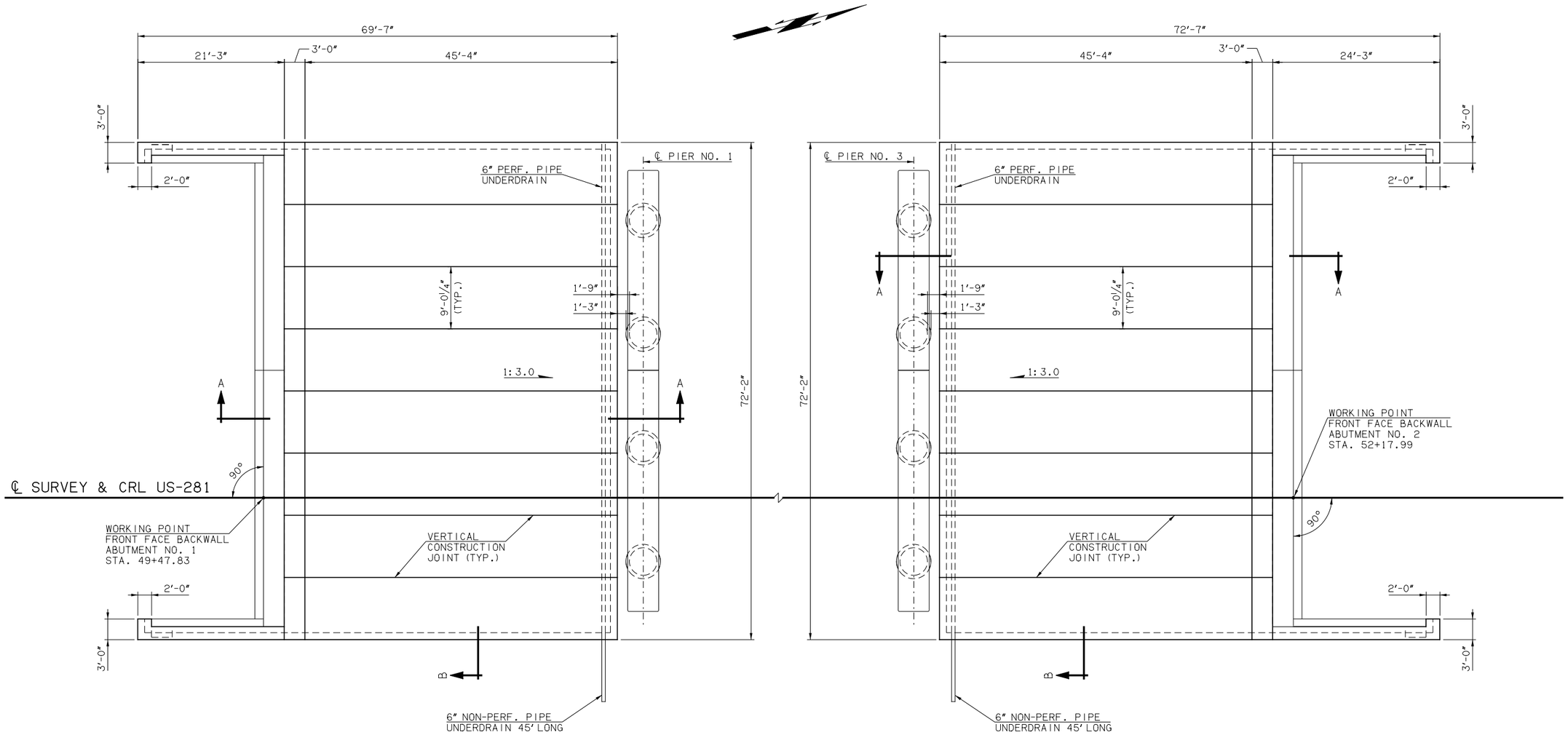
OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE



SLOPE WALL NO. 1

SLOPE WALL NO. 2

SLOPE WALL PLAN

NOTE:
ALL DIMENSIONS ARE PLAN DIMENSIONS.

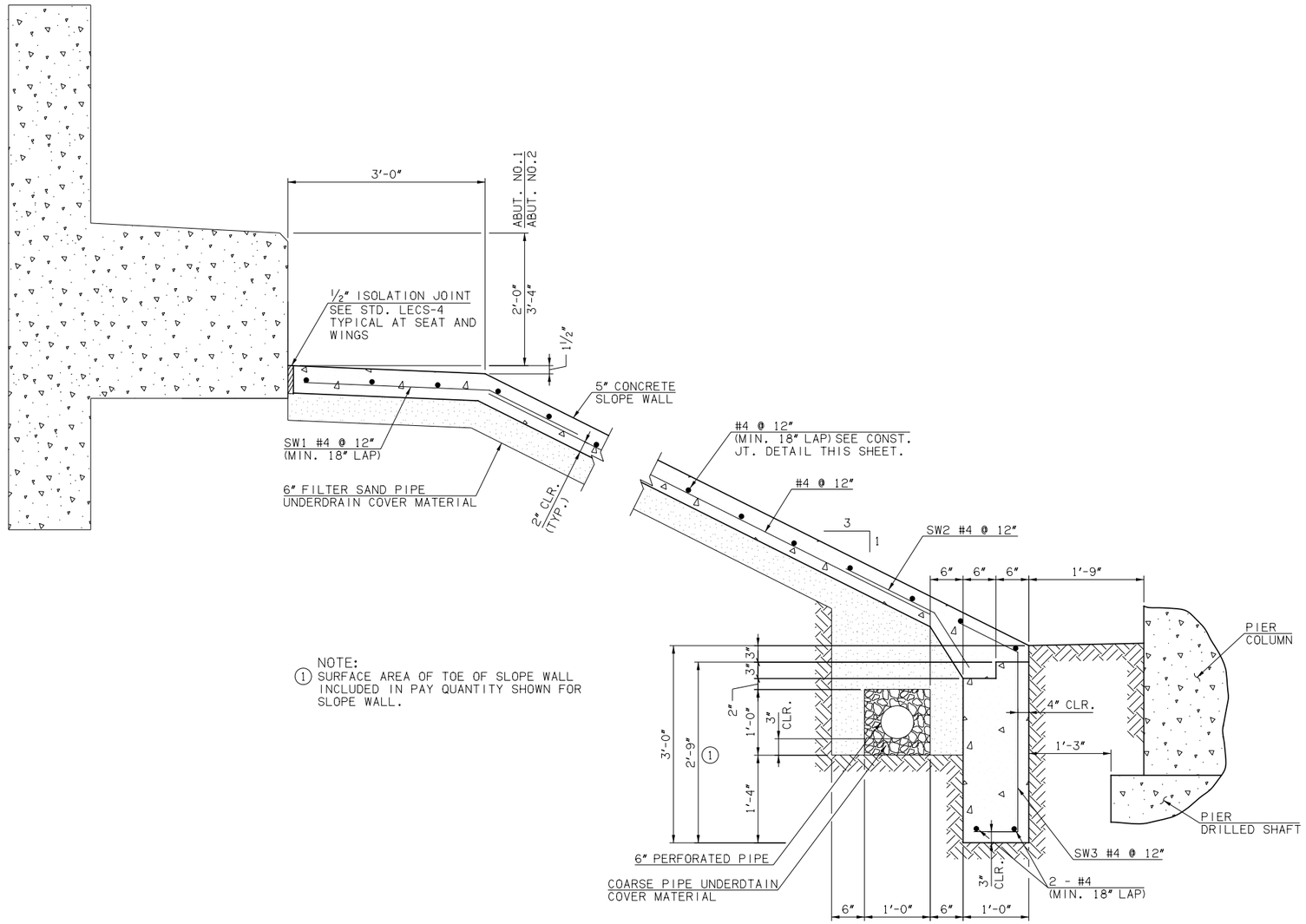
DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN		BRIDGE 'A' CANADIAN COUNTY US-281 SPUR OVER I-40
CHECKED		DETAILS OF SLOPEWALL (SHEET 1 OF 2)
APPROVED		
SQUAD		

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. B026

8/20/2024

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

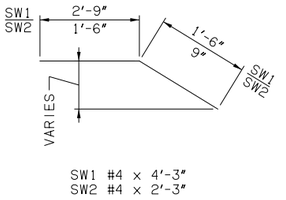
REVISIONS	
DESCRIPTION	DATE



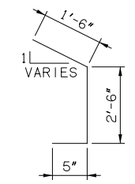
NOTE:
(1) SURFACE AREA OF TOE OF SLOPE WALL INCLUDED IN PAY QUANTITY SHOWN FOR SLOPE WALL.

SECTION A-A

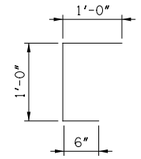
SLOPE WALL QUANTITIES				
ITEM	UNIT	SLOPE WALL NO. 1	SLOPE WALL NO. 2	TOTAL
SLOPE WALL (5")	SY	464.80	467.20	932.00
6" NON-PERF. PIPE UNDERDRAIN RND.	LF	38.00	52.00	90.00



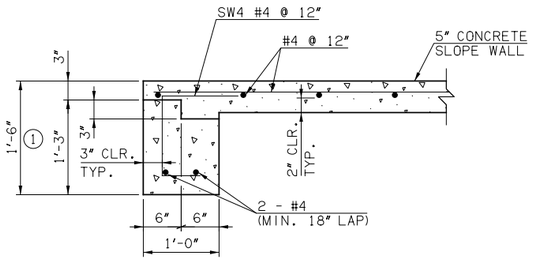
SW1 #4 x 4'-3"
SW2 #4 x 2'-3"



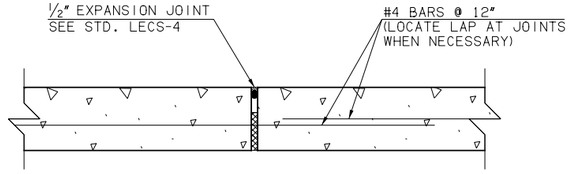
SW3 #4 x 4'-5"



SW4 #4 x 2'-6"



SECTION B



VERTICAL CONSTRUCTION DETAIL

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN		BRIDGE 'A' CANADIAN COUNTY US-281 SPUR OVER I-40
CHECKED		DETAILS OF SLOPEWALL (SHEET 2 OF 2)
APPROVED		
SQUAD		

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. B027

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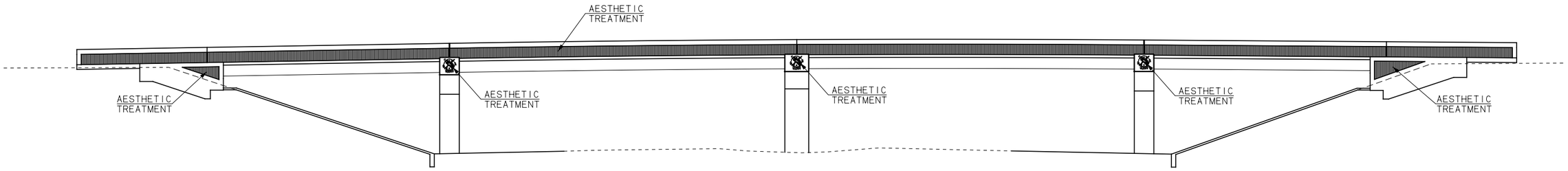
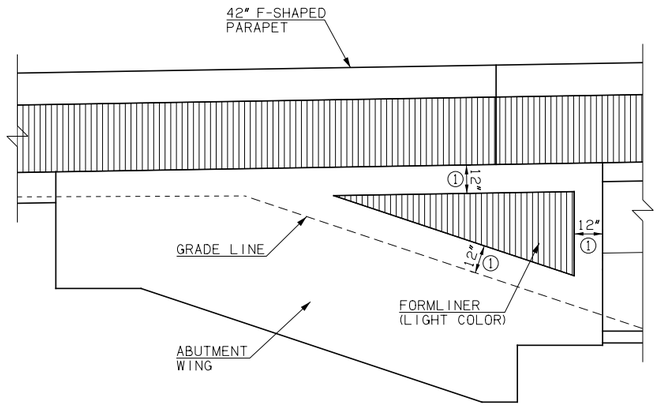
OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE

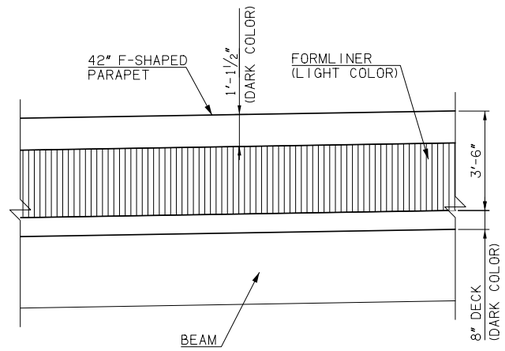


AESTHETIC TREATMENT ELEVATION

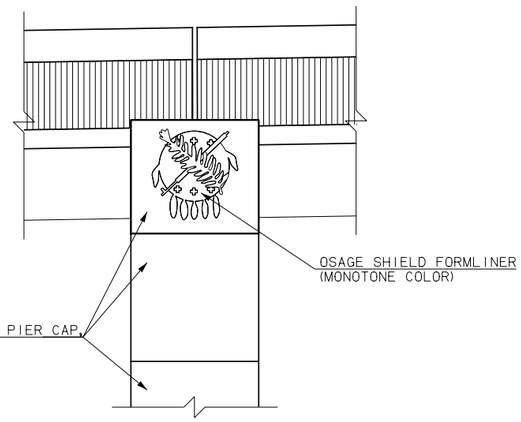
THE FORMLINER EXTENTS AND PATTERNS, COLOR PALETTES AND SCHEME, AND PEDESTAL ART WILL BE AS DIRECTED BY THE ENGINEER.



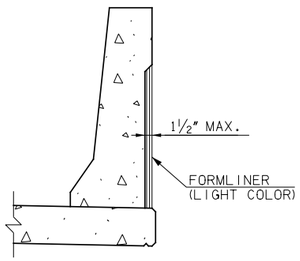
ELEVATION AT ABUTMENT WINGS
① DARK COLOR



ELEVATION AT BARRIER RAIL



ELEVATION AT PIERS



SECTION THRU PARAPET

AESTHETIC TREATMENT ELEVATION DETAILS

NOTE:
PROVIDE CONCRETE SURFACES OF ABUTMENT WINGS, PIER CAPS AND COLUMNS, SHIELD PEDESTAL, AND F-SHAPED PARAPETS WITH A CLASS 7 PAINT FINISH IN ACCORDANCE WITH SECTION 509 OF THE STANDARD SPECIFICATIONS. THE CLASS 7 PAINT FINISH WILL BE OF THE COLOR PRE-APPROVED BY THE ENGINEER.

PROVIDE CONCRETE SURFACES OF ABUTMENT WINGS AND F-SHAPED PARAPETS WITH A TEXTURED SURFACE APPROVED BY THE ENGINEER AND CONSISTENT WITH THE DETAILS SHOWN IN THE PLANS.

SUBMIT A 12" X 18" SAMPLE PANEL TO THE ENGINEER FOR APPROVAL. FURNISH SAMPLE PANELS WITH THE APPROPRIATE CONCRETE SURFACE FINISH.

PROVIDE FORM LINING MATERIAL OF FULL SIZED COMMERCIAL PANELS AND LINE UP JOINTS AS CLOSE AS PRACTICAL. NO SCRAP OR ODD SIZED PIECES WILL BE ALLOWED. MAKE PROVISIONS IN THE ADJUSTMENT OF FORMS TO CORRECT ANY DEFORMATIONS. SEAL FORM LINERS AT ALL ENDS, EDGE JOINTS, AND TIE HOLES TO PREVENT DISCOLORATION, SAND STREAKING AND FINS ON CONCRETE SURFACES. OIL ALL CHAMFER STRIPS FOR V-GROOVES TO FACILITATE STRIPPING AS SOON AS FORMS ARE REMOVED. DRESS ANY DISCONTINUITY OF RELIEF PATTERN, PARTICULARLY AT PANEL BUTT JOINTS, IN A MANNER APPROVED BY THE ENGINEER. INCLUDE ALL COST OF FORM LINERS, LABOR, MATERIAL, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SPECIFIED IN THE CONTRACT UNIT PRICE OF "CLASS AA CONCRETE" AND "CLASS A CONCRETE".

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN		BRIDGE 'A' CANADIAN COUNTY US-281 SPUR OVER I-40
CHECKED		AESTHETIC TREATMENT DETAILS
APPROVED		
SQUAD		

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. B028

STORM WATER MANAGEMENT PLAN

05/15/2023

SITE DESCRIPTION

PROJECT LIMITS: US-281 SPUR OVER I-40 BEGINNING AT I-40 SERVICE RD. AT SOUTH END OF PROJECT AND ENDING AT THE ENTRANCE TO THE CHEROKEE TRADING POST ON THE NORTH END OF PROJECT.

PROJECT DESCRIPTION: REPLACE BRIDGE AND APPROACHES OF US-281 SPUR OVER I-40. REPLACEMENT OF THE EXISTING FUNTIONALLY OBSOLETE TWO LANE, FOUR SPAN BRIDGE WITH A NEW FIVE LANE, FOUR SPAN BRIDGE ALONG THE CURRENT ALIGNMENT.

SUGGESTED SEQUENCE OF EROSION CONTROL ACTIVITIES: PRIOR TO INITIATING SOIL DISTURBING ACTIVITIES, THE CONTRACTOR WILL INSTALL ALL PERIMETER TEMPORARY SEDIMENT CONTROLS SPECIFIED. STRIP, STOCKPILE AND STABILIZE TOPSOIL, CLEAR AND GRUB ONLY IN NECESSARY AREAS, PRESERVING AS MUCH NATIVE VEGETATION AS POSSIBLE. INSTALL, MAINTAIN AND/OR MOVE TEMPORARY SEDIMENT ITEMS WITH CONSTRUCTION OPERATIONS AS PRACTICAL. IF DIRECTED BY THE ENGINEER, PLANT TEMPORARY SEEDING, REPLACE SALVAGED TOPSOIL AND DEVICES WHEN AN ACCEPTABLE VEGETATIVE COVER (AT LEAST 70%) HAS BEEN ATTAINED. AS SITE CONDITIONS WARRANT, THE CONTRACTOR MAY CHOOSE TO MODIFY THE TYPE OR ARRANGEMENT OF SPECIFIED PRACTICES TO IMPROVE THEIR EFFECTIVENESS AS APPROVED BY THE ENGINEER. THE CONTRACTOR WILL MAINTAIN A LOG OF THE DATES OF MAJOR SOIL DISTURBANCE ACTIVITIES, AND ALSO THE DATES OF INSTALLATION OF EROSION CONTROL MEASURES.

SOIL TYPE: SILT LOAM

TOTAL AREA OF THE CONSTRUCTION SITE: 9.70 AC.

ESTIMATED AREA TO BE DISTURBED: 3.29 AC.

OFFSITE AREA TO BE DISTURBED: (FOR CONTRACTOR USE)

TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION: 0.55 AC.

TOTAL IMPERVIOUS AREA POST-CONSTRUCTION: 0.80 AC.

POST-CONSTRUCTION RUNOFF COEFFICIENT OF THE SITE: 0.39

LATITUDE & LONGITUDE OF CENTER OF PROJECT: 35.53325° N, 98.23791° W

PROJECT WILL DISCHARGE TO:

NAME OF RECEIVING WATERS: UNNAMED TRIBUTARY TO THE CANADIAN RIVER

SENSITIVE WATERS OR WATERSHEDS: YES [ ] NO [X]

303(d) IMPAIRED WATERS: YES [ ] NO [X]

IF YES, LIST IMPAIRMENT: N/A

LOCATED IN A TMDL: YES [ ] NO [X]

LAKE THUNDERBIRD TMDL: YES [ ] NO [X]

MS4 ENTITY YES [ ] NO [X]

IF YES, LOCATION:

NOTE:
THIS SHEET SHOULD BE USED IN CONJUNCTION WITH A DRAINAGE MAP THAT ILLUSTRATES THE DRAINAGE PATTERNS/PATHWAYS AND RECEIVING WATERS FOR THIS PROJECT. THIS SHEET SHOULD ALSO BE USED WITH THE EROSION CONTROL SUMMARIES, PAY ITEMS, & NOTES.

EROSION AND SEDIMENT CONTROLS

SOIL STABILIZATION PRACTICES:

- ____ TEMPORARY SEEDING
- X PERMANENT SODDING, SPRIGGING OR SEEDING
- X VEGETATIVE MULCHING
- ____ SOIL RETENTION BLANKET
- X PRESERVATION OF EXISTING VEGETATION
- ____ HYDROMULCH / HYDROSEED

NOTE: TEMPORARY EROSION CONTROL METHODS MUST BE USED ON ALL DISTURBED AREAS WHERE CONSTRUCTION ACTIVITIES HAVE CEASED FOR OVER 14 DAYS. METHODS USED WILL BE AS SHOWN ON PLANS, OR AS DIRECTED BY THE ENGINEER.

STRUCTURAL PRACTICES:

- ____ STABILIZED CONSTRUCTION EXIT
- X TEMPORARY SILT FENCE
- X TEMPORARY SILT DIKES
- ____ TEMPORARY FIBER LOG
- ____ DIVERSION, INTERCEPTOR OR PERIMETER DIKES
- ____ DIVERSION, INTERCEPTOR OR PERIMETER SWALES
- X ROCK FILTER DAMS
- X TEMPORARY SLOPE DRAIN
- ____ PAVED DITCH W/ DITCH LINER PROTECTION
- ____ TEMPORARY DIVERSION CHANNELS
- ____ TEMPORARY SEDIMENT BASINS
- ____ TEMPORARY SEDIMENT TRAPS
- X TEMPORARY SEDIMENT FILTERS
- X TEMPORARY SEDIMENT REMOVAL
- ____ RIP RAP
- ____ INLET PROTECTION
- ____ TEMPORARY BRUSH SEDIMENT BARRIERS
- ____ SANDBAG BERMS
- ____ TEMPORARY STREAM CROSSINGS
- ____ FLEXAMAT / ARTICULATED CONCRETE BLOCK
- ____ COMPOST FILTER SOCKS
- ____ EROSION CONTROL MATS AND BLANKETS

OFFSITE VEHICLE TRACKING:

- ____ HAUL ROADS DAMPENED FOR DUST CONTROL
- X LOADED HAUL TRUCKS TO BE COVERED WITH TARPAULIN
- X EXCESS DIRT ON ROAD REMOVED DAILY

NOTES:

THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE FOLLOWING:

MAINTENANCE AND INSPECTION:

ALL EROSION AND SEDIMENT CONTROLS WILL BE MAINTAINED IN GOOD WORKING ORDER FROM THE BEGINNING OF CONSTRUCTION UNTIL AN ACCEPTABLE VEGETATIVE COVER IS ESTABLISHED. INSPECTION BY THE CONTRACTOR AND ANY NECESSARY REPAIRS SHALL BE PERFORMED ONCE EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.5 INCH AS RECORDED BY A NON-FREEZING RAIN GAUGE TO BE LOCATED ON SITE. POTENTIALLY ERODIBLE AREAS, DRAINAGEWAYS, MATERIAL STORAGE, STRUCTURAL DEVICES, CONSTRUCTION ENTRANCES AND EXITS ALONG WITH EROSION AND SEDIMENT CONTROL LOCATIONS ARE EXAMPLES OF SITES THAT NEED TO BE INSPECTED.

WASTE MATERIALS:

PROPER MANAGEMENT AND DISPOSAL OF CONSTRUCTION WASTE MATERIAL IS REQUIRED BY THE CONTRACTOR. MATERIALS INCLUDE STOCKPILES, SURPLUS, DEBRIS AND ALL OTHER BY-PRODUCTS FROM THE CONSTRUCTION PROCESS. PRACTICES INCLUDE DISPOSAL, PROPER MATERIALS HANDLING, SPILL PREVENTION AND CLEANUP MEASURES. CONTROLS AND PRACTICES SHALL MEET THE REQUIREMENTS OF ALL FEDERAL, STATE AND LOCAL AGENCIES.

HAZARDOUS MATERIALS:

PROPER MANAGEMENT AND DISPOSAL OF HAZARDOUS WASTE MATERIALS IS REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING MANUFACTURER'S RECOMMENDATIONS, STATE AND FEDERAL REGULATIONS TO ENSURE CORRECT HANDLING, DISPOSAL, SPILL PREVENTION AND CLEANUP MEASURES. EXAMPLES INCLUDE BUT ARE NOT LIMITED TO: PAINTS, ACIDS, CLEANING SOLVENTS, CHEMICAL ADDITIVES, CONCRETE CURING COMPOUNDS AND CONTAMINATED SOILS.

GENERAL NOTES:

A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS REQUIRED TO COMPLY WITH THE OKLAHOMA POLLUTION DISCHARGE ELIMINATION SYSTEM (OPDES) REGULATIONS. THIS PLAN IS INITIATED DURING THE DESIGN PHASE, CONFIRMED IN THE PRE-WORK MEETINGS AND AVAILABLE ON THE JOB SITE ALONG WITH COPIES OF THE NOTICE OF INTENT (NOI) FORM AND PERMIT CERTIFICATE THAT HAVE BEEN FILED WITH THE OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ). THE PLAN MUST BE KEPT CURRENT WITH UP-TO-DATE AMENDMENTS DURING THE PROGRESSION OF THE PROJECT. ALL CONTRACTOR OFF-SITE OPERATIONS ASSOCIATED WITH THE PROJECT MUST BE DOCUMENTED IN THE SWPPP, I.E., BORROW PITS, WORK ROADS, DISPOSAL SITES, ASPHALT/CONCRETE PLANTS, ETC. THE BASIC GOAL OF STORM WATER MANAGEMENT IS TO IMPROVE WATER QUALITY BY REDUCING POLLUTANTS IN STORM WATER DISCHARGES. RUNOFF FROM CONSTRUCTION SITES HAS A POTENTIAL FOR POLLUTION DUE TO EXPOSED SOILS AND THE PRESENCE OF HAZARDOUS MATERIALS USED IN THE CONSTRUCTION PROCESS. THE PREVENTION OF SOIL EROSION, CONTAINMENT OF HAZARDOUS MATERIALS AND/OR THE INTERCEPTION OF THESE POLLUTANTS BEFORE LEAVING THE CONSTRUCTION SITE ARE THE BEST PRACTICES FOR CONTROLLING STORM WATER POLLUTION.

THE FOLLOWING SECTIONS OF THE 2019 ODOT STANDARD SPECIFICATIONS SHOULD BE NOTED:

103.05	BONDING REQUIREMENTS
104.10	FINAL CLEANING UP
104.12	CONTRACTOR'S RESPONSIBILITY FOR WORK
104.13	ENVIRONMENTAL PROTECTION
106.08	STORAGE AND HANDLING OF MATERIAL
107.01	LAWS, RULES AND REGULATIONS TO BE OBSERVED
107.20	STORM WATER MANAGEMENT
220	MANAGEMENT OF EROSION, SEDIMENTATION, AND STORM WATER POLLUTION PREVENTION
221	TEMPORARY SEDIMENT CONTROL

IN ADDITION:

"ODEQ GENERAL PERMIT (OKR10) FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES WITHIN THE STATE OF OKLAHOMA." ODEQ, WATER QUALITY DIVISION, OCTOBER 18, 2022.

ADDITIONAL PERMITS REQUIRED FROM OKLAHOMA WATER RESOURCES BOARD

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN		
CHECKED		STORM WATER MANAGEMENT PLAN
APPROVED		
SQUAD		

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. R001

REVISED 8-1-2022

8/20/2024

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OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE

100′ 0 50′ 100′

US-281 SPUR

I-40 WB RAMP

DA 14 = 4.35ac

DA 10 = 0.97ac

DA 9 = 4.16ac

I-40 WB

I-40 EB

I-40 EB RAMP

65+00 60+00 55+00 50+00 45+00

15+00 10+00 5+00 320+00 325+00 330+00 335+00 340+00 345+00

NAME OF RECEIVING WATERS:
UNNAMED TRIBUTARY - CANADIAN RIVER

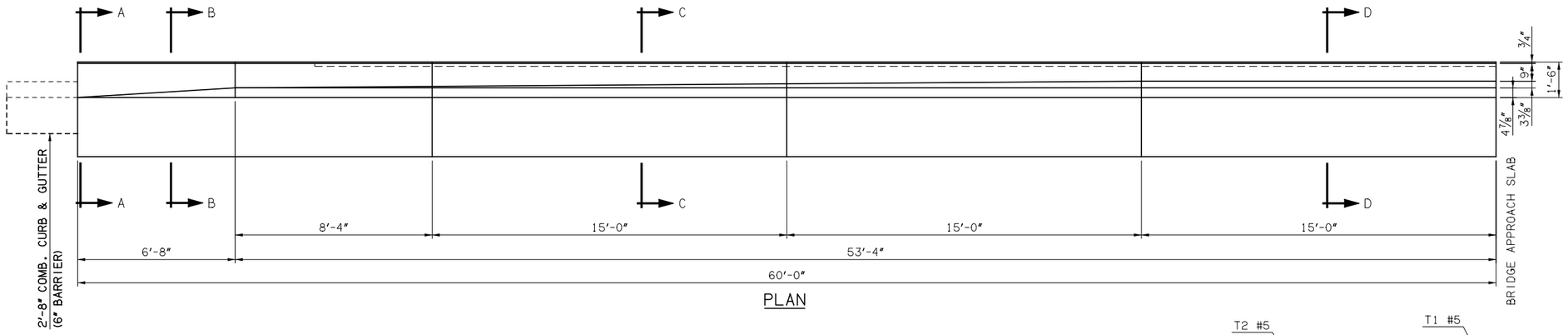
DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN			
CHECKED			DRAINAGE MAP
APPROVED			
SQUAD			

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. R002

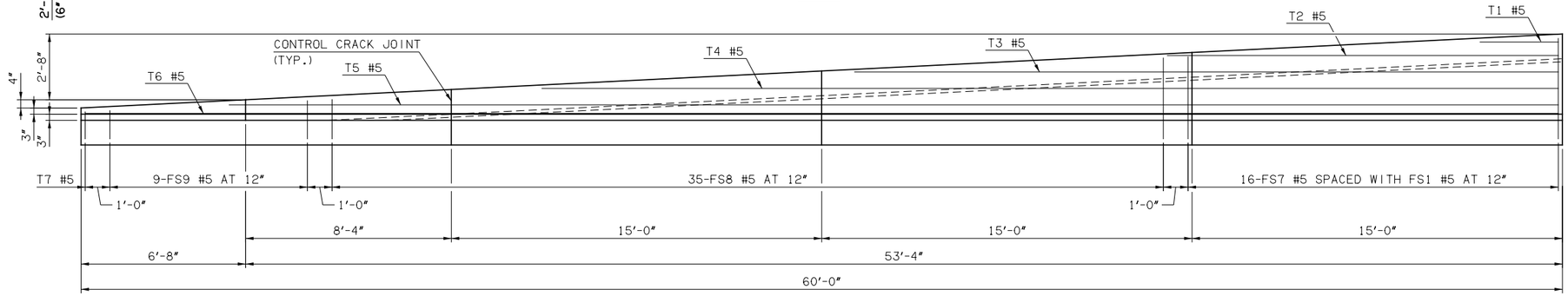
8/20/2024

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE



PLAN

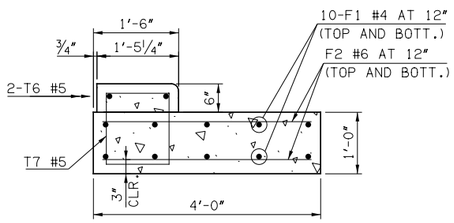


ELEVATION

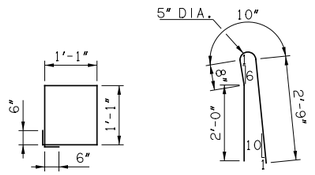
TRANSITION BARRIER BAR LIST (ONE TRANSITION BARRIER SHOWN, FOUR REQUIRED)					
EPOXY COATED REINFORCING					
MARK	SIZE	QTY.	FORM	LENGTH	REMARKS
F1	#4	10	STR.	59'-8"	
F2	#6	122	STR.	3'-8"	
FS1	#5	16	BNT.	6'-3"	
FS7	#5	16	BNT.	8'-0"	
FS8	#5	35	BNT.	6'-4" AVG.	4'-8" TO 8'-0"
FS9	#5	9	BNT.	4'-4" AVG.	4'-0" TO 4'-8"
T1	#5	2	STR.	3'-2"	
T2	#5	2	STR.	15'-10"	
T3	#5	2	STR.	28'-6"	
T4	#5	2	STR.	41'-2"	
T5	#5	2	STR.	53'-10"	
T6	#5	2	STR.	59'-8"	
T7	#5	1	BNT.	5'-4"	

TRANSITION BARRIER QUANTITIES (QUANTITIES PER BARRIER, FOUR REQUIRED)			
	ITEM	UNIT	TOTAL
	CLASS AA CONCRETE	CY	13.60
(10)	EPOXY COATED REINFORCING STEEL	LB	2010.00

(10) INCLUDES FS7, FS8, FS9 AND T7 BARS MUST BE IN PLACE PRIOR TO POURING OF THE PARAPET CONCRETE.

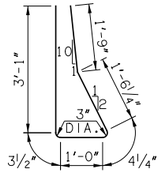


SECTION A-A

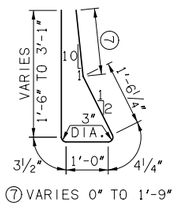


T7 #5 x 5'-4"

FS1 #5 x 6'-3"

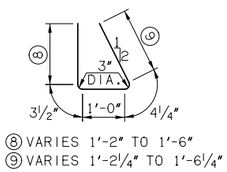


FS7 #5 x 8'-0"



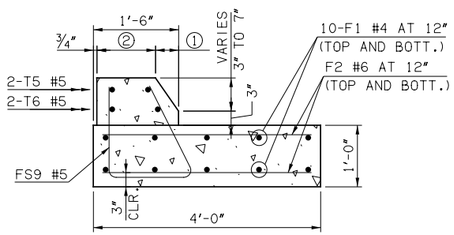
⑦ VARIES 0" TO 1'-9"

FS8 #5 x 6'-4" AVG.



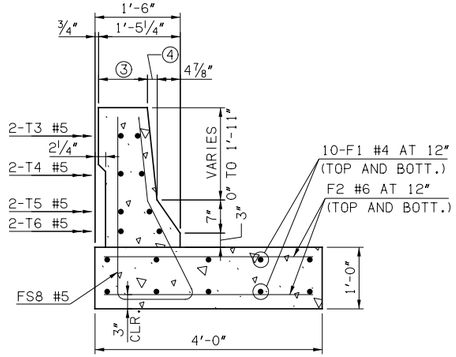
⑧ VARIES 1'-2" TO 1'-6"
⑨ VARIES 1'-2 1/4" TO 1'-6 1/4"

FS9 #5 x 4'-4" AVG.



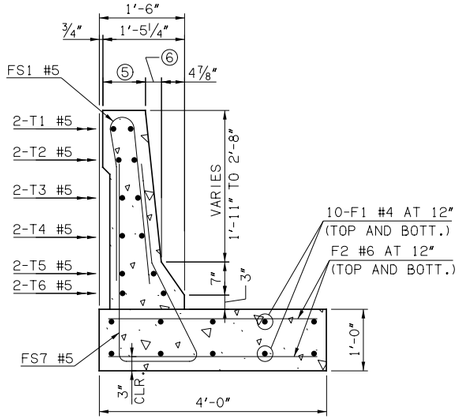
① VARIES 0" TO 4 7/8"
② VARIES 1'-5 1/4" TO 1'-0 3/8"

SECTION B-B



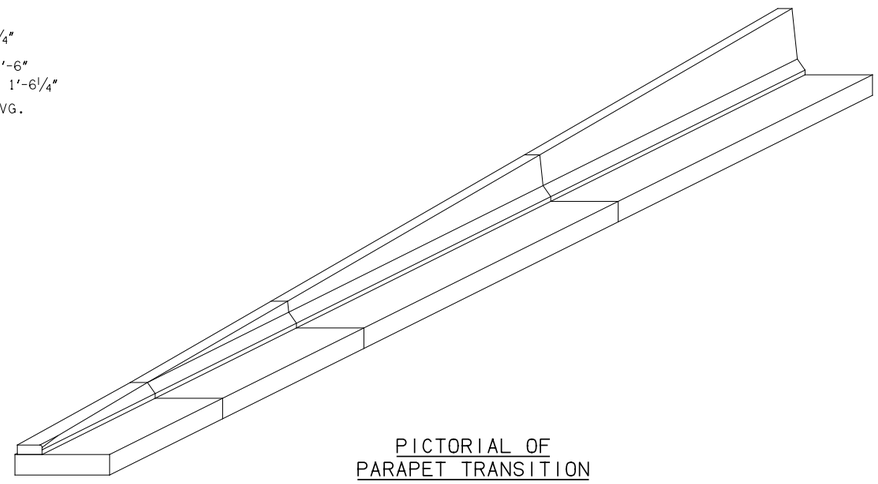
③ VARIES 1'-0 3/8" TO 9 15/16"
④ VARIES 0" TO 2 7/16"

SECTION C-C



⑤ VARIES 9 15/16" TO 9"
⑥ VARIES 2 7/16" TO 3 3/8"

SECTION D-D



PICTORIAL OF PARAPET TRANSITION

DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN			
CHECKED			ROADWAY DETAILS
APPROVED			
SQUAD			

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. R003

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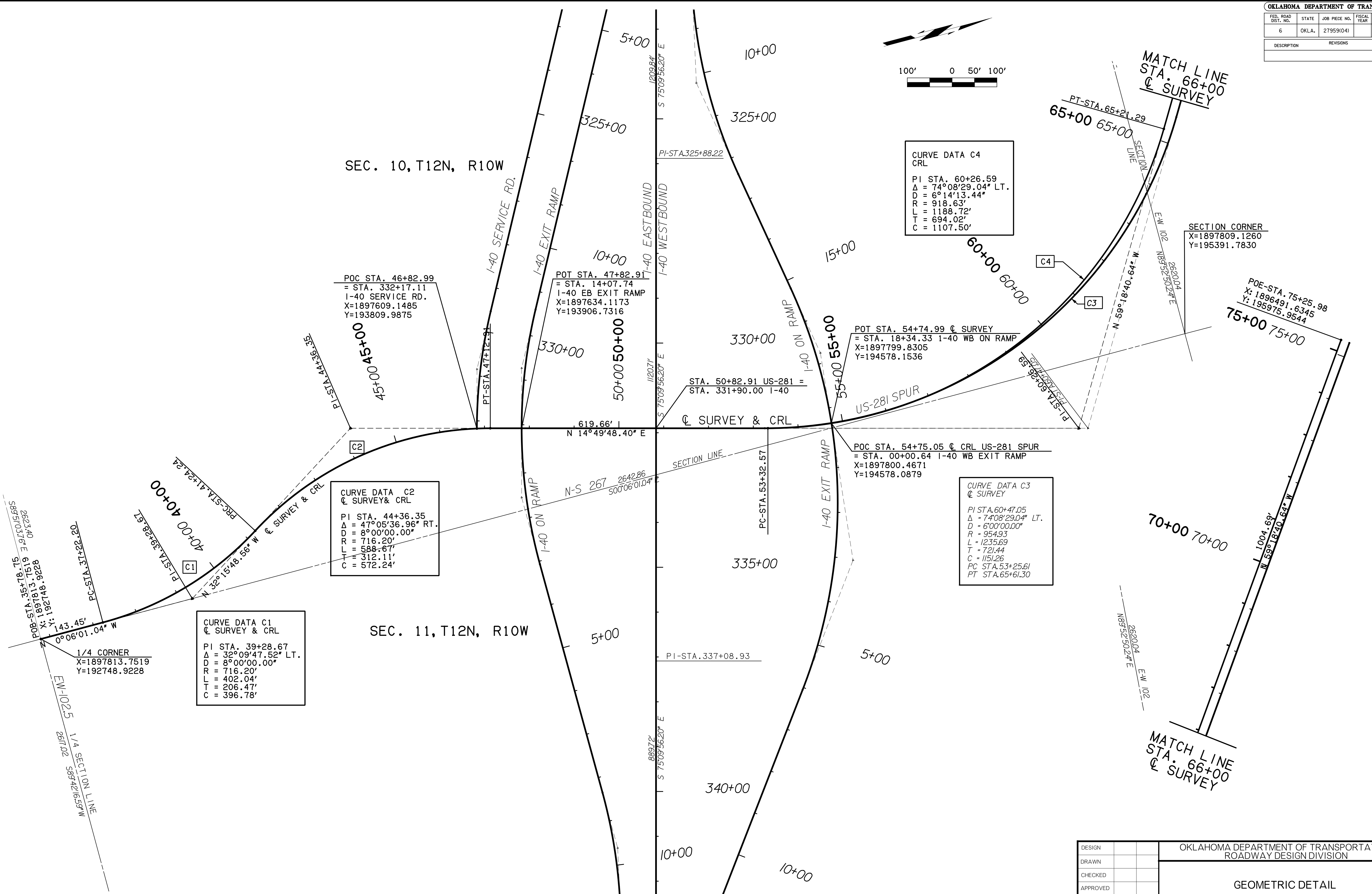
OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

DESCRIPTION	REVISIONS	DATE



MATCH LINE STA. 66+00 ℄ SURVEY
100' 0 50' 100'
SEC. 10, T12N, R10W
SEC. 11, T12N, R10W
I-40 SERVICE RD.
I-40 EXIT RAMP
I-40 EASTBOUND
I-40 WESTBOUND
I-40 ON RAMP
I-40 EXIT RAMP
US-281 SPUR
℄ SURVEY & CRL
SECTION LINE
1/4 SECTION LINE
PI-STA.325+88.22
PI-STA.337+08.93
S 75°09'56.20" E
POC STA. 46+82.99
= STA. 332+17.11
I-40 SERVICE RD.
X=1897609.1485
Y=193809.9875
POT STA. 47+82.91
= STA. 14+07.74
I-40 EB EXIT RAMP
X=1897634.1173
Y=193906.7316
STA. 50+82.91 US-281 =
STA. 331+90.00 I-40
619.66'
N 14°49'48.40" E
POT STA. 54+74.99 ℄ SURVEY
= STA. 18+34.33 I-40 WB ON RAMP
X=1897799.8305
Y=194578.1536
POC STA. 54+75.05 ℄ CRL US-281 SPUR
= STA. 00+00.64 I-40 WB EXIT RAMP
X=1897800.4671
Y=194578.0879
PC-STA.53+32.57
PT-STA.65+21.29
PT-STA.47+12.91
PI-STA.44+36.35
PRC-STA.41+24.24
PI-STA.39+28.67
PC-STA.37+22.20
POB-STA.35+78.75
X: 1897813.7519
Y: 192748.9228
143.45'
0°06'01.04" W
N 32°15'48.56" W
1/4 CORNER
X=1897813.7519
Y=192748.9228
SECTION CORNER
X=1897809.1260
Y=195391.7830
POE-STA.75+25.98
X: 1896491.6345
Y: 195975.9544
N 59°18'40.64" W
1004.69'
N-S 267
2642.86
S00°06'01.04" E
EW-102.5
2617.02
S89°42'16.59" W
E-W 102
2620.04
N89°52'50.24" E
CURVE DATA C1
℄ SURVEY & CRL
PI STA. 39+28.67
Δ = 32°09'47.52" LT.
D = 8°00'00.00"
R = 716.20'
L = 402.04'
T = 206.47'
C = 396.78'
CURVE DATA C2
℄ SURVEY& CRL
PI STA. 44+36.35
Δ = 47°05'36.96" RT.
D = 8°00'00.00"
R = 716.20'
L = 588.67'
T = 312.11'
C = 572.24'
CURVE DATA C3
℄ SURVEY
PI STA.60+47.05
Δ = 74°08'29.04" LT.
D = 6°00'00.00"
R = 954.93
L = 1235.69
T = 721.44
C = 1151.26
PC STA.53+25.61
PT STA.65+61.30
CURVE DATA C4
CRL
PI STA. 60+26.59
Δ = 74°08'29.04" LT.
D = 6°14'13.44"
R = 918.63'
L = 1188.72'
T = 694.02'
C = 1107.50'

			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DESIGN			
DRAWN			GEOMETRIC DETAIL
CHECKED			
APPROVED			
SQUAD			

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. R004

8/20/2024

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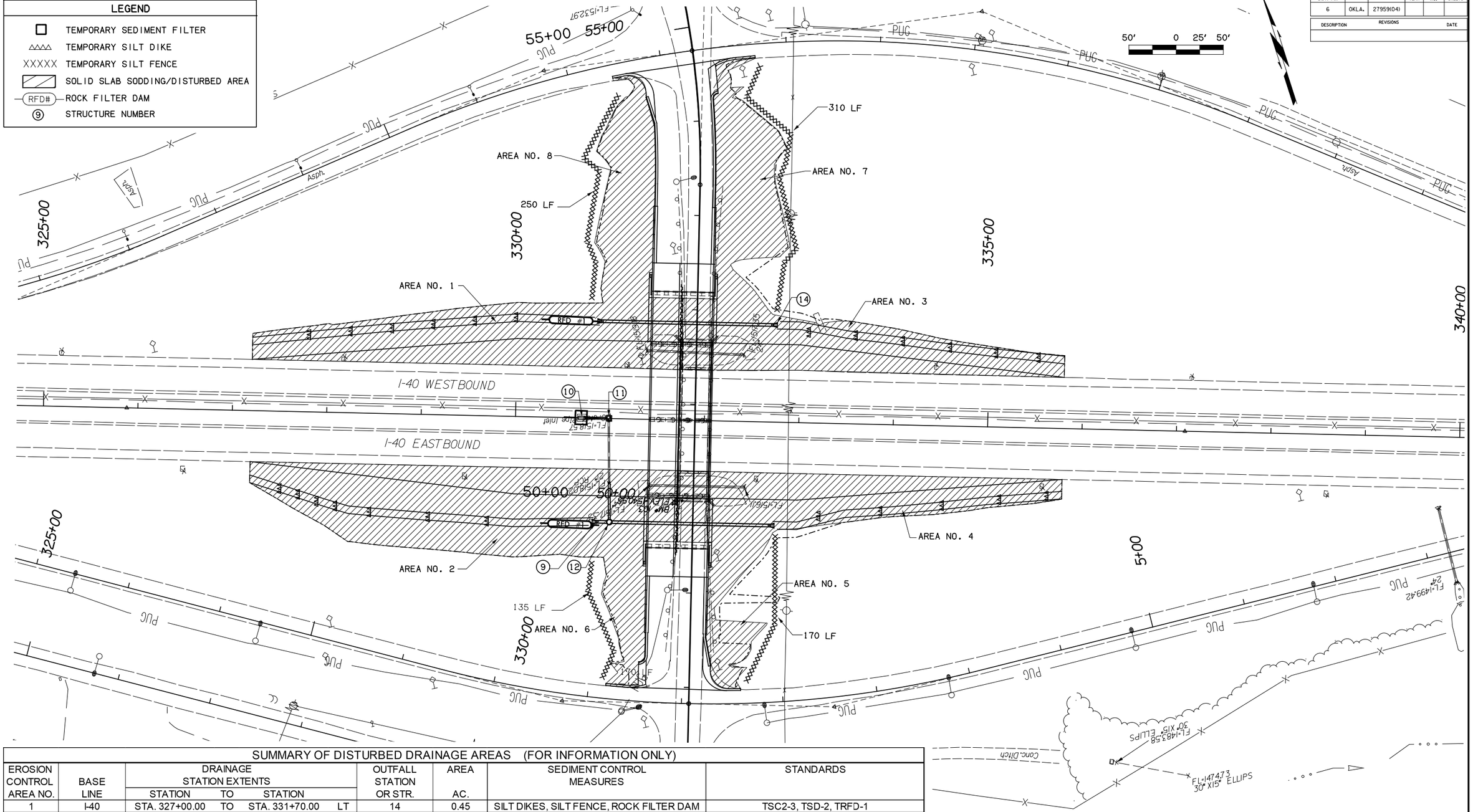
OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			
DESCRIPTION	REVISIONS				DATE

LEGEND

- TEMPORARY SEDIMENT FILTER
- TEMPORARY SILT DIKE
- XXXXX TEMPORARY SILT FENCE
- SOLID SLAB SODDING/DISTURBED AREA
- RFD# ROCK FILTER DAM
- ⑨ STRUCTURE NUMBER



SUMMARY OF DISTURBED DRAINAGE AREAS (FOR INFORMATION ONLY)

EROSION CONTROL AREA NO.	BASE LINE	DRAINAGE STATION EXTENTS				OUTFALL STATION OR STR.	AREA AC.	SEDIMENT CONTROL MEASURES	STANDARDS
		STATION	TO	STATION					
1	I-40	STA. 327+00.00	TO	STA. 331+70.00	LT	14	0.45	SILT DIKES, SILT FENCE, ROCK FILTER DAM	TSC2-3, TSD-2, TRFD-1
2	I-40	STA. 327+00.00	TO	STA. 331+70.00	RT	9	0.68	SILT DIKES, SILT FENCE, ROCK FILTER DAM	TSC2-3, TSD-2, TRFD-1
3	I-40	STA. 331+70.00	TO	STA. 336+00.00	LT	342+52	0.30	SILT DIKES, SILT FENCE	TSC2-3, TSD-2
4	I-40	STA. 331+70.00	TO	STA. 336+00.00	RT	339+80	0.29	SILT DIKES, SILT FENCE	TSC2-3, TSD-2
5	US-281 SPUR	STA. 47+98.00	TO	STA. 50+85.00	RT	339+80	0.39	SILT FENCE	TSC2-3
6	US-281 SPUR	STA. 47+98.00	TO	STA. 50+85.00	LT	9	0.27	SILT FENCE	TSC2-3
7	US-281 SPUR	STA. 50+85.00	TO	STA. 54+62.33	RT	342+52	0.50	SILT FENCE	TSC2-3
8	US-281 SPUR	STA. 50+85.00	TO	STA. 54+62.33	LT	14	0.41	SILT FENCE	TSC2-3
TOTAL DISTURBED AREA							3.29		

DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN			
CHECKED			EROSION CONTROL DETAIL SHEET
APPROVED			
SQUAD			

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. R005

8/20/2024

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OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

DESCRIPTION	REVISIONS	DATE

SEC. 10, T12N, R10W

SEC. 11, T12N, R10W

STA. 47+98.00
BEGIN PROJECT

STA. 54+62.32
END PROJECT
J/P NO. 27959(04)

I-40 SERVICE RD

I-40 EXIT RAMP

I-40 ON RAMP

I-40 EASTBOUND

I-40 WESTBOUND

US-281
℄ SURVEY & CRL

℄ SURVEY & CRL

CRL ℄ SURVEY

PRES R/W

PARAPET TRANSITION
SEE DETAIL

TOE OF SLOPE

REMOVE & RELOCATE

6' R

CABLE BARRIER

REMOVE

WHEELER HOLDINGS, LLC
BK 3489, PG 593

WHEELSON INVESTMENTS, LLC
BK 3789, PG 818

BM# 102
BENCHMARK IRON 3/4"
STA. 45+92, 93' LT.
ELEV.=1539.31

BM# 103
CUT 'X' ON SW WINGWALL BR
STA. 49+96, 19' LT.
ELEV.=1540.95

BM# 104
CUT 'X' SW CORNER CONC. PAD
STA. 57+03, 93' RT.
ELEV.=1545.32

BRIDGE LENGTH = 271.66'

BRIDGE 'A' - ℄ STA. 50+82.91
CONST. 55.83'-80'-80'-55.83' PLATE
GIRDER SPANS X 63' CLEAR ROADWAY
WITH 42" F-SHAPED PARAPET

STA. 49+17.08
BEGIN APPROACH SLAB

STA. 49+47.08
BEGIN BRIDGE

PVC-STA. 50+02.91
ELEV.= 1542.26

PVI-STA. 50+82.91
ELEV.= 1543.60

PVT-STA. 51+62.91
ELEV.= 1543.03

STA. 52+18.74
END BRIDGE

STA. 52+48.74
END APPROACH SLAB

LOW STA. 53+98.20
ELEV.= 1541.67

110' V.C.
K = 114

150' V.C.
K = 124

160' V.C.
K = 67

PROFILE GRADE
ALONG CRL

EXISTING GROUND

0.704% 1.672% -0.714% -0.714% 0.500%

PVC-STA. 47+98.00
ELEV.= 1539.37

PVI-STA. 48+53.00
ELEV.= 1539.76

PVT-STA. 49+08.00
ELEV.= 1540.68

HI STA. 51+15.05
ELEV.= 1543.20

PVC-STA. 53+10.00
ELEV.= 1541.98

PVI-STA. 53+85.00
ELEV.= 1541.44

PVT-STA. 54+60.00
ELEV.= 1541.82

STA. 49+73.30, 88.30' LT
(US-281 SPUR)
CONST. 5'DIA. MANHOLE
175 LF. OF 30" RCP W/
END SECTION
TOP = 1524.70
IN = 1517.68
IN = 1518.18
OUT = 1517.68

STA. 51+85.77 (US-281 SPUR)
CONST. 191 LF. OF 30" RCP
W/ END SECTION
IN = 1519.64
OUT = 1516.60

UTILITY COMPANIES	PHONE NUMBERS
CANADIAN COUNTY RWD #1	NO CONTACT (405) 262-2696
GEARY WATER AUTHORITY	RICK (405) 884-5466
ENOGEX	
SANDRIDGE ENERGY	JARED FREUND (405) 492-0272
PIONEER TELEPHONE COMPANY	STEVE LIEBL (405) 375-0714
DOBSON TELECOMMUNICATIONS	TERRY WRIGHT (405) 544-8691
CK ENERGY	BRYANT POTTS (405) 656-2322

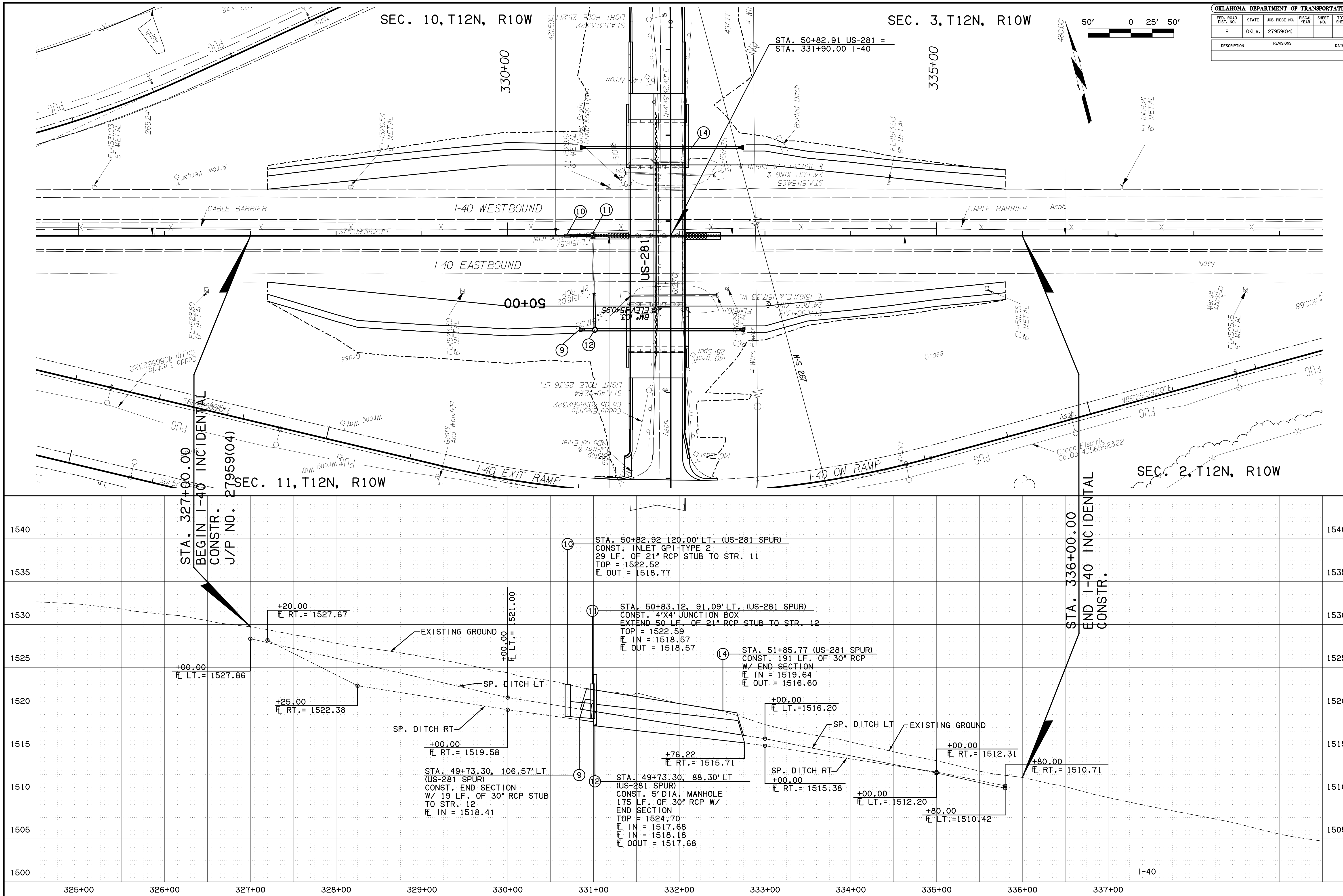
45+00 46+00 47+00 48+00 49+00 50+00 51+00 52+00 53+00 54+00 55+00 56+00

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. R006

OKLAHOMA DEPARTMENT OF TRANSPORTATION

FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

DESCRIPTION	REVISIONS	DATE



SEC. 10, T12N, R10W
SEC. 3, T12N, R10W
SEC. 11, T12N, R10W
SEC. 2, T12N, R10W
50' 0 25' 50'
330+00
335+00
50+00
STA. 50+82.91 US-281 =
STA. 331+90.00 I-40
I-40 WESTBOUND
I-40 EASTBOUND
US-281
CABLE BARRIER
I-40 EXIT RAMP
I-40 ON RAMP
Buried Ditch
Grass
FL=1531.03 6" METAL
FL=1526.54 6" METAL
FL=1513.53 6" METAL
FL=1508.21 6" METAL
FL=1528.80 6" METAL
FL=1523.30 6" METAL
FL=1511.35 6" METAL
FL=1505.15 6" METAL
Caddo Electric Co.Op 4056562322
N89°29'38.00"E
STA. 327+00.00
BEGIN I-40 INCIDENTAL
CONSTR.
J/P NO. 27959(04)
STA. 336+00.00
END I-40 INCIDENTAL
CONSTR.
STA. 50+82.92 120.00' LT. (US-281 SPUR)
CONST. INLET GPI-TYPE 2
29 LF. OF 21" RCP STUB TO STR. 11
TOP = 1522.52
FL OUT = 1518.77
STA. 50+83.12, 91.09' LT. (US-281 SPUR)
CONST. 4'X4' JUNCTION BOX
EXTEND 50 LF. OF 21" RCP STUB TO STR. 12
TOP = 1522.59
FL IN = 1518.57
FL OUT = 1518.57
STA. 51+85.77 (US-281 SPUR)
CONST. 191 LF. OF 30" RCP
W/ END SECTION
FL IN = 1519.64
FL OUT = 1516.60
STA. 49+73.30, 106.57' LT
(US-281 SPUR)
CONST. END SECTION
W/ 19 LF. OF 30" RCP STUB
TO STR. 12
FL IN = 1518.41
STA. 49+73.30, 88.30' LT
(US-281 SPUR)
CONST. 5' DIA. MANHOLE
175 LF. OF 30" RCP W/
END SECTION
TOP = 1524.70
FL IN = 1517.68
FL IN = 1518.18
FL OOUT = 1517.68
EXISTING GROUND
SP. DITCH LT
SP. DITCH RT
+20.00 FL RT.= 1527.67
+00.00 FL LT.= 1527.86
+25.00 FL RT.= 1522.38
+00.00 FL LT.= 1521.00
+00.00 FL RT.= 1519.58
+76.22 FL RT.= 1515.71
+00.00 FL LT.=1516.20
+00.00 FL RT.= 1515.38
+00.00 FL LT.= 1512.20
+00.00 FL RT.= 1512.31
+80.00 FL RT.= 1510.71
+80.00 FL LT.=1510.42
1540
1535
1530
1525
1520
1515
1510
1505
1500
325+00
326+00
327+00
328+00
329+00
330+00
331+00
332+00
333+00
334+00
335+00
336+00
337+00
I-40

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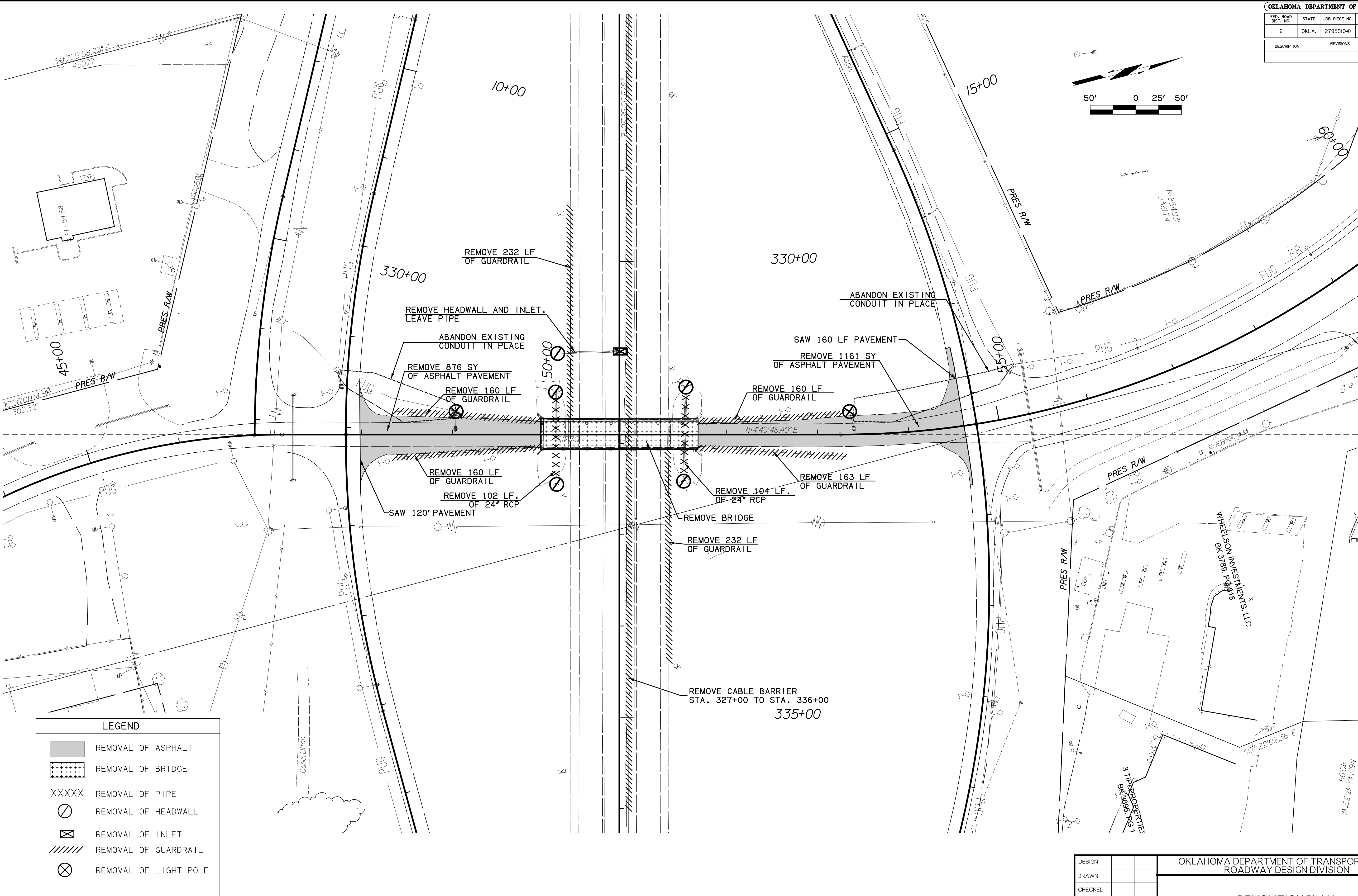

REMOVE 232 LF OF GUARDRAIL
REMOVE HEADWALL AND INLET. LEAVE PIPE
ABANDON EXISTING CONDUIT IN PLACE
REMOVE 876 SY OF ASPHALT PAVEMENT
REMOVE 160 LF OF GUARDRAIL
REMOVE 160 LF OF GUARDRAIL
REMOVE 102 LF. OF 24" RCP
SAW 120' PAVEMENT
ABANDON EXISTING CONDUIT IN PLACE
SAW 160 LF PAVEMENT
REMOVE 1161 SY OF ASPHALT PAVEMENT
REMOVE 160 LF OF GUARDRAIL
REMOVE 163 LF OF GUARDRAIL
REMOVE 104 LF. OF 24" RCP
REMOVE BRIDGE
REMOVE 232 LF OF GUARDRAIL
REMOVE CABLE BARRIER STA. 327+00 TO STA. 336+00
10+00
15+00
330+00
335+00
45+00
50+00
55+00
60+00
PRES R/W
PUG
WHEELSON INVESTMENTS, LLC BK 3789, PG 818
3 TIP PROPERTIES BK 3696, PG 1
50' 0 25' 50'
LEGEND
REMOVAL OF ASPHALT
REMOVAL OF BRIDGE
XXXXX REMOVAL OF PIPE
REMOVAL OF HEADWALL
REMOVAL OF INLET
REMOVAL OF GUARDRAIL
REMOVAL OF LIGHT POLE

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

OKLAHOMA DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION

DEMOLITION PLAN

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. R008

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OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE
1 REVISED SEQUENCING TEXT	08/15/25

SUGGESTED SEQUENCE OF CONSTRUCTION

PHASE I MOVE I-40 EASTBOUND AND WESTBOUND TRAFFIC TO INSIDE LANES. CONSTRUCT THE WEST SECTION OF PIERS NO. 1 AND NO. 3, NORTH AND SOUTH ABUTMENTS, SLOPE WALLS AND APPROACH SLABS.

PHASE II MOVE I-40 EASTBOUND AND WESTBOUND TRAFFIC TO THE OUTSIDE LANES. CONSTRUCT THE WEST SECTION OF PIER NO. 2 IN THE MEDIAN.

PHASE III CONSTRUCT NEW ROADWAY FROM NEW APPROACH SLABS TO THE EXISTING EASTBOUND AND WESTBOUND RAMPS.

PHASE IV DIVERT BOTH EASTBOUND AND WESTBOUND I-40 TRAFFIC ONTO THE EXIT RAMPS AND BACK TO I-40 VIA THE ON RAMPS. INSTALL BEAMS ON NEW BRIDGE.

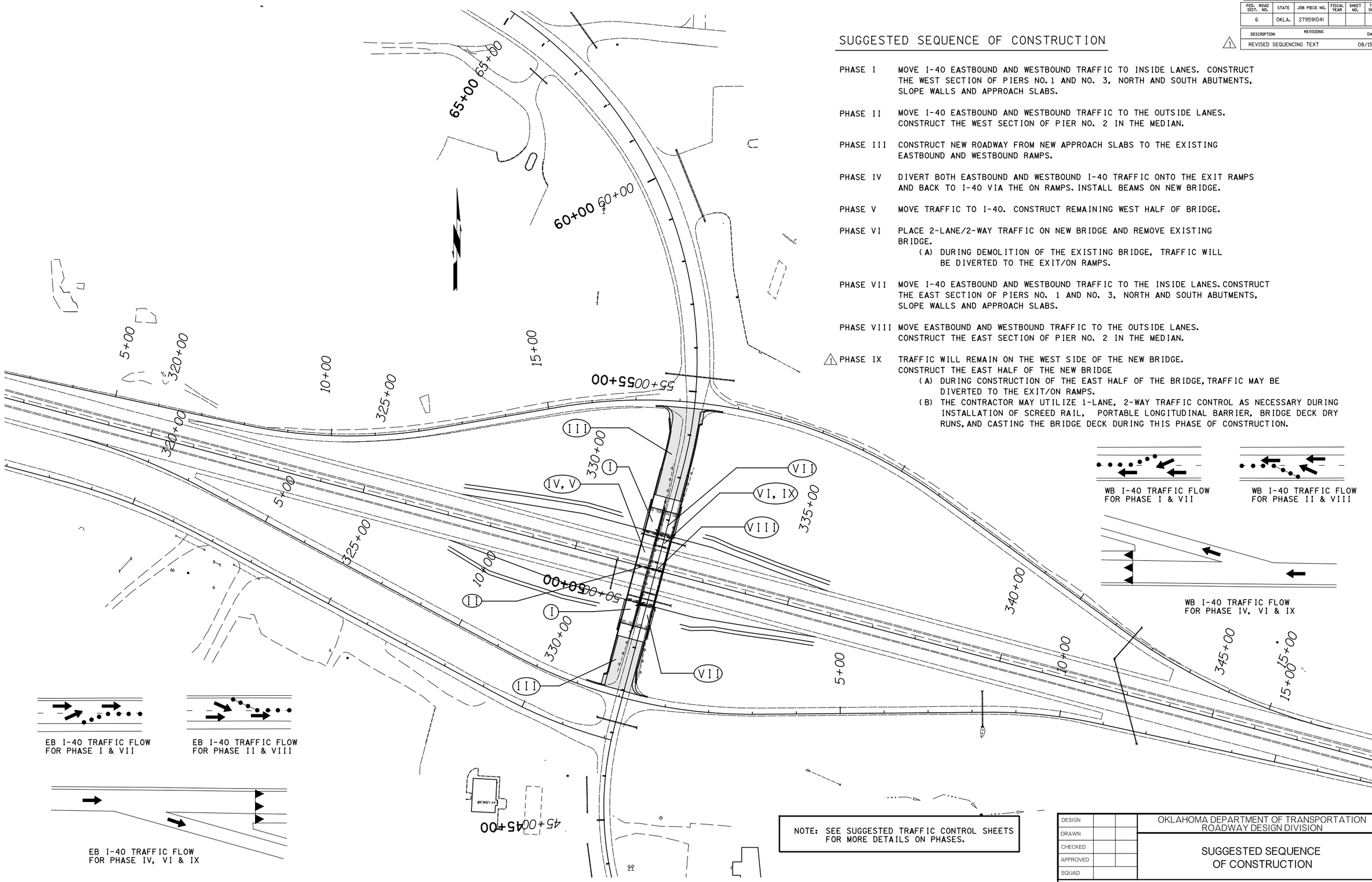
PHASE V MOVE TRAFFIC TO I-40. CONSTRUCT REMAINING WEST HALF OF BRIDGE.

PHASE VI PLACE 2-LANE/2-WAY TRAFFIC ON NEW BRIDGE AND REMOVE EXISTING BRIDGE.
- (A) DURING DEMOLITION OF THE EXISTING BRIDGE, TRAFFIC WILL BE DIVERTED TO THE EXIT/ON RAMPS.

PHASE VII MOVE I-40 EASTBOUND AND WESTBOUND TRAFFIC TO THE INSIDE LANES. CONSTRUCT THE EAST SECTION OF PIERS NO. 1 AND NO. 3, NORTH AND SOUTH ABUTMENTS, SLOPE WALLS AND APPROACH SLABS.

PHASE VIII MOVE EASTBOUND AND WESTBOUND TRAFFIC TO THE OUTSIDE LANES. CONSTRUCT THE EAST SECTION OF PIER NO. 2 IN THE MEDIAN.

1 PHASE IX TRAFFIC WILL REMAIN ON THE WEST SIDE OF THE NEW BRIDGE. CONSTRUCT THE EAST HALF OF THE NEW BRIDGE
- (A) DURING CONSTRUCTION OF THE EAST HALF OF THE BRIDGE, TRAFFIC MAY BE DIVERTED TO THE EXIT/ON RAMPS.
- (B) THE CONTRACTOR MAY UTILIZE 1-LANE, 2-WAY TRAFFIC CONTROL AS NECESSARY DURING INSTALLATION OF SCREED RAIL, PORTABLE LONGITUDINAL BARRIER, BRIDGE DECK DRY RUNS, AND CASTING THE BRIDGE DECK DURING THIS PHASE OF CONSTRUCTION.



NOTE: SEE SUGGESTED TRAFFIC CONTROL SHEETS FOR MORE DETAILS ON PHASES.

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN		
CHECKED		SUGGESTED SEQUENCE OF CONSTRUCTION
APPROVED		
SQUAD		

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. R009

STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION
SURVEY DIVISION

SWO 5125(1) J/P 27959(04) ; _____ CO. CANADIAN

HORIZONTAL CONTROL:
( ) Oklahoma Coordinate System of 1927 _____ Zone.
(X) Oklahoma Coordinate System of 1983 NORTH Zone.
( ) Oklahoma Dept. of Transportation Plane Coordinate System of 1927 _____ Zone.
( ) Oklahoma Dept. of Transportation Plane Coordinate System of 1983 _____ Zone.
( ) Arbitrary Coordinate System

HORIZONTAL PLANE DATUM DEFINITION:
Oklahoma Department of Transportation coordinates were derived by multiplying the Oklahoma Coordinate Systems of 1927 or 1983 by the combined adjustment factor of 1.00010. The ODOT Coordinate System is 2350 feet above sea level.

1. PRIMARY CONTROL adjusted to CORS (B) Order
Stations _____
A) Closure before adjustment X _____ ; Y _____ Angles _____
Trav. Length _____ No. Angles _____ ; 1: _____
B) _____ ; is ( ) Order before adjustment.
C) Method of Distance Measurement
( ) Electronic (X) GPS ( ) Triangulation ( ) Chained
D) Instrument used for angles TRIMBLE R-10 GPS Equipment

2. Secondary Control adjusted to Primary Control (B) Order
Stations _____
A) Closure before adjustment X _____ ; Y Angles
B) Secondary Control ; is (3rd) Order; Tied to Primary Control
C) Method of Distance Measurement
( ) Electronic (X) GPS ( ) Triangulation ( ) Chained
D) Instrument used for angles TRIMBLE R-10 GPS Equipment

VERTICAL CONTROL IS (3rd) order. Level Line taken from C-9-950
() order and tied to C-9-951 (3rd) order.
( ) NGVD 29 datum
(X) NAVD 88 datum

ACCURACY DEFINITION:
(1) HORIZONTAL: (3rd Order = Class I = 1 : 10,000')
(3rd Order = Class II = 1 : 5,000')
(2) VERTICAL: (1st Order = 0.017 Ft. x sqrt. of Mi.)(2nd Order = 0.035 Ft. x sqrt. of Mi.)
(3rd Order = 0.050 Ft. x sqrt. of Mi.)

Distribution:
Copy w/survey reports
Copy in each Alignment and level book

Nicholas S. Schrader
Professional Land Surveyor

19-May-15
Date

(FORM SD #20)
Rev. 11/03

SURVEY BEGAN:
SURVEY COMPLETED:

PERSONNEL ON SURVEY:
NICHOLAS S. SCHRADER, LICENSED SURVEYOR
DANIEL BENNETT, SENIOR SURVEYOR
BRANDON HOLLAND, ASSOCIATE SURVEYOR
CHASE GARTEN, ASSISTANT SURVEYOR
DONALD SPICER, ASSISTANT SURVEYOR
ALAN SHIPMAN, SENIOR TECHNICIAN

OLSSON ASSOCIATES
201 NW 63RD ST., SUITE 130
OKLAHOMA CITY, OK 73116

EQUIPMENT:
TRIMBLE R10 (GPS EQUIPMENT)
TRIMBLE S-6 ROBOTIC TOTAL STATION
TRIMBLE DINI DIGITAL LEVEL

SCALES 1"
SURVEY DATA SHEETS 1" = 100'
LAND TIE DATA SHEETS 1" = 500'

THIS SURVEY MEETS THE OKLAHOMA MINIMUM STANDARDS FOR THE PRACTICE OF LAND SURVEYING AS ADOPTED BY THE OKLAHOMA STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS, JULY 25, 2013.

SPECIFICATIONS FOR SURVEYS FOR PRIMARY AND SECONDARY HIGHWAYS DATED JANUARY 2011 GOVERN.

CONVENTIONAL SYMBOLS

- RAILROADS
- RANGE & TOWNSHIP
- SECTION LINES
- QUARTER SECTION LINES
- FENCES
- EXISTING ROADS
- BASE LINE
- TELEPHONE & TELEGRAPH
- POWER LINES
- BUILDINGS
- OILWELL
- DRAINAGE STRUCTURES - IN PLACE

OKIE811 Know what's below. Call before you dig.

OLSSON ASSOCIATES
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STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION

SURVEY OF

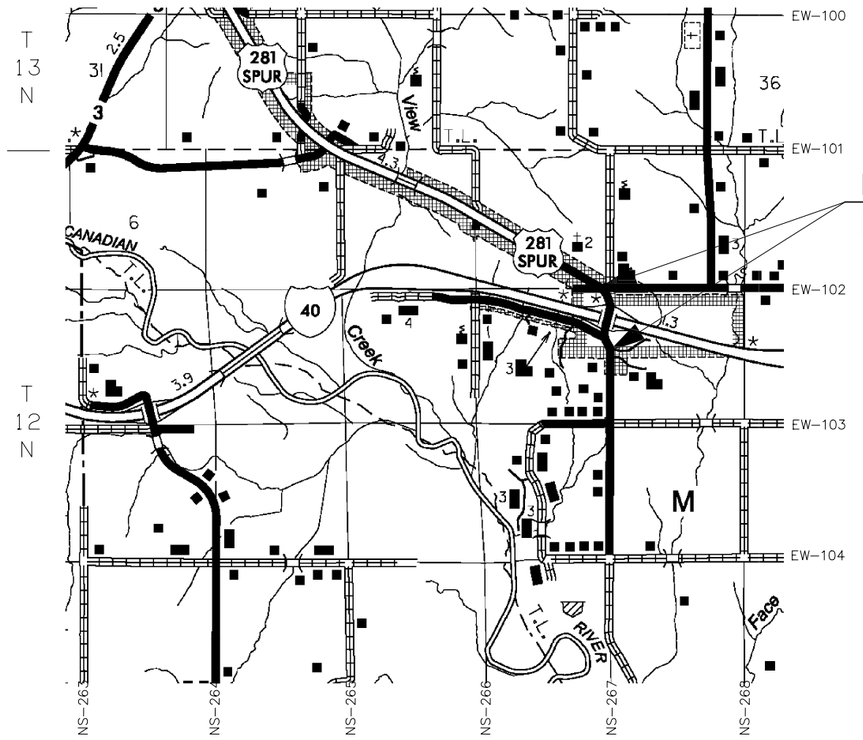
US 281 SPUR

SWO 5125(1)
J P NO. 27959(04)

OKLAHOMA

BRIDGE OVER I-40
4.1 MILES EAST OF THE CADDO COUNTY LINE

PROJECT LOCATION



PROJECT LENGTH 7,656 Ft. 1.45 MI.

BEGIN STATION: 39+00 (US281)
END STATION: 71+00 (US281)

BEGIN STATION: 315+00 (I-40)
END STATION: 352+00 (I-40)

INDEX OF SURVEY SHEETS

STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION

SWO 5125(1) Job/Piece 27959 (04) Engr. Contract No. 1614

LAND SURVEYOR'S CERTIFICATION

I hereby certify that all land and property sub-division, distances, angles, corners, and monumentation made or used in conjunction with this survey and depicted or recorded herein or hereon were recovered, established, or re-established in substantial conformity with:

- applicable instruction contained in the U.S. Government Bureau of Land Management publication **"Manual of Surveying Instruction"**;
- its supplement, **"Restoration of Lost or Obliterated Corners and Subdivision of Sections"**;
- **"Oklahoma Minimum Standards for the Practice of Land Surveying"** as adopted by the State Board of Registration for Professional Engineers and Land Surveyors; and
- sound land surveying practices;

including a thorough search, study, analysis, and consideration of all existing records and field evidence.

I further certify that all survey monuments depicted exist and that all survey work was done by me or under my direct supervision and that it is true, accurate, and correct to the best of my knowledge and belief.

Dated this 23rd day of June, 20 15 .

(seal)
Land Surveyor _____
Signature
Nicholas S. Schrader
Printed Name

NICHOLAS S SCHRADER 1898 — LICENSED PROFESSIONAL LAND SURVEYOR — OKLAHOMA

Oklahoma Registered Land Surveyor No. 1898

Certificate of Authorization No. 2483 Exp. Date June 30, 2015

Pipelines:
Enogex
515 Central Park Drive #110
Oklahoma City, Ok 73105-1704
Contact Steve Prichett at (405)323-7540

Sandridge Energy
123 Robert S Kerr Ave.
Oklahoma City, Ok 73102-6406
Contact Aaron Birk (405)429-5816

Electric Coop:
Caddo Electric
PO Box 70
Binger Ok 73009
Contact Bryant Potts (405)687-1410

Communications:
Dobson Communications
13900 N Portland Ave, Suite 200
Oklahoma City, Ok 73134
Contact Darren Stewart (405)242-1055

Pioneer Telephone Company
117 E Elm
Mooreland, Ok 73852
Contact Bobby Peters (405)375-0395

Water:
Canadian County RWD #1
15323 W Elm Street
Calumet, Ok 73014
Contact Steve Prichett (405)323-7540

PO Box 125 515 N Broadway
Geary, Ok 73040
Contact Mary Hayes (405)884-5466

DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN			
CHECKED			SURVEY DATA SHEET (SHEET 1 OF 15)
APPROVED			
SQUAD			

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. S001

FILE: 69080340.15o OP1424110514466 (C-9-950)

NGS OPUS SOLUTION REPORT
==========

All computed coordinate accuracies are listed as peak-to-peak values.
For additional information: http://www.ngs.noaa.gov/OPUS/about.jsp#accuracy

USER: nschrader@olssonassociates.com DATE: February 16, 2015
RINEX FILE: 6908034r.15o TIME: 18:15:49 UTC

SOFTWARE: page5 1209.04 master92.pl 022814 START: 2015/02/03 17:45:00
EPHEMERIS: igr18302.eph [rapid] STOP: 2015/02/03 22:44:30
NAV FILE: brdc0340.15n OBS USED: 11277 / 12784 : 88%
ANT NAME: TRMR10 NONE # FIXED AMB: 69 / 84 : 82%
ARP HEIGHT: 2.3 OVERALL RMS: 0.017(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2015.0927)

X:	-744622.676(m)	0.008(m)	-744623.484(m) 0.008(m)
Y:	-5143220.671(m)	0.008(m)	-5143219.275(m) 0.008(m)
Z:	3686124.158(m)	0.016(m)	3686124.018(m) 0.016(m)

LAT:	35 31 47.62178	0.015(m)	35 31 47.64195 0.015(m)
E LON:	261 45 43.55449	0.009(m)	261 45 43.51481 0.009(m)
W LON:	98 14 16.44551	0.009(m)	98 14 16.48519 0.009(m)
EL HGT:	441.190(m)	0.010(m)	440.078(m) 0.010(m)
ORTHO HGT:	468.241(m)	0.019(m)	[NAVD88 (Computed using GEOID12A)]

	UTM COORDINATES (Zone 14)	STATE PLANE COORDINATES SPC (3501 OK N)
Northing (Y) [meters]	3932076.012	58820.092
Easting (X) [meters]	569092.121	578423.212
Convergence [degrees]	0.44289403	-0.14039689
Point Scale	0.99965883	1.00000688
Combined Factor	0.99958961	0.99993764

US NATIONAL GRID DESIGNATOR: 14SNE6909232076(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DE8099	OKLW LAWTON CORS ARP	N343421.987	W0982435.689	107342.9
DG9755	OKAO ANADARKO CORS ARP	N350435.045	W0981445.200	50321.6
DE6009	OKDT OKLAHOMA CITY CORS ARP	N352924.453	W0973027.666	66394.4

NEAREST NGS PUBLISHED CONTROL POINT

FK0026	X 171	N353354.	W0981948.	9211.7

This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

FILE: 69080330.15o OP1424110485038 (C-9-951)

NGS OPUS SOLUTION REPORT
==========

All computed coordinate accuracies are listed as peak-to-peak values.
For additional information: http://www.ngs.noaa.gov/OPUS/about.jsp#accuracy

USER: nschrader@olssonassociates.com DATE: February 16, 2015
RINEX FILE: 6908033o.15o TIME: 18:15:21 UTC

SOFTWARE: page5 1209.04 master91.pl 022814 START: 2015/02/02 14:40:00
EPHEMERIS: igr18301.eph [rapid] STOP: 2015/02/02 19:54:00
NAV FILE: brdc0330.15n OBS USED: 11410 / 12803 : 89%
ANT NAME: TRMR10 NONE # FIXED AMB: 86 / 90 : 96%
ARP HEIGHT: 2.3 OVERALL RMS: 0.014(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2015.0897)

X:	-744796.992(m)	0.007(m)	-744797.800(m) 0.007(m)
Y:	-5142682.245(m)	0.011(m)	-5142680.849(m) 0.011(m)
Z:	3686846.172(m)	0.007(m)	3686846.032(m) 0.007(m)

LAT:	35 32 16.26170	0.012(m)	35 32 16.28187 0.012(m)
E LON:	261 45 33.64421	0.006(m)	261 45 33.60453 0.006(m)
W LON:	98 14 26.35579	0.006(m)	98 14 26.39547 0.006(m)
EL HGT:	447.508(m)	0.005(m)	446.397(m) 0.005(m)
ORTHO HGT:	474.562(m)	0.012(m)	[NAVD88 (Computed using GEOID12A)]

	UTM COORDINATES (Zone 14)	STATE PLANE COORDINATES SPC (3501 OK N)
Northing (Y) [meters]	3932956.428	59703.379
Easting (X) [meters]	568835.745	578175.727
Convergence [degrees]	0.44137988	-0.14202148
Point Scale	0.99965839	1.00000536
Combined Factor	0.99958818	0.99993512

US NATIONAL GRID DESIGNATOR: 14SNE6883532956(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DE8099	OKLW LAWTON CORS ARP	N343421.987	W0982435.689	108180.0
DG9755	OKAO ANADARKO CORS ARP	N350435.045	W0981445.200	51201.4
DE6009	OKDT OKLAHOMA CITY CORS ARP	N352924.453	W0973027.666	66704.7

NEAREST NGS PUBLISHED CONTROL POINT

FK0026	X 171	N353354.	W0981948.	8637.9

This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN		
CHECKED		SURVEY DATA SHEET (SHEET 2 OF 15)
APPROVED		
SQUAD		

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. S002

OKLAHOMA DEPARTMENT OF TRANSPORTATION

SURVEY DIVISION (405) 521-2621 FAX (405)522-0364

Date: June 2, 2015

To: Mr. Leroy Tackett

From: Nicholas S. Schrader, Professional Land Surveyor

Subject: SWO 5125(1), J/P 27959(04)-US 281 – US 281 Spur – Canadian County
Bridge over I-40, 4.1 Miles East of the Caddo County Line

HISTORICAL LETTER & WRITTEN REPORT

1. GENERAL:

Survey Began: February 16, 2015
Survey Completed: June 2, 2015

Personnel on this survey:

Nicholas S. Schrader	Licensed Surveyor
Daniel Bennett	Senior Surveyor
Brandon Holland	Associate Surveyor
Chase Garten	Assistant Surveyor
Donald Spicer	Assistant Surveyor
Alan Shipman	Senior Technician

2. ASSIGNMENT:
This survey was assigned to Olsson Associates under SWO 5125(1) and J/P 27959(04). *Specifications for Surveys for Primary and Secondary Highways* as well as *Survey Special Provisions*, were used and every effort was made to follow these provisions.

3. PURPOSE:
The purpose of this survey is to develop plans to construct a new bridge over I-40, and also to reconstruct portions of the US 281 Spur, and to make modifications to the existing ramps and interchange, as necessary. The survey includes the Alignment, Topographic/Planimetric data, Surface Features/ Digital Terrain Model Data, Land and Property Ties, Utilities, Drainage and all off pertinent information needed to aid in the design.

4. LIMITS:
The Survey begins approximately 0.25 mile South of I-40, and extends Northerly along the existing US 281 Spur to a point approximately 0.4 mile North of I-40. The total Mainline Survey Length is approximately 0.65 mile.

The Stub Survey was taken along I-40 from a point approximately 0.4 mile West of the existing bridge over I-40 and extends Easterly to a point approximately 0.4 mile East of the existing bridge over I-40. The total Stub Survey length is approximately 0.8 mile.

5. ALIGNMENT:
The Centerline of Survey for this project is along and identical to the centerline of the existing US 281 Spur, as depicted on the FAP No. I-40-4(13) 107 Highway Plans, and also shown on the SWO 2160(1) Survey.

The Stub Survey is along and identical to the centerline of the existing I-40, as depicted on the FAP No. I-40-4(13) 107 Highway Plans.

6. STATIONING:
The Stationing for the Mainline US 281 Spur was taken directly from the FAP No. I-40-4(13) 107 Highway Plans, by assigning Plans Station 50+82.91 to the intersection with I-40. From that point, the stationing was backed to the Beginning of the Survey, at P.O.B Station 35+78.75, and carried forward (North) to the End of the Survey, at P.O.T. Station 71+00.00

The Stationing for the I-40 Stub Survey was taken directly from the FAP No. I-40-4(13) 107 Highway Plans, by assigning Plans Station 331+90.00 to the intersection with the US 281 Spur. From that point, the Stationing was backed to the Beginning of the Survey, at P.O.B. Station 315+00, and carried forward (East) to the End of the Survey, at P.O.T. Station 352+00.00

7. HORIZONTAL CONTROL:
Horizontal control for this project is NGS Oklahoma State Plane Coordinate System, NAD83, Lambert Projection, North Zone. The project was began by collecting double static data on each point on different days and at different times of day. That data was in turn sent to NGS and processed through OPUS. The results of the 2 sessions were then averaged and a final coordinate for each point was assigned and is reflected on SD-11 forms C-9-950 and C-9-951, respectively.

8. VERTICAL CONTROL:
Vertical control for this survey is NGS NAVD88. The project was began by collecting double static data on each point on different days and at different times of day. That

DESIGN		
DRAWN		
CHECKED		
APPROVED		
SQUAD		

OKLAHOMA DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION

SURVEY DATA SHEET
(SHEET 3 OF 15)

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. S003

data was in turn sent to NGS and processed through OPUS. The results of the 2 sessions were then averaged and a final coordinate for each point was assigned and is reflected on SD-11 forms C-9-950 and C-9-951, respectively. Two forward level runs were then performed running from C-9-950 to C-9-951 with additional project benchmarks set along each alignment at an approximate 700 foot interval.

9. MEASUREMENT UNITS:
The distances, coordinates, and elevations shown on this survey are in US SURVEY FEET. All angles and bearings shown in degrees, minutes, and seconds.

10. TOPOGRAPHY/DIGITAL TERRAIN MODEL:
All topography and surface features were collected by conventional methods including Trimble R10 RTK GPS systems, a Trimble S-6 Robotic Total Station, and a Trimble DiNi Digital Level. All data that was collected in the field was recorded and stored in digital format.

11. LAND TIES: *(Please refer to the Land Tie Data Sheet for additional information)*
All land corners including all section corners and 1/4 section corners that were required on this survey, Section 10 and 11 of Township 12 North, Range 10 West, Indian Meridian, have been researched and Certified Corner Records were reviewed and taken into consideration. All corners and land ties were recovered and/or established on all section and Oklahoma Certified Corner Records have been executed as specified by the Corner Perpetuation and File Act Title 65 O.S. 3.116-3.123.

12. EXISTING RIGHT-OF-WAY
The Right-of-way shown on this survey was taken from field investigation, deeds on file at the Canadian County Clerk's office, and the following highway plans.
FAP No. I-40-4(13) 107
FAP No. NHY-10N(010)

13. UNDERGROUND STORAGE TANKS/HAZARDOUS WASTE SITES:
There where underground storage tanks for fuel that were encountered in this survey. Approximate location of these tanks are along Alignment A001 at the following stations and offsets.

At the Phillips 66 gas station, Station 43+90, 135 feet left
At the Cherokee Trading Post, Station 55+50, 180 feet right
At the Cherokee Trading Post, Station 57+00, 95 feet right

The fuel fill ports and access lids where shot and appear on the survey.

There were no hazardous waste sites encountered during this survey.

14. UTILITIES:
Multiple locate requests were made to cover the extent of the project through OKIE One Call and the lines on this survey represent all the lines that were marked but may not be complete in nature. During the course of the survey, Survey Crew Personnel made contact with representatives of certain utilities when possible to confirm located position on the ground as well as any special circumstances. No depths of the utility lines were given.

15. DRAINAGE:
The drainage areas for all drains crossing the Survey Centerline and other alignments were taken from USGS quad maps and field checked for accuracy and a DGN file showing these areas was created. Additionally, all cross drains and side drains have been called out and labeled on the V1 drawing.

16. DATA SUBMITTED:
1. ODOT form SD-1, Transmittal Letter
2. ODOT form SD-7, Public and Private Owned Utilities List.
3. ODOT form SD-11, Position and Description of Survey Control
4. ODOT form SD-20, Survey Control and Accuracy
5. ODOT form SD-41, Surveyor's Certification.
6. COGO point data
7. Alignment Report
8. Historical Letter & Written Report
9. SWO DGN drawing files.
10. ALG alignment file
11. Benchmark and check level list.
12. 15 copies of Oklahoma Certified Corner Records.

Nicholas S. Schrader
Licensed Professional Land Surveyor #1898

DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN			
CHECKED			SURVEY DATA SHEET (SHEET 4 OF 15)
APPROVED			
SQUAD			

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. S004

POINT NO.	EASTING	NORTHING	ELEVATION
C-9-950	1897710.1380	192978.9350	1536.220
C-9-951	1896898.1830	195876.8640	1556.960
100	1897757.7940	192939.1280	1536.122
101	1897688.4730	193047.5450	1536.143
102	1897502.4320	193728.7170	1539.309
103	1897670.0700	194117.2450	1540.952
104	1897888.4460	194818.1560	1545.320
105	1897615.6370	195393.1750	1555.114
106	1897040.4660	195791.3950	1556.843
201	1896133.9480	194336.9580	1523.887
202	1896638.3520	194190.3420	1535.168
203	1897001.1760	193996.7790	1546.138
204	1898511.1310	194382.0690	1525.284
205	1899118.7790	194032.4710	1485.477
206	1899781.4030	193825.8830	1473.557
207	1896778.4420	195945.8190	1557.583
1000	1897813.7519	192748.9228	0.000
1001	1897813.5008	192892.3721	0.000
1002	1897813.1394	193098.8423	0.000
1003	1897097.3047	192891.1185	0.000
1004	1897702.9227	193273.4343	0.000
1005	1897536.3155	193537.3529	0.000
1006	1898308.5406	193655.7501	0.000
1007	1897616.2006	193839.0636	0.000
1008	1897710.9035	194196.7385	0.000
1009	1897773.0235	194431.3539	0.000
1010	1897957.6789	195128.7623	0.000
1011	1896849.9035	194675.7718	0.000
1012	1897337.2743	195496.9663	0.000
1013	1896874.0173	195771.9048	0.000
1014	1896501.6812	195992.8825	0.000
1017	1895959.6650	194660.5603	0.000
1018	1896077.2314	194629.4225	0.000
1019	1897129.1809	194350.8098	0.000
1020	1897811.2643	194170.1656	0.000
1021	1899073.9081	193835.7418	0.000
1022	1899653.9100	193682.1262	0.000
1023	1897482.5114	195391.1025	0.000
1024	1896038.8275	194484.4220	0.000
1025	1896363.7349	194398.3691	0.000
1026	1896525.3065	194355.5762	0.000
1027	1895997.0047	193013.7164	0.000
1028	1896672.6847	194276.7329	0.000
1029	1897364.5072	193906.6263	0.000
1030	1897481.2452	193844.1746	0.000
1031	1897905.0512	194917.0395	0.000
1032	1897609.1485	193809.9875	0.000
1033	1895991.8296	194697.5585	0.000
1034	1896770.4841	194528.3862	0.000
1035	1896989.3616	194480.8323	0.000
1036	1897013.7727	195648.1777	0.000
1037	1897210.0358	194519.1944	0.000
1038	1897486.3615	194567.2310	0.000
1039	1897642.3415	194594.3467	0.000
1040	1897682.6247	193438.2477	0.000
1041	1897799.8305	194578.1536	0.000
1042	1898107.9445	194546.4780	0.000
1043	1897682.6426	193438.2459	0.000
1044	1898358.1440	194363.8918	0.000
1045	1898771.0561	194062.5641	0.000
1046	1898988.4966	193903.8843	0.000
1047	1899615.4329	195219.6215	0.000
1048	1899248.7083	193834.9674	0.000
1049	1896365.1603	194507.6464	0.000
1050	1896527.2071	194464.7277	0.000
1051	1895998.4300	193122.9937	0.000
1052	1896674.9652	194385.5523	0.000
1053	1897386.2545	194004.4118	0.000
1054	1897504.4697	193941.0668	0.000
1055	1897927.4826	195014.4587	0.000
1056	1897634.1173	193906.7315	0.000
1057	1897783.2917	193867.2252	0.000
1058	1897927.4807	195014.4593	0.000
1059	1897937.6027	193868.5883	0.000
1060	1898465.5721	193873.2521	0.000
1061	1898593.7326	193874.3842	0.000
1062	1898475.6942	192727.3812	0.000
1063	1898718.9763	193847.1742	0.000
1064	1899497.6416	193678.0043	0.000
7600	1895189.2348	195081.8522	0.000
7601	1896034.3299	194858.0257	0.000
7602	1896304.0982	194721.8139	0.000
7603	1896789.5919	194616.3344	0.000
7604	1897194.6214	194607.8646	0.000
7605	1897704.5815	194696.5163	0.000
7606	1897620.6922	195045.6226	0.000
7607	1897368.2875	195224.5859	0.000
7608	1897189.1273	195390.4912	0.000
7609	1897152.5609	195442.5413	0.000
7610	1896802.0164	195650.5860	0.000
7611	1895189.4941	194543.8543	0.000
7612	1895901.4364	194355.2938	0.000
7613	1896104.7714	194342.8190	0.000
7614	1896607.0036	194209.8010	0.000
7615	1897512.0419	193725.6297	0.000
7616	1897733.7514	192749.1308	0.000
7617	1897733.5010	192892.2320	0.000
7618	1897635.2745	193230.7292	0.000
7619	1897512.5679	193425.1059	0.000
7620	1897846.7517	192749.0929	0.000
7621	1897845.1972	193637.2062	0.000
7622	1898452.6305	193638.2216	0.000
7623	1899564.3009	193343.7917	0.000
7624	1899991.9330	193396.0485	0.000
7625	1899995.1162	193798.6524	0.000
7626	1899817.1438	193907.8578	0.000
7627	1898773.1403	194184.3659	0.000
7628	1898278.4642	194542.9681	0.000
7629	1897907.6574	194659.5615	0.000
7630	1897842.7701	195023.8340	0.000
7631	1897842.1850	195358.1136	0.000
7632	1897776.4224	195466.2772	0.000
7633	1897490.4113	195528.1653	0.000
7634	1896927.6002	195862.1881	0.000
8000	1896429.7603	195871.5163	0.000
8001	1896431.1643	195388.9119	0.000
8002	1896320.2292	195388.6808	0.000
8003	1896581.2687	195389.2247	0.000
8004	1896962.0678	195390.0181	0.000
8005	1896964.1618	194593.4282	0.000
8006	1896565.6660	194664.9851	0.000
8007	1896304.7431	194721.6738	0.000
8008	1897842.6530	195090.7421	0.000
8009	1897924.3980	195090.8720	0.000
8010	1897932.8984	194963.5609	0.000
8011	1898206.9102	194840.7246	0.000
8012	1898216.5491	194766.1768	0.000
8013	1898092.0493	194601.5828	0.000
8014	1898261.9232	195068.3306	0.000
8015	1898487.4379	195014.3102	0.000
8016	1898458.8165	194899.4157	0.000
8017	1898458.4300	194829.4664	0.000
8018	1898432.3008	194761.2815	0.000
8019	1898375.3010	194612.5390	0.000
8020	1898333.3840	194503.1554	0.000
8021	1898667.0964	194502.2292	0.000
8022	1898722.7552	194649.4598	0.000
8023	1898742.6854	194802.4169	0.000
8024	1895867.8065	194352.2772	0.000
8025	1896086.7061	194339.0304	0.000
8026	1896074.7078	194140.7631	0.000
8027	1895855.8083	194154.0099	0.000
8028	1896763.6550	194125.9966	0.000
8029	1897161.7395	193913.0321	0.000
8030	1897162.5224	193462.2627	0.000
8031	1896576.7060	193772.2020	0.000
8032	1897162.9245	193230.7530	0.000
8033	1897163.4029	192790.6137	0.000
8034	1897733.6814	192789.1311	0.000
8035	1897845.7214	193337.7088	0.000
8036	1898143.0739	193338.2059	0.000
8037	1898142.5497	193637.7033	0.000
8038	1898261.5495	193637.9022	0.000
8039	1898262.8192	193362.3051	0.000
8040	1898143.2056	193262.9913	0.000
8041	1898262.7550	193376.2330	0.000
8042	1898454.3600	193377.2460	0.000
8043	1898504.7516	193377.5124	0.000
8044	1898505.5805	193197.5754	0.000
8045	1898455.3620	193197.3070	0.000
8046	1898263.5840	193196.2820	0.000
8047	1897846.1216	193109.0628	0.000
8048	1898112.8140	192997.6230	0.000
8049	1898113.1416	192810.4671	0.000
8050	1897846.6467	192809.0932	0.000
8051	1898112.8787	192960.6476	0.000
8052	1898313.0747	192961.4990	0.000
8053	1898313.3372	192811.4993	0.000
8054	1899006.7758	192815.0744	0.000
8055	1899006.8808	192755.0741	0.000
8056	1899005.5914	193491.7680	0.000
8057	1899255.2145	193425.6544	0.000
8058	1899255.7379	192756.3571	0.000
8059	1899536.2352	192757.8033	0.000
8060	1899535.7711	193351.3479	0.000
9000	1892609.0090	200820.0240	0.000
9001	1895219.3930	200815.8875	0.000
9002	1897829.7770	200811.7510	0.000
9003	1892596.0837	198009.2317	0.000
9004	1895203.8208	198018.1311	0.000
9005	1897819.6220	198027.0580	0.000
9006	1892584.0040	195382.3230	0.000
9007	1895189.0880	195386.3240	0.000
9008	1897809.1260	195391.7830	0.000
9009	1900431.2330	195403.8260	0.000
9010	1903083.1250	195394.3310	0.000
9011	1892584.2200	192754.9330	0.000
9012	1895190.3560	192755.7430	0.000
9013	1897813.7519	192748.9228	0.000
9014	1900431.2018	192760.0554	0.000
9015	1903074.9820	192771.3000	0.000
9016	1892584.7520	190095.9240	0.000
9017	1895217.9370	190136.2890	0.000
9018	1897818.3130	190143.1200	0.000
9019	1900431.1710	190154.5170	0.000
9020	1903066.8390	190148.2690	0.000

DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
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COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. S005

Project Name: SWO 5125(1)
Description: US 281 SPUR
Horizontal Alignment Name: A001
Description: US 281 Mainline
Style: Centerline

		STATION	EASTING	NORTHING
Element: Linear				
POB (	1000)	35+78.75	1897813.7519	192748.9228
PC (	1001)	37+22.20	1897813.5008	192892.3721
Tangent Direction:		N 0^06'01.04" W		
Tangent Length:		143.45		
Element: Circular				
PC (	1001)	37+22.20	1897813.5008	192892.3721
PI (	)	39+28.67	1897813.1395	193098.8423
CC (	1003)		1897097.3047	192891.1185
PRC (	1004)	41+24.24	1897702.9227	193273.4343
Radius:		716.20		
Delta:		32^09'47.52" Left		
Degree of Curvature(Arc):		8^00'00.00"		
Length:		402.04		
Tangent:		206.47		
Chord:		396.78		
Middle Ordinate:		28.03		
External:		29.17		
Tangent Direction:		N 0^06'01.04" W		
Radial Direction:		N 89^53'58.96" E		
Chord Direction:		N 16^10'54.80" W		
Radial Direction:		N 57^44'11.44" E		
Tangent Direction:		N 32^15'48.56" W		
Element: Circular				
PRC (	1004)	41+24.24	1897702.9227	193273.4343
PI (	)	44+36.35	1897536.3155	193537.3529
CC (	1006)		1898308.5406	193655.7501
PT (	1007)	47+12.91	1897616.2006	193839.0636
Radius:		716.20		
Delta:		47^05'36.96" Right		
Degree of Curvature(Arc):		8^00'00.00"		
Length:		588.67		
Tangent:		312.11		
Chord:		572.24		
Middle Ordinate:		59.63		
External:		65.05		
Tangent Direction:		N 32^15'48.56" W		
Radial Direction:		N 57^44'11.44" E		
Chord Direction:		N 8^43'00.08" W		
Radial Direction:		S 75^10'11.60" E		
Tangent Direction:		N 14^49'48.40" E		
Element: Linear				
PT (	1007)	47+12.91	1897616.2006	193839.0636
PC (	1009)	53+25.61	1897773.0235	194431.3539
Tangent Direction:		N 14^49'48.40" E		
Tangent Length:		612.70		
Element: Circular				
PC (	1009)	53+25.61	1897773.0235	194431.3539
PI (	)	60+47.05	1897957.6789	195128.7623
CC (	1011)		1896849.9035	194675.7718
PT (	1012)	65+61.30	1897337.2743	195496.9663
Radius:		954.93		
Delta:		74^08'29.04" Left		
Degree of Curvature(Arc):		6^00'00.00"		
Length:		1235.69		
Tangent:		721.44		
Chord:		1151.26		
Middle Ordinate:		193.00		
External:		241.89		
Tangent Direction:		N 14^49'48.40" E		
Radial Direction:		S 75^10'11.60" E		
Chord Direction:		N 22^14'26.12" W		
Radial Direction:		N 30^41'19.36" E		
Tangent Direction:		N 59^18'40.64" W		
Element: Linear				
PT (	1012)	65+61.30	1897337.2743	195496.9663
POE (	1014)	75+32.97	1896501.6812	195992.8825
Tangent Direction:		N 59^18'40.64" W		
Tangent Length:		971.67		

Project Name: SWO 5125(1)
Description: US 281 SPUR
Horizontal Alignment Name: A002
Description: I-40 Survey
Style: Centerline

		STATION	EASTING	NORTHING
Element: Linear				
POB (	1018)	315+00.00	1896077.2314	194629.4225
POE (	1022)	352+00.00	1899653.9100	193682.1262
Tangent Direction:		S 75^09'56.20" E		
Tangent Length:		3700.00		

Project Name: SWO 5125(1)
Description: US 281 SPUR
Horizontal Alignment Name: A003
Description: I-40 Survey Service Road
Style: Centerline

		STATION	EASTING	NORTHING
Element: Linear				
POB (	1024)	315+00.00	1896038.8275	194484.4220
PC (	1025)	318+36.11	1896363.7349	194398.3691
Tangent Direction:		S 75^09'56.20" E		
Tangent Length:		336.11		
Element: Circular				
PC (	1025)	318+36.11	1896363.7349	194398.3691
PI (	)	320+03.25	1896525.3065	194355.5762
CC (	1027)		1895997.0047	193013.7164
PT (	1028)	321+68.89	1896672.6847	194276.7329
Radius:		1432.39		
Delta:		13^18'40.32" Right		
Degree of Curvature(Arc):		4^00'00.00"		
Length:		332.78		
Tangent:		167.14		
Chord:		332.03		
Middle Ordinate:		9.65		
External:		9.72		
Tangent Direction:		S 75^09'56.20" E		
Radial Direction:		S 14^50'03.80" W		
Chord Direction:		S 68^30'36.04" E		
Radial Direction:		S 28^08'44.12" W		
Tangent Direction:		S 61^51'15.88" E		
Element: Linear				
PT (	1028)	321+68.89	1896672.6847	194276.7329
PC (	1029)	329+53.49	1897364.5071	193906.6263
Tangent Direction:		S 61^51'15.88" E		
Tangent Length:		784.60		
Element: Circular				
PC (	1029)	329+53.49	1897364.5071	193906.6263
PI (	)	330+85.88	1897481.2452	193844.1746
CC (	1031)		1897905.0512	194917.0395
PT (	1032)	332+17.11	1897609.1485	193809.9875
Radius:		1145.92		
Delta:		13^10'51.23" Left		
Degree of Curvature(Arc):		5^00'00.00"		
Length:		263.62		
Tangent:		132.39		
Chord:		263.04		
Middle Ordinate:		7.57		
External:		7.62		
Tangent Direction:		S 61^51'15.88" E		
Radial Direction:		S 28^08'44.12" W		
Chord Direction:		S 68^26'41.49" E		
Radial Direction:		S 14^57'52.90" W		
Tangent Direction:		S 75^02'07.10" E		

Project Name: SWO 5125(1)
Description: US 281 SPUR
Horizontal Alignment Name: A004
Description: I-40 Ramp WBound off
Style: Centerline

		STATION	EASTING	NORTHING
Element: Circular				
PC (	1041)	0+00.00	1897799.8305	194578.1536
PI (	)	3+09.74	1898107.9445	194546.4780
CC (	1043)		1897682.6426	193438.2459
PT (	1044)	6+05.02	1898358.1440	194363.8918
Radius:		1145.92		
Delta:		30^15'03.23" Right		
Degree of Curvature(Arc):		5^00'00.00"		
Length:		605.02		
Tangent:		309.74		
Chord:		598.02		
Middle Ordinate:		39.70		
External:		41.12		
Tangent Direction:		S 84^07'49.23" E		
Radial Direction:		S 5^52'10.77" W		
Chord Direction:		S 69^00'17.61" E		
Radial Direction:		S 36^07'14.00" W		
Tangent Direction:		S 53^52'46.00" E		
Element: Linear				
PT (	1044)	6+05.02	1898358.1440	194363.8918
PC (	1045)	11+16.19	1898771.0561	194062.5641
Tangent Direction:		S 53^52'46.00" E		
Tangent Length:		511.17		
Element: Circular				
PC (	1045)	11+16.19	1898771.0561	194062.5641
PI (	)	13+85.37	1898988.4966	193903.8843
CC (	1047)		1899615.4329	195219.6215
PT (	1048)	16+48.35	1899248.7083	193834.9674
Radius:		1432.39		
Delta:		21^17'11.04" Left		
Degree of Curvature(Arc):		4^00'00.00"		
Length:		532.16		
Tangent:		269.18		
Chord:		529.10		
Middle Ordinate:		24.64		
External:		25.07		
Tangent Direction:		S 53^52'46.00" E		
Radial Direction:		S 36^07'14.00" W		
Chord Direction:		S 64^31'21.52" E		
Radial Direction:		S 14^50'02.96" W		
Tangent Direction:		S 75^09'57.04" E		

DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
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COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. S006

Project Name: SWO 5125(1)
Description: US 281 SPUR
Horizontal Alignment Name: A005
Description: I-40 Ramp EBound ON
Style: Centerline

		STATION	EASTING	NORTHING
Element: Circular				
PC (	1056)	0+00.00	1897634.1173	193906.7315
PI (	)	1+54.32	1897783.2917	193867.2252
CC (	1058)		1897927.4807	195014.4593
PT (	1059)	3+06.79	1897937.6027	193868.5883
Radius:		1145.92		
Delta:		15^20'21.91" Left		
Degree of Curvature(Arc):		5^00'00.00"		
Length:		306.79		
Tangent:		154.32		
Chord:		305.87		
Middle Ordinate:		10.25		
External:		10.34		
Tangent Direction:		S 75^10'00.09" E		
Radial Direction:		S 14^49'59.91" W		
Chord Direction:		S 82^50'11.04" E		
Radial Direction:		S 0^30'22.00" E		
Tangent Direction:		N 89^29'38.00" E		
Element: Linear				
PT (	1059)	3+06.79	1897937.6027	193868.5883
PC (	1060)	8+34.78	1898465.5721	193873.2521
Tangent Direction:		N 89^29'38.00" E		
Tangent Length:		527.99		
Element: Circular				
PC (	1060)	8+34.78	1898465.5721	193873.2521
PI (	)	9+62.94	1898593.7326	193874.3842
CC (	1062)		1898475.6942	192727.3812
PT (	1063)	10+90.05	1898718.9763	193847.1742
Radius:		1145.92		
Delta:		12^45'48.60" Right		
Degree of Curvature(Arc):		5^00'00.00"		
Length:		255.27		
Tangent:		128.17		
Chord:		254.74		
Middle Ordinate:		7.10		
External:		7.15		
Tangent Direction:		N 89^29'38.00" E		
Radial Direction:		S 0^30'22.00" E		
Chord Direction:		S 84^07'27.70" E		
Radial Direction:		S 12^15'26.60" W		
Tangent Direction:		S 77^44'33.40" E		
Element: Linear				
PT (	1063)	10+90.05	1898718.9763	193847.1742
POE (	1064)	18+86.88	1899497.6416	193678.0043
Tangent Direction:		S 77^44'33.40" E		
Tangent Length:		796.83		

Project Name: SWO 5125(1)
Description: US 281 SPUR
Horizontal Alignment Name: A006
Description: I-40 Ramp EBound OFF
Style: Centerline

		STATION	EASTING	NORTHING
Element: Circular				
PC (	1049)	0+00.00	1896365.1603	194507.6464
PI (	)	1+67.63	1896527.2071	194464.7277
CC (	1051)		1895998.4300	193122.9937
PT (	1052)	3+33.75	1896674.9652	194385.5523
Radius:		1432.39		
Delta:		13^21'00.00" Right		
Degree of Curvature(Arc):		4^00'00.00"		
Length:		333.75		
Tangent:		167.63		
Chord:		333.00		
Middle Ordinate:		9.71		
External:		9.78		
Tangent Direction:		S 75^09'56.20" E		
Radial Direction:		S 14^50'03.80" W		
Chord Direction:		S 68^29'26.20" E		
Radial Direction:		S 28^11'03.80" W		
Tangent Direction:		S 61^48'56.20" E		
Element: Linear				
PT (	1052)	3+33.75	1896674.9652	194385.5523
PC (	1053)	11+40.72	1897386.2545	194004.4118
Tangent Direction:		S 61^48'56.20" E		
Tangent Length:		806.97		
Element: Circular				
PC (	1053)	11+40.72	1897386.2545	194004.4118
PI (	)	12+74.84	1897504.4697	193941.0668
CC (	1055)		1897927.4826	195014.4587
PT (	1056)	14+07.74	1897634.1173	193906.7315
Radius:		1145.92		
Delta:		13^21'03.52" Left		
Degree of Curvature(Arc):		5^00'00.00"		
Length:		267.02		
Tangent:		134.12		
Chord:		266.42		
Middle Ordinate:		7.77		
External:		7.82		
Tangent Direction:		S 61^48'56.20" E		
Radial Direction:		S 28^11'03.80" W		
Chord Direction:		S 68^29'27.96" E		
Radial Direction:		S 14^50'00.28" W		
Tangent Direction:		S 75^09'59.72" E		

Project Name: SWO 5125(1)
Description: US 281 SPUR
Horizontal Alignment Name: A007
Description: I-40 Ramp WBound ON
Style: Centerline

		STATION	EASTING	NORTHING
Element: Linear				
POB (	1033)	0+00.00	1895991.8296	194697.5585
PC (	1034)	7+96.82	1896770.4841	194528.3862
Tangent Direction:		S 77^44'32.20" E		
Tangent Length:		796.82		
Element: Circular				
PC (	1034)	7+96.82	1896770.4841	194528.3862
PI (	)	10+20.80	1896989.3616	194480.8323
CC (	1036)		1897013.7727	195648.1777
PT (	1037)	12+39.21	1897210.0358	194519.1944
Radius:		1145.92		
Delta:		22^07'10.20" Left		
Degree of Curvature(Arc):		5^00'00.00"		
Length:		442.39		
Tangent:		223.98		
Chord:		439.65		
Middle Ordinate:		21.28		
External:		21.69		
Tangent Direction:		S 77^44'32.20" E		
Radial Direction:		S 12^15'27.80" W		
Chord Direction:		S 88^48'07.30" E		
Radial Direction:		S 9^51'42.40" E		
Tangent Direction:		N 80^08'17.60" E		
Element: Linear				
PT (	1037)	12+39.21	1897210.0358	194519.1944
PC (	1038)	15+19.68	1897486.3615	194567.2310
Tangent Direction:		N 80^08'17.60" E		
Tangent Length:		280.47		
Element: Circular				
PC (	1038)	15+19.68	1897486.3615	194567.2310
PI (	)	16+78.00	1897642.3415	194594.3467
CC (	1040)		1897682.6247	193438.2477
PT (	1041)	18+34.33	1897799.8305	194578.1536
Radius:		1145.92		
Delta:		15^43'56.41" Right		
Degree of Curvature(Arc):		5^00'00.00"		
Length:		314.65		
Tangent:		158.32		
Chord:		313.66		
Middle Ordinate:		10.78		
External:		10.88		
Tangent Direction:		N 80^08'17.60" E		
Radial Direction:		S 9^51'42.40" E		
Chord Direction:		N 88^00'15.81" E		
Radial Direction:		S 5^52'14.02" W		
Tangent Direction:		S 84^07'45.98" E		

DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
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COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. S007

CHECK LEVELS SWO 5125(1)						BENCHMARK LIST	NAVD88 DATUM FROM STATIC GPS
BM NO.	RUN 1	RUN 2	MEAN DIFF	ADJ DIFF	ADJ ELEV	PUBLISHED ELEV	BM DESCRIPTION
C-9-950					1536.22	1536.22	ALUMINUM MONUMENT C-9-950 Station 38+23, 97' Left A001
TO	-0.104	-0.104	-0.104	-0.100			
							3/4" Rebar Station 37+73, 54' Left A001 OPUS Ran on this point as check (OPUS Solution=1536.12)
100					1536.122		
TO	0.022	0.020	0.021	0.021			
101					1536.143		3/4" Rebar Sta 39+06, 105' Left A001
TO	3.161	3.170	3.166	3.166			
102					1539.309		3/4" Rebar Sta. 45+92, 93' Left A001
TO	1.641	1.645	1.643	1.643			
							Cut X on SW wingwall of bridge Station
103					1540.952		49+96, 19' Left A001
TO	4.375	4.362	4.368	4.368			
							Cut "X" on SW corner on concrete pad
104					1545.320		Station 57+03, 93' Right A001
TO	9.798	9.790	9.794	9.794			
105					1555.114		3/4" Rebar Station 62+92, 94' Right A001
TO	1.727	1.732	1.729	1.729			
106					1556.843		3/4" Rebar Station 69+67, 102' Right A001
TO	-32.968	-32.944	-32.956	-32.956			
201					1523.887		3/4" Rebar Station 316+30, 268' Right A002
TO	11.284	11.279	11.281	11.281			

CHECK LEVELS SWO 5125(1)						BENCHMARK LIST	NAVD88 DATUM FROM STATIC GPS
BM NO.	RUN 1	RUN 2	MEAN DIFF	ADJ DIFF	ADJ ELEV	PUBLISHED ELEV	BM DESCRIPTION
202					1535.168		3/4" Rebar Station 321+55, 281' Right A002
TO	10.970	10.969	10.969	10.969			
203					1546.138		3/4" Rebar Station 325+55, 375' Right A002
TO	-20.851	-20.857	-20.854	-20.854			
204					1525.284		3/4" Rebar Station 339+16, 384' Left A002
TO	-39.806	-39.808	-39.807	-39.807			
205					1485.477		3/4" Rebar Station 345+93, 202' Left A002
TO	-11.919	-11.920	-11.920	-11.920			
206					1473.557		3/4" Rebar Station 352+86, 172' Left A002
TO	84.030	84.022	84.026	84.026			
							3/4" Rebar Station 72+71, 101' Right A001 OPUS Ran on this point as check (OPUS
207					1557.583		Solution=1557.58)
TO	-0.621	-0.620	-0.620	-0.620			
C-9-951					1556.963	1556.96	ALUMINUM MONUMENT C-9-951 Station 71.32, 102' Right A001

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN		
CHECKED		SURVEY DATA SHEET (SHEET 8 OF 15)
APPROVED		
SQUAD		

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. S008

STATE OF OKLAHOMA
DEPARTMENT OF HIGHWAYS
SURVEY DIVISION
POSITION AND DESCRIPTION OF SURVEY MONUMENTS

S.D. FORM NO. 11
REVISED 3/10/75

COUNTY *CANADIAN* | STATION NUMBER *C-9-950* | SWO *5125 (1)* | DATE *5/15/2015*

TYPE OF MONUMENT *2 1/2" ALUMINUM CAP* MONUMENT SET FOR *HORIZONTAL & VERTICAL*

METHOD ESTABLISHED: TRILATERATION ____, TRIANGULATION ____, TRAVERS *X*, OTHER (SPECIFY) *GPS OPUS OBSERVATION*

HEIGHT OF INSTUMENT ABOVE MONUMENT: ____ FEET, TYPE OF WITNESS POST *CARSONITE*

WRITTEN DESCRIPTION OF LOCATION: *MONUMENT LOCATED APPROXIMATELY 1,200' SOUTH FROM THE INTERSECTION OF US 281 SPUR AND I-40, AND APPROXIMATELY 95' WEST OF THE CENTERLINE OF US 281 SPUR.*

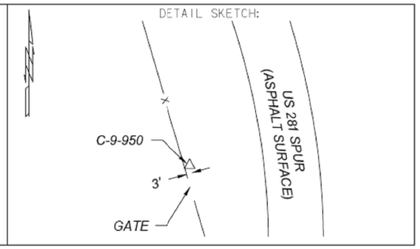
ESTABLISHED BY: *OLSSON ASSOCIATES*

COORDINATE SYSTEM: ☐ USC&GS, ☐ OHD, ☒ OTHER (SPECIFY) NAD 83 (1993)

GRID DATA	COORDINATES (FEET)	GRID BEARING	DISTANCE	POINTS OBSERVED
SOUTH ZONE ACCURACY: *3RD* ORDER	X *1897710.138* Y *192978.935*			

GEODETIC DATA	POSITION	ELEVATION
ANGLE OF VARIANCE (θ) *00°08'25.43"*	LATITUDE *35°31'47.6421"* NORTH LONGITUDE *98°14'16.4854"* WEST	*1536.22* FEET SOURCE *STATIC GPS* ACCURACY: *3rd* ORDER

GENERAL VICINITY:
SEC *10*
R *10 W*
T *12 N*
△ = CONTROL MONUMENT
⊙ = LAND CORNER
▭ = OTHER



STATE OF OKLAHOMA
DEPARTMENT OF HIGHWAYS
SURVEY DIVISION
POSITION AND DESCRIPTION OF SURVEY MONUMENTS

S.D. FORM NO. 11
REVISED 3/10/75

COUNTY *CANADIAN* | STATION NUMBER *C-9-951* | SWO *5125 (1)* | DATE *5/15/2015*

TYPE OF MONUMENT *2 1/2" ALUMINUM CAP* MONUMENT SET FOR *HORIZONTAL & VERTICAL*

METHOD ESTABLISHED: TRILATERATION ____, TRIANGULATION ____, TRAVERS *X*, OTHER (SPECIFY) *GPS OPUS OBSERVATION*

HEIGHT OF INSTUMENT ABOVE MONUMENT: ____ FEET, TYPE OF WITNESS POST *CARSONITE*

WRITTEN DESCRIPTION OF LOCATION: *MONUMENT LOCATED NORTH OF THE I-40/281 SPUR INTERCHANGE AND IS APPROXIMATELY 750' NORTHWEST OF OLD ROUTE 66, AND NORTHEAST OF THE CENTERLINE OF US 281 SPUR APPROXIMATELY 120'.*

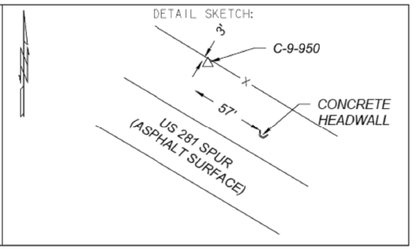
ESTABLISHED BY: *OLSSON ASSOCIATES*

COORDINATE SYSTEM: ☐ USC&GS, ☐ OHD, ☒ OTHER (SPECIFY) NAD 83 (1993)

GRID DATA	COORDINATES (FEET)	GRID BEARING	DISTANCE	POINTS OBSERVED
SOUTH ZONE ACCURACY: *3RD* ORDER	X *1896898.183* Y *195876.864*			

GEODETIC DATA	POSITION	ELEVATION
ANGLE OF VARIANCE (θ) *00°08'25.43"*	LATITUDE *35°32'16.2821"* NORTH LONGITUDE *98°14'26.3956"* WEST	*1556.96* FEET SOURCE *STATIC GPS* ACCURACY: *3rd* ORDER

GENERAL VICINITY:
SEC *3*
R *10 W*
T *12 N*
△ = CONTROL MONUMENT
⊙ = LAND CORNER
▭ = OTHER



DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN			
CHECKED			SURVEY DATA SHEET (SHEET 9 OF 15)
APPROVED			
SQUAD			

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. S009

C1
PI=39+28.67
R=716.20
D=32°09'48"
DOC=8°00'00"
L=402.04'
T=206.47'
CL=396.78'
CB=N16°10'55"W

C2
PI=44+36.35
R=716.20
D=47°05'37"
DOC=8°00'00"
L=588.67'
T=312.11'
CL=572.24'
CB=N8°43'00"W

C3
PI=60+47.05
R=954.93'
D=74°08'29"
DOC=6°00'00"
L=1235.69'
T=721.44'
CL=1151.26
CB=N22°14'26"W

SECTION 10
T-12-N, R-10-W

SECTION 11
T-12-N, R-10-W

SECTION 3
T-12-N, R-10-W

SECTION 2
T-12-N, R-10-W

BM• 202
ELEV.=1535.17

BM• 203
ELEV.=1546.14

BM• 101
BENCHMARK IRON
ELEV.=1536.14
3/4"

BM• 102
BENCHMARK IRON
ELEV.=1539.31
3/4"

BM• 103
ELEV.=1540.95

BM• 104
ELEV.=1545.32

BM• 105
ELEV.=1555.11

BM• 100
3/4" REBAR
ELEV.=1536.12

C-9-950
2½" ALUM CAP
ELEV.=1536.22

BM• 204
ELEV.=1525.28

BEGIN A001 STA 35+78.75
•STA 35+78.23 FAP NO.I-40-4(13)107

PC STA 37+22.20
FAP NO.I-40-4(13)107
SWO 216001)

PRC STA 41+24.24

PT STA 47+12.91

A001 STA 47+82.91
A002 STA 33+90.00
FAP NO.I-40-4(13)107 & SWO 21601)
STA 10+000-Begin SW03736(1)
STA 10+000-Begin FAP NO.NHX-10W(10)

A001 STA 50+42.91
A002 STA 33+90.00
FAP NO.I-40-4(13)107 & SWO 21601)
STA 10+000-Begin SW03736(1)
STA 10+000-Begin FAP NO.NHX-10W(10)

A001 STA 54+75.00
A004 STA 0+00.00
A007 STA 13+34.33

PT STA 63+61.30 A001
PT STA 10+50.615 SW03736(1)

PRES.R/W

NS-267

EW-103

EW-102

I-40 SURVEY CENTERLINE A002

I-40 SERVICE ROAD A003

I-40 RAMP A006

I-40 RAMP A007

I-40 RAMP A005

I-40 RAMP A004

SHERI LYNN WILSON WHEELER
BK 3642,PG 31

WHEELER HOLDINGS,LLC
BK 3489,PG 593

LINDA STIRMAN
REVOCABLE LIVING TRUST
BK 1956,PG 527

CALVIN FRANKLIN TOHO &
PAMELA LEE TOHO
BOOK 1690,PAGE 037

MARTIN L.TURNER &
CERA LEE TURNER
LIVING TRUST
BK 1731,PG 716

HOUSING AUTHORITY OF THE
CHEYENNE-ARAPAHO
TRIBES OF OKLAHOMA
BK 2400,PG 449

GARY LINDLEY
BK 3788,PG 470

LISA L.MILLER
BK 1862,PG 298

WHEELSON INVESTMENTS,LLC
BK 3789,PG 818

3 TIPI PROPERTIES,LLC
BK 3696,PG 168

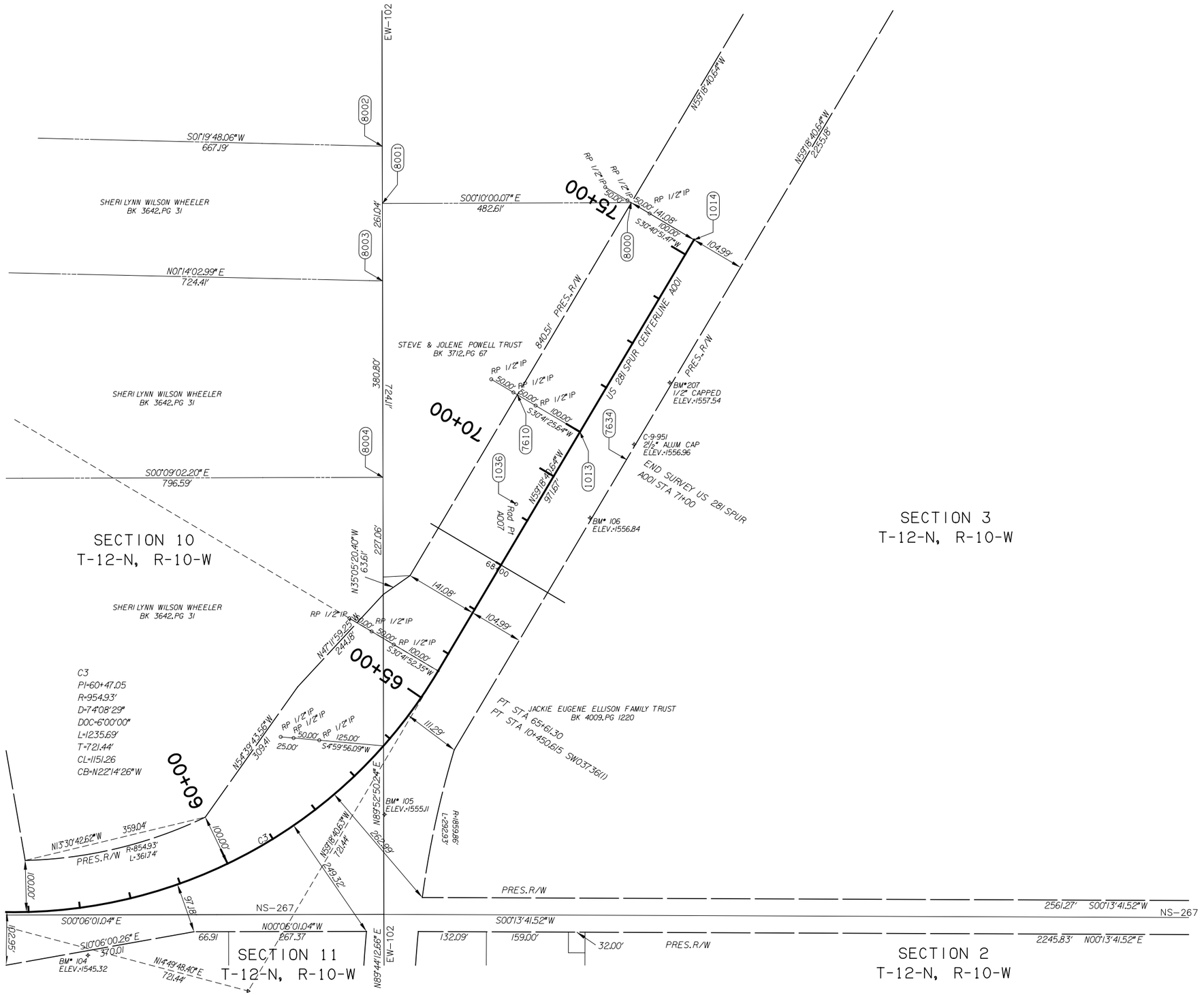
JANE MILLSAP
BK 3794,PG 526

45+00
50+00
55+00
60+00
65+00
68+00
40+00

SCALE
1" = 100'

DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN			
CHECKED			SURVEY DATA SHEET (SHEET 10 OF 15)
APPROVED			
SQUAD			

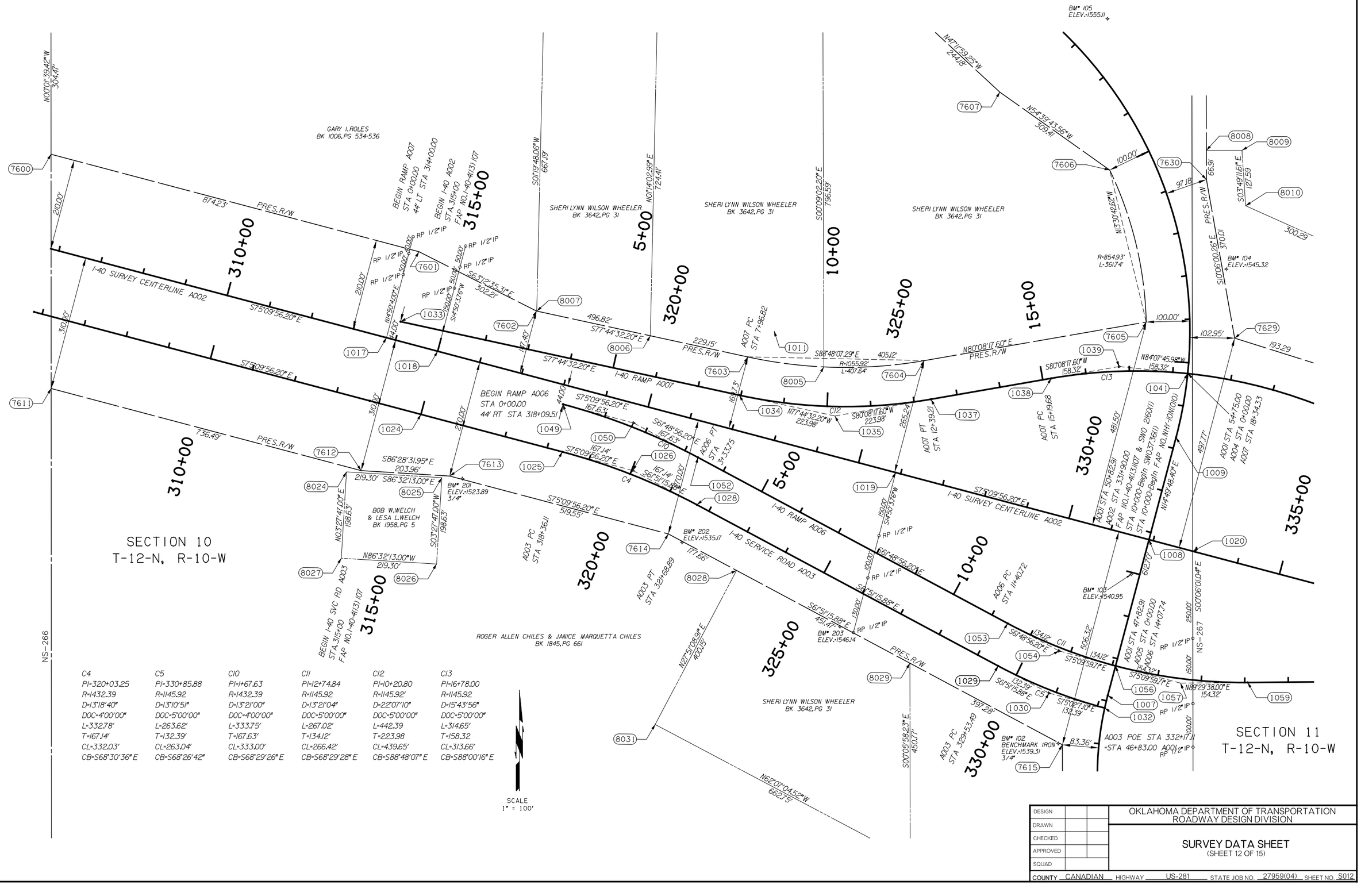
COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. S010



SCALE
1" = 100'

DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN			
CHECKED			SURVEY DATA SHEET (SHEET 11 OF 15)
APPROVED			
SQUAD			

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. S011



C4	C5	C10	C11	C12	C13
PI=320+03.25	PI=330+85.88	PI=1+67.63	PI=12+74.84	PI=10+20.80	PI=16+78.00
R=1432.39	R=1145.92	R=1432.39	R=1145.92	R=1145.92'	R=1145.92
D=13°18'40"	D=13°10'51"	D=13°21'00"	D=13°21'04"	D=22°07'10"	D=15°43'56"
D0C=4°00'00"	D0C=5°00'00"	D0C=4°00'00"	D0C=5°00'00"	D0C=5°00'00"	D0C=5°00'00"
L=332.78'	L=263.62'	L=333.75'	L=267.02'	L=442.39'	L=314.65'
T=167.14'	T=132.39'	T=167.63'	T=134.12'	T=223.98'	T=158.32
CL=332.03'	CL=263.04'	CL=333.00'	CL=266.42'	CL=439.65'	CL=313.66'
CB=S68°30'36"E	CB=S68°26'42"	CB=S68°29'26"E	CB=S68°29'28"E	CB=S88°48'07"E	CB=S88°00'16"E

DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN			
CHECKED			SURVEY DATA SHEET (SHEET 12 OF 15)
APPROVED			
SQUAD			

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. S012

WHEELSON INVESTMENTS,LLC
BK 3789,PG 818

RSL&K ENTERPRISES,INC
BK 2353,PG 511

3 TIPI PROPERTIES,LLC
BK 3696,PG 168

4W INVESTMENTS,LLC
BK 3706,PG 643

SHERI LYNN WILSON WHEELER
BK 3642,PG 31

HOUSING AUTHORITY OF THE CHEYENNE-ARAPAHO TRIBES OF OKLAHOMA
BK 2400,PG 449

GARY LINDLEY
BK 3788,PG 470

USA L.MILLER
BK 1862,PG 298

CALVIN FRANKLIN TOHO & PAMELA LEE TOHO
BOOK 1690,PAGE 037

LINDA L.WHEELER
BK 2003,PG 684

LINDA STIRMAN REVOCABLE LIVING TRUST
BK 1956,PG 526

SHERI LYNN WILSON WHEELER
BK 3642,PG 31

BM# 104
ELEV.=1545.32

BM# 103
ELEV.=1540.95

BM# 204
ELEV.=1525.28

BM# 205
ELEV.=1485.48

BM# 206
ELEV.=1473.56

BM# 102
BENCHMARK IRON
ELEV.=1539.31
3/4"

BM# 101
BENCHMARK IRON
ELEV.=1536.14
3/4"

C:9-950
2½" ALUM CAP
ELEV.=1536.22

BM#100
3/4" REBAR
ELEV.=1536.12

C6	C7	C8	C9
PI=6+05.02	PI=13+85.37	PI=1+54.32	PI=9+62.94
R=1145.92'	R=1432.39'	R=1145.92'	R=1145.92
D=30°15'03"	D=2°17'11"	D=15°20'22"	D=12°45'49"
D0C=5°00'00"	D0C=4°00'00"	D0C=5°00'00"	D0C=5°00'00"
L=605.02'	L=532.16'	L=306.79'	L=255.27'
T=309.74'	T=269.18'	T=154.32'	T=128.17'
CL=598.02'	CL=529.10'	CL=305.87'	CL=254.74
CB=S69°00'18"E	CB=S64°31'22"E	CB=S82°50'11"E	CB=S84°07'28"E

SECTION 11
T-12-N, R-10-W

SCALE
1" = 100'

DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN			
CHECKED			SURVEY DATA SHEET (SHEET 13 OF 15)
APPROVED			
SQUAD			

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. S013

FOUND 1/2" IRON BAR AND REFERENCES AS DESCRIBED ON OCCR BY T. WAYNE FISCH, DATED 6/11/1997; BY GREGORY H. GUNNING, DATED 7/23/1997; AND BY J. STEVEN FOX, DATED 11/15/2012.

ODOT MON. NO. C-9-813

REF 1) CUT "X" CENTER OF HEADWALL (FOUND)	186.62'	S79°E
REF 2) 1/2" IRON BAR (FOUND)	115.52'	S33°E
REF 3) 1/2" IRON BAR (FOUND)	211.08'	S33°E
REF 4) PK NAIL IN TOP OF BRACE POST (FOUND)	118.24'	S27°W
REF 5) CUT "X" IN CONCRETE DRAIN (FOUND)	93.91'	N81°W
REF 6) PK NAIL IN TOP OF BRACE POST (FOUND)	107.06'	S08°E

FOUND 1/2" IRON BAR WITH YELLOW CAP AS DESCRIBED ON OCCR BY GREGORY H. GUNNING, DATED 7/23/1997. HELD

ALSO FOUND 5/8" IRON BAR WITH YELLOW CAP AS DESCRIBED ON OCCR BY J. STEVEN FOX, DATED 11/15/2012. MR. FOX RESET THIS CORNER, AS STATED ON HIS OCCR, FOR THE REASON OF "OLD CORNER SET BY GUNNING SURVEYING APPEARED TO BE GONE." DID NOT HOLD

ODOT MON. NO. C-9-812

REF 1) 60D IN CORNER POST (FOUND)	35.00'	N46°E
REF 2) RR SPIKE IN 20" TREE (FOUND)	58.58'	S27°W
REF 3) 60D IN BRACE POST (FOUND)	33.73'	S29°W
REF 4) 5/8" IRON BAR (FOUND)	19.76'	S60°W
REF 5) 60D IN BRACE POST (FOUND)	29.87'	S71°W

FOUND 1/2" IRON BAR WITH CAP STAMPED "GUNNING SURVEYING" AND REFERENCE AS DESCRIBED ON OCCR BY GREGORY H. GUNNING, DATED 7/23/1997 SET IN CONJUNCTION WITH ODOT SWO 3736(1) HELD AS CORNER.

FOUND 3/8" IRON BAR WITH CAP AND REFERENCE AS DESCRIBED ON OCCR BY T. WAYNE FISCH, DATED 6/11/1997. DID NOT HOLD.

ODOT MON. NO. C-9-811

REF 1) 1/2" IRON BAR (FOUND)	62.90'	N02°E
REF 2) NAIL IN TREE (FOUND)	31.99'	S42°W
REF 3) 3/8" IRON BAR (FOUND)	44.01'	N81°W
REF 4) 60D NAIL IN 18" CEDAR (FOUND)	42.55'	N73°W

FOUND 1/2" IRON BAR WITH YELLOW CAP STAMPED "LS 1375" AND REFERENCES AS DESCRIBED ON OCCR BY GREGORY H. GUNNING, DATED 7/23/1997, AND BY J. STEVEN FOX, DATED 11/15/2012.

ODOT MON. NO. C-9-810

REF 1) R/W MARKER (FOUND)	31.83'	S02°W
REF 2) 1/2" REBAR (FOUND)	65.14'	S15°W
REF 3) 1/2" REBAR (FOUND)	119.48'	S15°W
REF 4) 1/2" REBAR (FOUND)	179.98'	S15°W

FOUND 1/2" IRON BAR AND REFERENCES AS DESCRIBED ON OCCR BY WILLIAM W. VAUGHAN, DATED 10/9/1981; AND BY GREGORY H. GUNNING, DATED 7/23/1997.

ODOT MON. NO. C-9-809

REF 1) 1/2" IRON BAR (FOUND)	182.08'	N78°E
REF 2) 1/2" IRON BAR (FOUND)	85.11'	N78°E
REF 3) RR SPIKE IN TREE (FOUND)	35.06'	S02°E

FOUND 3/8" IRON BAR WITH REFERENCES AS DESCRIBED BY NUMEROUS OCCR DOCUMENTS.

ODOT MON. NO. C-9-808

REF 1) NAIL IN CORNER POST (FOUND)	18.12'	N10°E
REF 2) MAG NAIL IN FENCE POST (FOUND)	50.90'	S00°E
REF 3) 1/2" IRON BAR (FOUND)	190.47'	S71°W
REF 4) NAIL IN WOOD POST (FOUND)	37.44'	N87°W

FOUND RAILROAD SPIKE AND REFERENCES AS DESCRIBED ON OCCR BY GREGORY H. GUNNING, DATED 7/23/1997, AND BY J. STEVEN FOX, DATED 11/15/2015.

ODOT MON. NO. C-9-804

REF 1) TOP NUT OF FIRE HYDRANT (FOUND)	80.84'	N26°W
REF 2) FACE OF STEEL POST (FOUND)	73.28'	N36°E
REF 3) RAILROAD SPIKE IN 24" ELM (FOUND)	67.28'	S54°E

FOUND 1/2" IRON BAR AND REFERENCES AS DESCRIBED ON OCCR BY WILLIAM W. VAUGHAN, DATED 11/5/1980; GREGORY H. GUNNING, DATED 7/23/1997; AND ANTHONY J. FELDER, DATED 3/5/2004

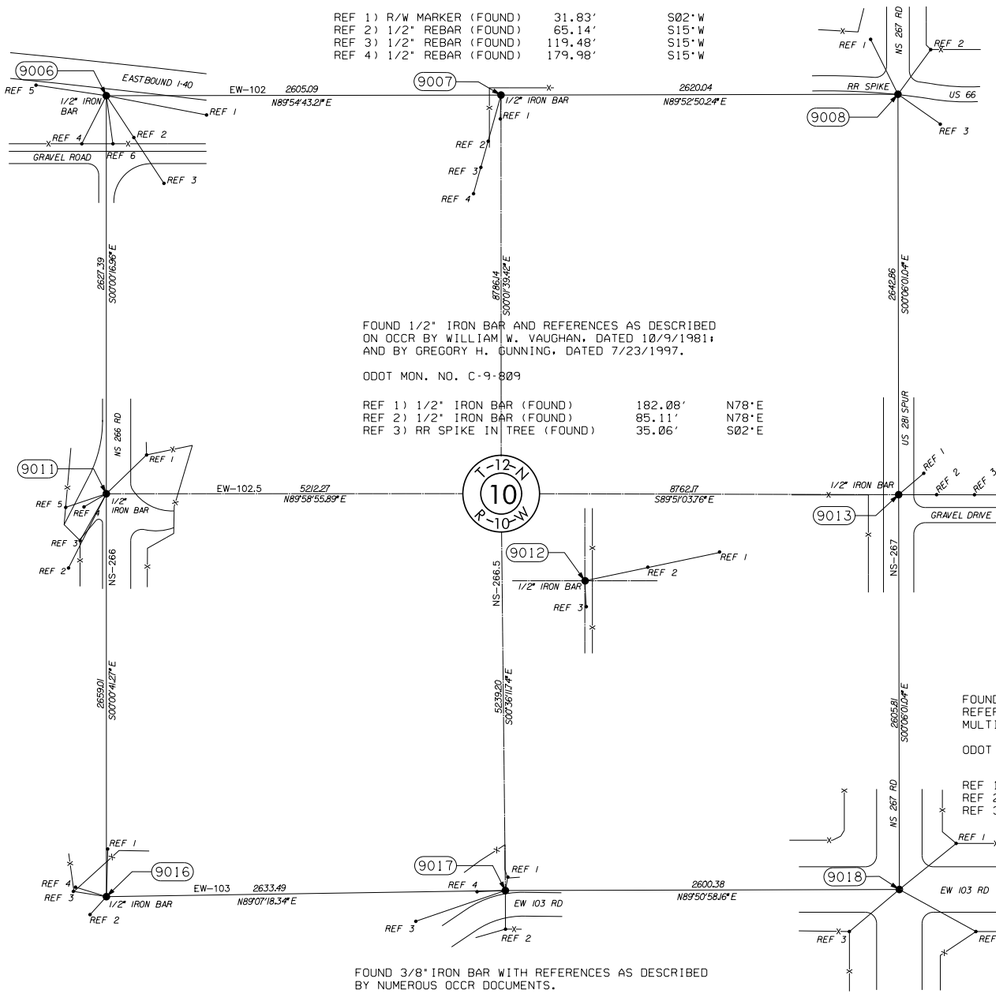
ODOT MON. NO. C-9-803

REF 1) MAG NAIL WITH WASHER CA 980 IN TELEPHONE POST (FOUND)	43.39'	N50°E
REF 2) 1/2" IRON BAR (FOUND)	50.00'	S90°E
REF 3) 1/2" IRON BAR (FOUND)	100.00'	S90°E
REF 4) 1/2" IRON BAR (FOUND)	150.00'	S90°E

FOUND MAG NAIL WITH WASHER, "LS 1584", AND REFERENCES IN SAME POSITION AS THOSE ON MULTIPLE OCCR DOCUMENTS.

ODOT MON. NO. C-9-802

REF 1) MAG NAIL IN WOOD POST (FOUND)	67.41'	N51°E
REF 2) MAG NAIL IN WOOD POST (FOUND)	59.19'	S61°E
REF 3) 40D IN TOP OF CORNER POST (FOUND)	45.92'	S50°W



SCALE:
1" = 500'

NOTE: REFERENCE'S SHOWN ARE NOT TO SCALE.

DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN			
CHECKED			SURVEY DATA SHEET (SHEET 14 OF 15)
APPROVED			
SQUAD			

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. S014

FOUND RAILROAD SPIKE AND REFERENCES AS DESCRIBED ON OCCR BY GREGORY H. GUNNING, DATED 7/23/1997, AND BY J. STEVEN FOX, DATED 11/15/2015.

ODOT MON. NO. C-9-804

REF 1) TOP NUT OF FIRE HYDRANT (FOUND)	80.84′	N26°W
REF 2) FACE OF STEEL POST (FOUND)	73.28′	N36°E
REF 3) RAILROAD SPIKE IN 24" ELM (FOUND)	67.28′	S54°E

FOUND 1/2" IRON BAR AND REFERENCES MATCHING OCCR BY WILLIAM W. VAUGHAN, DATED 10/10/1980, AND BY ANTHONY J. FELDER, DATED 03/05/2004.

ODOT MON. NO. C-9-952

REF 1) 40D NAIL IN CORNER POST (FOUND)	51.25′	N03°E
REF 2) MAG NAIL W/ WASHER CA980 IN GATE POST (FOUND)	53.70′	N21°W
REF 3) NAG NAIL IN CORNER POST (FOUND)	32.64′	S00°W

FOUND CUT "X" ON CONCRETE PAVING AS DESCRIBED ON OCCR BY WILLIAM W. VAUGHAN, DATED 4/6/1982.

ODOT MON. NO. C-9-953

REF 1) FACE OF 3" STEEL CORNER POST (FOUND)	63.75′	N32°E
REF 2) 60D NAIL IN 8" BRACE POST (FOUND)	51.47′	S13°W
REF 3) 60D NAIL IN 8" CORNER POST (FOUND)	44.23′	S17°W
REF 4) 60D NAIL IN 8" BRACE POST (FOUND)	46.90′	S26°W

FOUND 1/2" CAPPED IRON BAR, CA 1600 WITH REFERENCES.

ODOT MON. NO. C-9-954

REF 1) 40D NAIL IN TREE STUMP (FOUND)	13.49′	N46°W
REF 2) 60D NAIL IN RAILROAD TIE (FOUND)	9.46′	S77°W
REF 3) 60D NAIL IN RAILROAD TIE (FOUND)	13.90′	S46°W

FOUND 1/2" IRON BAR AND REFERENCES AS DESCRIBED ON OCCR BY WILLIAM W. VAUGHAN, DATED 11/5/1980; GREGORY H. GUNNING, DATED 7/23/1997; AND ANTHONY J. FELDER, DATED 3/5/2004

ODOT MON. NO. C-9-803

REF 1) MAG NAIL WITH WASHER CA 980 IN TELEPHONE POST (FOUND)	43.39′	N50°E
REF 2) 1/2" IRON BAR (FOUND)	50.00′	S90°E
REF 3) 1/2" IRON BAR (FOUND)	100.00′	S90°E
REF 4) 1/2" IRON BAR (FOUND)	150.00′	S90°E

SET 5/8" IRON BAR WITH PLASTIC CAP STAMPED "OLSSON CA -2483" ON LINE AND EQUAL DISTANCE BETWEEN THE FOUND NORTHEAST AND SOUTHEAST SECTION CORNERS.

ODOT MON. NO. C-9-955

REF 1) CUT "X" ON SIGN BASE (FOUND)	139.24′	S44°E
REF 2) 60D NAIL IN CORNER POST (SET)	156.59′	S01°W
REF 3) 1/2" IRON BAR (SET)	100.00′	S45°W

FOUND MAG NAIL WITH WASHER, "LS 1584", AND REFERENCES IN SAME POSITION AS THOSE ON MULTIPLE OCCR DOCUMENTS.

ODOT MON. NO. C-9-802

REF 1) MAG NAIL IN WOOD POST (FOUND)	67.41′	N51°E
REF 2) MAG NAIL IN WOOD POST (FOUND)	59.19′	S61°E
REF 3) 40D IN TOP OF CORNER POST (FOUND)	45.92′	S50°W

FOUND 3/8" CAPPED IRON BAR "LS 1584" AND REFERENCES AS DESCRIBED ON OCCR DOCUMENT BY BOB MANLEY, DATED 10/18/2007.

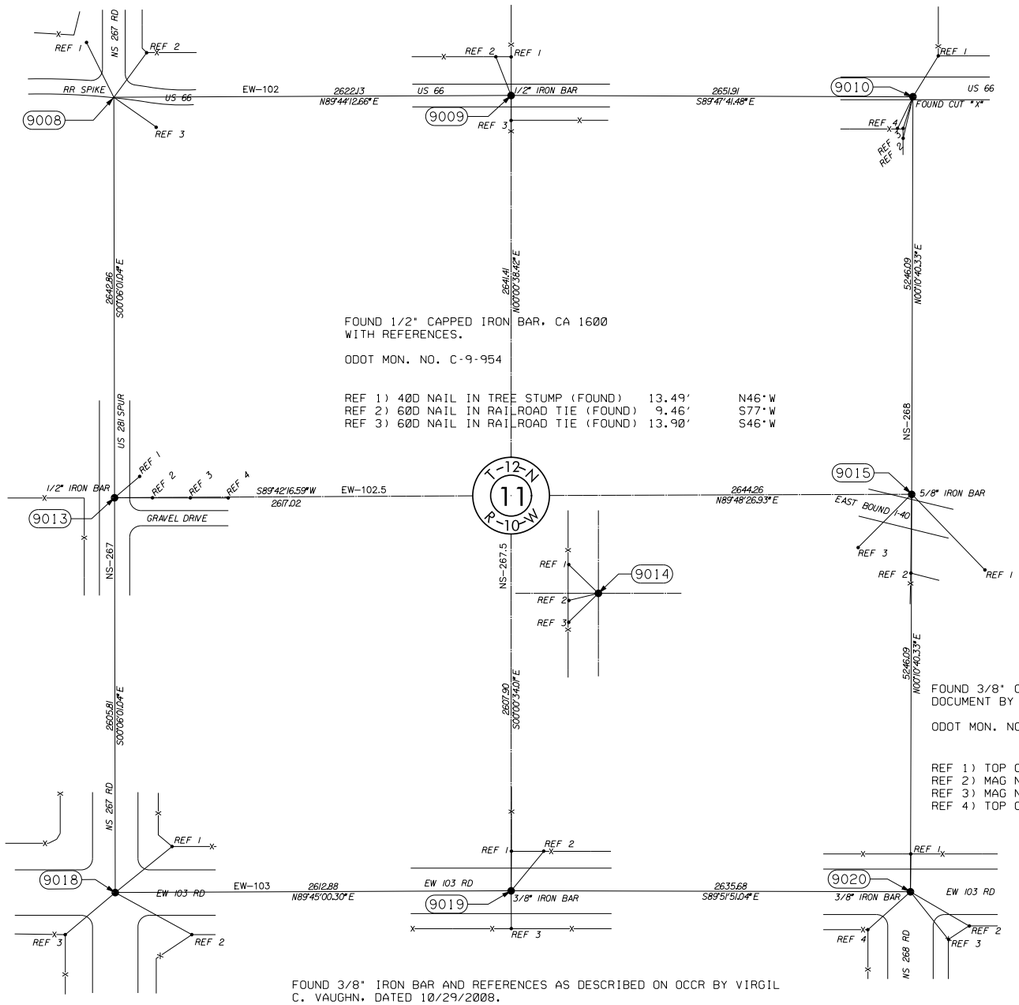
ODOT MON. NO. C-9-957

REF 1) TOP CENTER WOOD CORNER POST (FOUND)	35.46′	N01°E
REF 2) MAG NAIL TOP 8" WOOD CORNER POST (FOUND)	60.80′	S60°E
REF 3) MAG NAIL TOP 8" WOOD CORNER POST (FOUND)	52.58′	S38°E
REF 4) TOP CENTER WOOD CORNER POST (FOUND)	42.76′	S48°W

FOUND 3/8" IRON BAR AND REFERENCES AS DESCRIBED ON OCCR BY VIRGIL C. VAUGHN, DATED 10/29/2008.

ODOT MON. NO. C-9-956

REF 1) 60D NAIL IN FENCE POST (FOUND)	32.81′	N00°E
REF 2) 60D NAIL IN TWIN/SPLIT TREE (FOUND)	41.44′	N40°E
REF 3) 60D NAIL IN FENCE POST (FOUND)	35.12′	S00°E



SCALE:
1" = 500'

NOTE: REFERENCE'S SHOWN ARE NOT TO SCALE.

DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN			
CHECKED			SURVEY DATA SHEET (SHEET 15 OF 15)
APPROVED			
SQUAD			

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. S015

8/20/2024

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE

50′ 0 25′ 50′

MATCHLINE A

1,000′ | 1,000′ | 750′ | 750′ | 750′ | 750′ | 750′ | 1,320′ | 1,320′ | 570′ | 570′ | 500′

(2) CS-16E
(2) CS-17E
(2) CS-18E

(2) CONTRACTOR SIGNS

(2) W3-5(65)
(2) TYPE 'B' LIGHTS

(2) R2-1F(65)

(2) "NO CELL PHONES"

(2) R2-1F(55)

(2) R2-1F(45)

(2) W20-1(1 MILE)
(2) TYPE 'B' LIGHTS

(2) CS-13F
(2) CS-14F
(2) R2-1F(35)

(2) W20-5L(1/2 MILE)
(2) TYPE 'B' LIGHTS

(2) W4-2(L)
(2) TYPE 'B' LIGHTS

(1) CONSTRUCTION SIGN 10

(2) R4-1F

WORK ZONE
FINES DOUBLE
WHEN WORKERS ARE PRESENT

ROAD WORK NEXT XX MILES
EST. COMPLETION - SUMMER 20XX
XYZ Road Contractors Inc
Anytown, Oklahoma

SPEED LIMIT 65

STAY ALERT
PLEASE
IN WORK ZONE

SPEED LIMIT 55

SPEED LIMIT 45

ROAD WORK 1 MILE

BEGIN WORK ZONE
SPEED LIMIT 35

LEFT LANE CLOSED 1/2 MILE

STATE LAW MERGE NOW

DO NOT PASS

MATCHLINE A

(1) ARROW DISPLAY (TYPE 'C')

SOLID YELLOW EDGE LINE (OPTIONAL)

1,000′

(2) CS-14F
(2) R2-1(25)F

850′ TAPER
DRUMS @ 50′ C/C
(THRU MERGING TAPER)
(1) W1-8 (EVERY OTHER DRUM)

STA. 301+10 END 850′ MERGING TAPER-BEGIN 1,700′ TANGENT LANE

(1) SPECIAL SIGN NO. 1

1,700′ TANGENT
DRUMS @ 100′ C/C (THRU TANGENT)
(1) R4-7A(R)(EVERY FOURTH DRUM)

KEEP RIGHT

STA. 318+10 END 1,700′ TANGENT LANE

(3) TYPE III BARRICADES
(6) TYPE 'B' LIGHTS
W1-6 ON EACH BARRICADE

320′

ROAD CLOSED

(3) TYPE III BARRICADES
(6) TYPE 'B' LIGHTS
(3) R11-2

DRUMS @ 25′ C/C
W1-8 ON EVERY OTHER DRUM

5+00

(5) TYPE III BARRICADES
(10) TYPE 'B' LIGHTS
(3) R11-2
(2) M4-10(R)

ROAD CLOSED

DETOUR

MATCHLINE STA. 324+00

SPEED LIMIT 25
WORK ZONE

STA. 292+60 BEGI
850′ MERGING TAPE

ROAD WORK NEXT XX MILES
EST. COMPLETION - SUMMER 20XX

CONTRACTOR SUPPLEMENTAL PLAQUES

XYZ Road Contractors Inc
Anytown, Oklahoma

CONTRACTOR SIGN

FOR MORE INFORMATION AND SPECIFICATIONS SEE LINK BELOW:
https://oklahoma.gov/content/dam/ok/en/odot/traffic/Contractor%20Sign%20-%20Color.pdf

FOR DETAIL OF SPECIA
NO. 1, SEE "SUGGESTEI
CONTROL (4)" SHEET.

CONSTRUCTION
ALL TRAFFIC MUST EXIT

PHASE IV, VI, AND IX

DESIGN		
DRAWN		
CHECKED		
APPROVED		
SQUAD		

OKLAHOMA DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION

SUGGESTED TRAFFIC CONTROL
(SHEET 1 OF 14)

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. T001

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8/20/2024

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE

50′ 0 25′ 50′

(3) TYPE III BARRICADS
(6) TYPE 'B' LIGHTS
(3) R11-2
ROAD CLOSED

(5) TYPE III BARRICADES
(10) TYPE 'B' LIGHTS
(3) R11-2
(2) M4-10(R)
ROAD CLOSED
DETOUR

CONSTRUCTION
ALL TRAFFIC MUST EXIT

FOR DETAIL OF SPECIAL SIGN NO. 1, SEE "SUGGESTED TRAFFIC CONTROL (4)" SHEET.

(2) SPECIAL SIGN NO. 1

STA. 342+70 BEGIN 1,700′ TANGENT LANE

STA. 359+70 END 1,700′ TANGENT LANE--BEGIN 850′ MERGING TAPER

STA. 368+20 END 850′ MERGING TAPER

WORK ZONE SPEED LIMIT 25

345+00

DRUMS @ 25′ C/C
W1-8 ON EVERY OTHER DRUM

1,700′ TANGENT
DRUMS @ 100′ C/C (THRU TANGENT)
(1) R4-7A(R)(EVERY FOURTH DRUM)

KEEP RIGHT

SOLID YELLOW EDGE LINE (OPTIONAL)

850′ TAPER
DRUMS @ 50′ C/C
(THRU MERGING TAPER)
(1) W1-8 (EVERY OTHER DRUM)

(2) CS-14E
(2) R2-1F(25)
500′

MATCHLINE B

(3) TYPE III BARRICADES
(6) TYPE 'B' LIGHTS
W1-6 ON EACH BARRICADE

(1) ARROW DISPLAY (TYPE 'C')

STATE LAW MERGE NOW

LEFT LANE CLOSED 1/2 MILE

BEGIN WORK ZONE SPEED LIMIT 35

ROAD WORK 1 MILE

STAY ALERT PLEASE IN WORK ZONE

SPEED LIMIT 65

ROAD WORK NEXT XX MILES
EST. COMPLETION - SUMMER 2023
OKLAHOMA
XYZ Road Contractors Inc
Anytown, Oklahoma

DO NOT PASS

SPEED LIMIT 45

SPEED LIMIT 55

SPEED LIMIT 65

WORK ZONE
FINES DOUBLE
WHEN WORKERS ARE PRESENT

(2) R4-1F	1,000′	(1) CONSTRUCTION SIGN 10	570′	(2) W4-2(L) (2) TYPE 'B' LIGHTS
570′	(2) W20-5(L)(1/2 MILE) (2) TYPE 'B' LIGHTS	1,320′	(2) CS-13F (2) CS-14F (2) R2-1F(35)	1,320′
(2) W20-1(1 MILE) (2) TYPE 'B' LIGHTS	750′	(2) R2-1F(45)	750′	(2) R2-1F(55)
750′	(2) "NO CELL PHONES"	750′	(2) R2-1F(65)	750′
(2) W3-5(65) (2) TYPE 'B' LIGHTS	1,000′	(2) CONTRACTOR SIGNS	1,000′	(2) CS-16E (2) CS-17E (2) CS-18E

MATCHLINE B

PHASE IV, VI, AND IX

DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN			
CHECKED			SUGGESTED TRAFFIC CONTROL (SHEET 2 OF 13)
APPROVED			
SQUAD			

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. T002

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OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE

50′ 0 25′ 50′

(••••)
(4) TYPE III BARRICADES
(8) TYPE 'B' LIGHTS
(4) R11-2

(••••)
100 LF PORTABLE
LONGITUDINAL BARRIER

(••••)
DRUMS @ 25′ C/C

(••••)
DRUMS @ 25′ C/C

(••••)
75 LF PORTABLE
LONGITUDINAL BARRIER

(••••)
(8) TYPE III BARRICADES
(16) TYPE 'B' LIGHTS
(8) R11-2

I-40 ON RAMP

I-40 EXIT RAMP

325+00

330+00

335+00

55+00

5+00

I-40 WESTBOUND

I-40 EASTBOUND

US-281

****THESE ITEMS SHALL BE COVERED OR MOVED DURING THOSE TIMES THAT THE U.S. 281(SPUR) BRIDGE IS OPEN TO TRAFFIC OVER I-40.

(••••)
(8) TYPE III BARRICADES
(16) TYPE 'B' LIGHTS
(8) R11-2

10+00

55+00

330+00

5+00

(••••)
75 LF PORTABLE
LONGITUDINAL BARRIER

(••••)
DRUMS @ 25′ C/C

I-40 EXIT RAMP

I-40 ON RAMP

(••••)
(4) TYPE III BARRICADES
(8) TYPE 'B' LIGHTS
(4) R11-2

(••••)
DRUMS @ 25′ C/C

(••••)
100 LF PORTABLE
LONGITUDINAL BARRIER

I-40 SERVICE RD.

PHASE IV, VI, AND IX

DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN			
CHECKED			SUGGESTED TRAFFIC CONTROL (SHEET 3 OF 13)
APPROVED			
SQUAD			

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. T003

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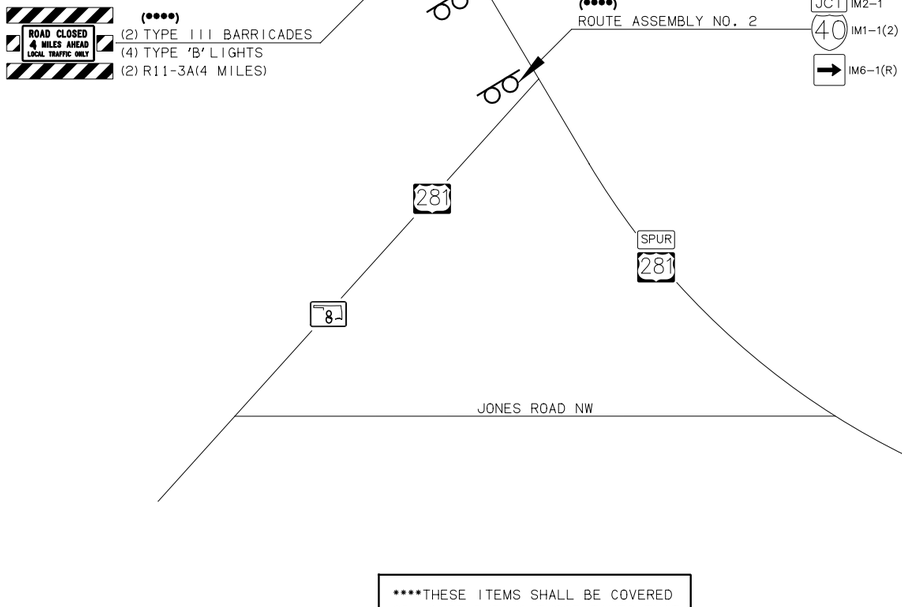
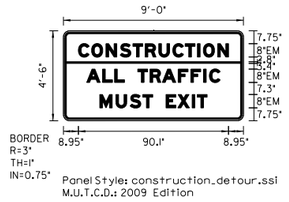
OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE



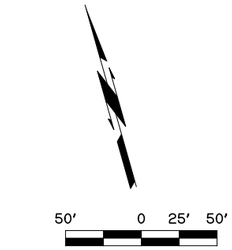


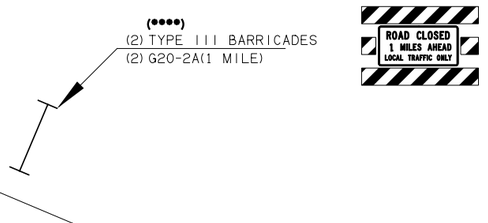
Panel Style: construction_detour.ssi
M.U.T.C.D.: 2009 Edition

SIGN NUMBER	SPECIAL SIGN NO.1
WIDTH x HGHT.	9'-0" x 4'-6"
BORDER WIDTH	1"
CORNER RADIUS	3"
MOUNTING	Ground
SIGN AREA	40.5 Sq.Ft.
BACKGROUND	TYPE: Reflective
	COLOR: Orange
LEGEND/BORDER	TYPE: Non-reflective
	COLOR: Black

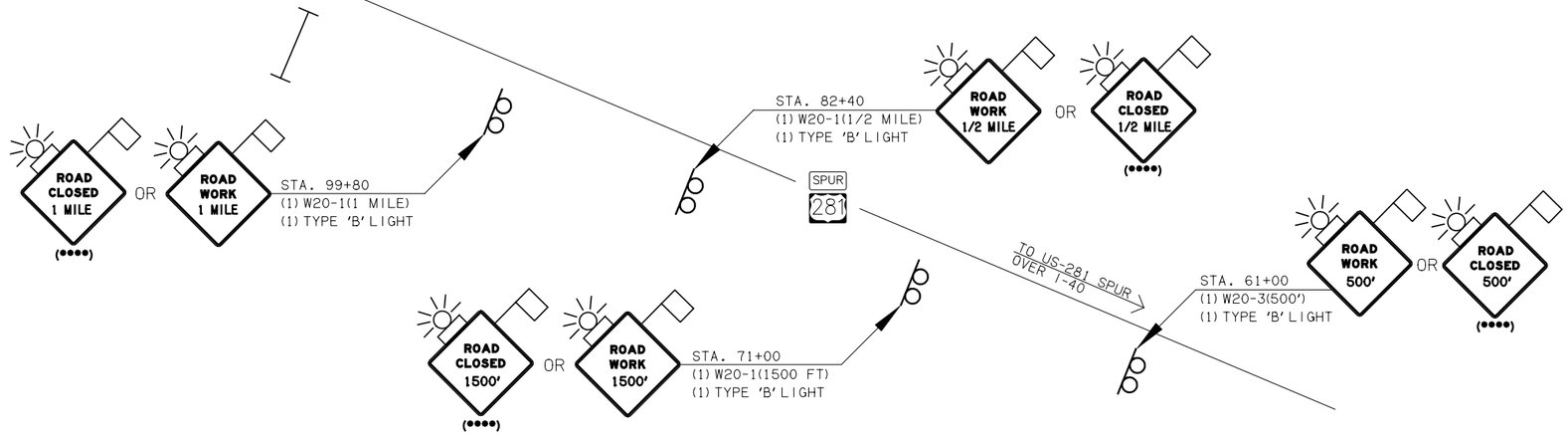
Dimensions are in inches.tenths Letter locations are paneledge to lower left corner

LETTER POSITIONS (X)																					LENGTH	SERIES/SIZE
C	O	N	S	T	R	U	C	T	I	O	N											EM 2000
9	16.9	25.5	34	41.7	49	57.2	65.6	73	80.4	83.9	92.6										90.1	
A	L	L		T	R	A	F	F	I	C												EM 2000
14	23.5	30.7	36.6	44.6	52	59.3	68.8	76.4	84	87.6											80.1	
M	U	S	T		E	X	I	T														EM 2000
21.8	31.5	40	47.6	53.6	61.6	68.6	77.2	80.3													64.4	





****THESE ITEMS SHALL BE COVERED OR MOVED DURING THOSE TIMES THAT THE U.S. 281(SPUR) BRIDGE IS OPEN TO TRAFFIC OVER I-40.



ALL PHASES

DESIGN		
DRAWN		
CHECKED		
APPROVED		
SQUAD		

OKLAHOMA DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION

SUGGESTED TRAFFIC CONTROL
(SHEET 4 OF 13)

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. T004

8/20/2024

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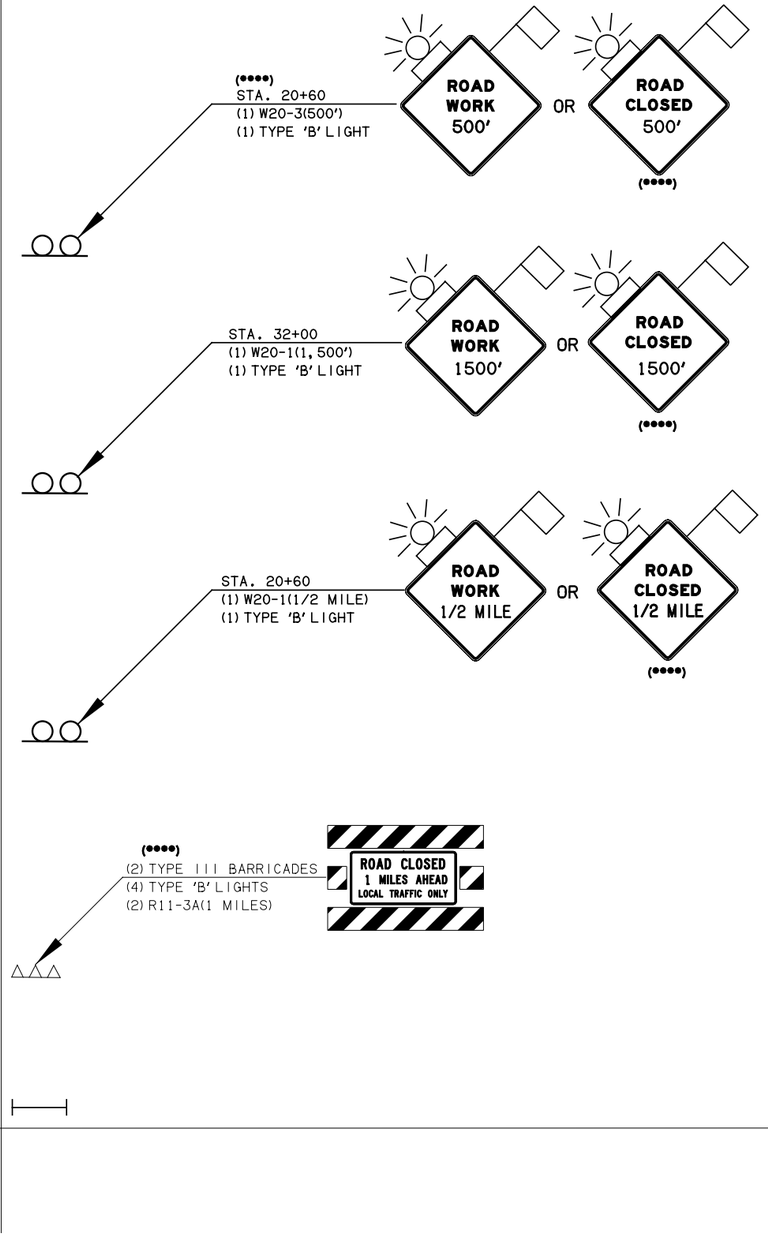
OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE



50' 0 25' 50'

****THESE ITEMS SHALL BE COVERED OR MOVED DURING THOSE TIMES THAT THE U.S. 281(SPUR) BRIDGE IS OPEN TO TRAFFIC OVER I-40.

PHASE IV, VI, AND IX

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN		
CHECKED		SUGGESTED TRAFFIC CONTROL (SHEET 5 OF 13)
APPROVED		
SQUAD		

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. T005

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OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE

50′ 0 25′ 50′

MATCHLINE A

1,000′ 750′ 750′ 750′ 750′ 1,320′ 1,320′ 570′ 570′ 1,000′

(2) CS-16E
(2) CS-17E
(2) CS-18E

(2) CONTRACTOR SIGNS

(2) "NO CELL PHONES"

(2) W3-5(65)
(2) TYPE 'B' LIGHTS

(2) R2-1F(65)

(2) W20-1(1 MILE)
(2) TYPE 'B' LIGHTS

(2) CS-13F
(2) CS-14F
(2) R2-1F(55)

(2) W20-5L(1/2 MILE)
(2) TYPE 'B' LIGHTS

(2) W4-2(L)
(2) TYPE 'B' LIGHTS

(1) CONSTRUCTION SIGN 10

(2) R4-1F

DO NOT PASS

STATE LAW MERGE NOW

LEFT LANE CLOSED 1/2 MILE

BEGIN WORK ZONE
SPEED LIMIT 55

ROAD WORK 1 MILE

SPEED LIMIT 65

SPEED LIMIT 65

STAY ALERT
PLEASE
IN WORK ZONE

WORK ZONE
FINES DOUBLE
WHEN WORKERS ARE PRESENT

ROAD WORK NEXT XX MILES
EST COMPLETION - SUMMER 2021
XYZ Road Contractors Inc
Anytown, Oklahoma

320+00

5+00

MATCHLINE A

(1) ARROW DISPLAY (TYPE 'C')

SOLID YELLOW
EDGE LINE (OPTIONAL)

500′

(2) CS-14F
(2) R2-1(55)F

850′ MERGING TAPER
DRUMS @ 50′ C/C
(THRU MERGING TAPER)
(1) W1-8 (EVERY OTHER DRUM)

STA. 301+10 END 850′ MERGING TAPER--BEGIN 1,700′ TANGENT LANE

2,500′ TANGENT
DRUMS @ 100′ C/C (THRU TANGENT)
(1) R4-7A(R)(EVERY FOURTH DRUM)

KEEP RIGHT

STA. 326+10 END 2,500′ TANGENT LANE

SPEED LIMIT 55
WORK ZONE

STA. 292+60 BEGIN 850′ MERGING TAPER

PHASE II, AND VIII

DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN			
CHECKED			SUGGESTED TRAFFIC CONTROL (SHEET 6 OF 13)
APPROVED			
SQUAD			

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. T006

8/20/2024

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE

50′ 0 25′ 50′

STA. 342+70 BEGIN 2,500′ TANGENT LANE

STA. 367+70 END 2,500′ TANGENT LANE--BEGIN 850′ MERGING TAPER

STA. 376+20 END 850′ MERGING TAPER

345+00

2,500′ TANGENT
DRUMS @ 100′ C/C (THRU TANGENT)
(1) R4-7A(R)(EVERY FOURTH DRUM)

KEEP RIGHT

SOLID YELLOW EDGE LINE

850′ MERGING TAPER
DRUMS @ 50′ C/C
(THRU MERGING TAPER)
(1) W1-8 (EVERY OTHER DRUM)

(2) CS-14E
(2) R2-1F(55)

500′

MATCHLINE B

(1) ARROW DISPLAY (TYPE 'C')

WORK ZONE SPEED LIMIT 55

DO NOT PASS

(2) R4-1F

1,000′

STATE LAW MERGE NOW

(1) CONSTRUCTION SIGN 10

570′

(2) W4-2(L)
(2) TYPE 'B' LIGHTS

570′

LEFT LANE CLOSED 1/2 MILE

(2) W20-5(L)(1/2 MILE)
(2) TYPE 'B' LIGHTS

1,320′

BEGIN WORK ZONE SPEED LIMIT 55

(2) CS-13F
(2) CS-14F
(2) R2-1F(55)

1,320′

ROAD WORK 1 MILE

(2) W20-1(1 MILE)
(2) TYPE 'B' LIGHTS

750′

SPEED LIMIT 65

(2) R2-1F(65)

750′

SPEED LIMIT 65

(2) W3-5(65)
(2) TYPE 'B' LIGHTS

750′

STAY ALERT
PLEASE
IN WORK ZONE

(2) "NO CELL PHONES"

750′

ROAD WORK NEXT XX MILES
EST. COMPLETION - SUMMER 2XXX
OKLAHOMA Transportation
XYZ Road Contractors Inc
Anytown, Oklahoma

(2) CONTRACTOR SIGNS

1,000′

WORK ZONE
FINES DOUBLE
WHEN WORKERS ARE PRESENT

(2) CS-16E
(2) CS-17E
(2) CS-18E

MATCHLINE B

PHASE II, AND VIII

DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN			
CHECKED			SUGGESTED TRAFFIC CONTROL (SHEET 7 OF 13)
APPROVED			
SQUAD			

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. T007

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OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE

50′ 0 25′ 50′

325+00

330+00

335+00

55+00

10+00

5+00

I-40 ON RAMP

I-40 EXIT RAMP

US 281

I-40 WESTBOUND

I-40 EASTBOUND

I-40 SERVICE RD

400′ PORTABLE LONGITUDINAL BARRIER (200′ TAPER / 200′ TANGENT)

CHANNELIZING DEVICES @ 50′ C/C

CZ ATTENUATOR

SOLID YELLOW EDGE LINE

STA. 337+70 BEGIN 2,500′ TANGENT LANE

STA. 326+10 END 2,500′ TANGENT LANE

PHASE II, AND VIII

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN		
CHECKED		SUGGESTED TRAFFIC CONTROL (SHEET 8 OF 13)
APPROVED		
SQUAD		

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. T008

8/20/2024

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OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE

50′ 0 25′ 50′

MATCHLINE A

1,000′ 750′ 750′ 750′ 750′ 1,320′ 1,320′ 570′ 570′ 1,000′

(2) CS-16E
(2) CS-17E
(2) CS-18E

(2) CONTRACTOR SIGNS

(2) "NO CELL PHONES"

(2) W3-5(65)
(2) TYPE 'B' LIGHTS

(2) R2-1F(65)

(2) W20-1(1 MILE)
(2) TYPE 'B' LIGHTS

(2) CS-13F
(2) CS-14F
(2) R2-1F(55)

(2) W20-5(R)(1/2 MILE)
(2) TYPE 'B' LIGHTS

(2) W4-2(R)
(2) TYPE 'B' LIGHTS

(1) CONSTRUCTION SIGN 11

(2) R4-1F

DO NOT PASS

STATE LAW
MERGE NOW

RIGHT LANE CLOSED
1/2 MILE

BEGIN WORK ZONE
SPEED LIMIT 55

ROAD WORK
1 MILE

SPEED LIMIT 65

SPEED LIMIT 65

STAY ALERT
PLEASE
IN WORK ZONE

ROAD WORK NEXT XX MILES
EST COMPLETION--SUMMER 20XX
XYZ Road Contractors Inc
Anytown, Oklahoma

WORK ZONE
FINES DOUBLE
WHEN WORKERS ARE PRESENT

320+00

5+00

MATCHLINE A

(1) ARROW DISPLAY (TYPE 'C')

SOLID WHITE EDGE LINE

CHANNELIZING DEVICES @ 25′ C/C

SOLID WHITE EDGE LINE

500′

(2) CS-14F
(2) R2-1(55)F

850′ MERGING TAPER
DRUMS @ 50′ C/C
(THRU MERGING TAPER)
(1) W1-8 (EVERY OTHER DRUM)

STA. 301+10 END 850′ MERGING TAPER-BEGIN
1,700′ TANGENT LANE

2,500′ TANGENT
DRUMS @ 100′ C/C (THRU TANGENT)
(1) R4-7A(L)(EVERY FOURTH DRUM)

KEEP LEFT

STA. 326+10 END
2,500′ TANGENT LANE

SPEED LIMIT 55

WORK ZONE

STA. 292+60 BEGIN
850′ MERGING TAPER

PHASE I, AND VII

			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DESIGN			
DRAWN			SUGGESTED TRAFFIC CONTROL (SHEET 9 OF 13)
CHECKED			
APPROVED			
SQUAD			

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. T009

8/20/2024

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE

50′ 0 25′ 50′

STA. 342+70 BEGIN 2,500′ TANGENT LANE

STA. 367+70 END 2,500′ TANGENT LANE--BEGIN 850′ MERGING TAPER

STA. 376+20 END 850′ MERGING TAF

WORK ZONE SPEED LIMIT 55

(1) ARROW DISPLAY (TYPE 'C')

(2) CS-14E
(2) R2-1F(55)

500′

CHANNELIZING DEVICES @ 25′ C/C

SOLID WHITE EDGE LINE

345+00

2,500′ TANGENT
DRUMS @ 100′ C/C (THRU TANGENT)
(1) R4-7A(L)(EVERY FOURTH DRUM)

KEEP LEFT

SOLID WHITE EDGE LINE

850′ MERGING TAPER
DRUMS @ 50′ C/C
(THRU MERGING TAPER)
(1) W1-8 (EVERY OTHER DRUM)

MATCHLINE B

DO NOT PASS

(2) R4-1F

1,000′

(1) CONSTRUCTION SIGN 11

570′

STATE LAW MERGE NOW

(2) W4-2(R)
(2) TYPE 'A' LIGHTS

570′

RIGHT LANE CLOSED 1/2 MILE

(2) W20-5(R)(1/2 MILE)
(2) TYPE 'A' LIGHTS

1,320′

BEGIN WORK ZONE SPEED LIMIT 55

(2) CS-13F
(2) CS-14F
(2) R2-1F(55)

1,320′

ROAD WORK 1 MILE

(2) W20-1(1 MILE)
(2) TYPE 'A' LIGHTS

750′

SPEED LIMIT 65

(2) R2-1F(65)

750′

SPEED LIMIT 65

(2) W3-5(65)
(2) TYPE 'A' LIGHTS

750′

STAY ALERT PLEASE IN WORK ZONE

(2) "NO CELL PHONES"

750′

ROAD WORK NEXT XX MILES
EST. COMPLETION - SUMMER 2024
OKLAHOMA
XYZ Road Contractors Inc
Anytown, Oklahoma

(2) CONTRACTOR SIGNS

1,000′

WORK ZONE FINES DOUBLE WHEN WORKERS ARE PRESENT

(2) CS-16E
(2) CS-17E
(2) CS-18E

MATCHLINE B

PHASE I, AND VII

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN		
CHECKED		SUGGESTED TRAFFIC CONTROL (SHEET 10 OF 13)
APPROVED		
SQUAD		

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. T010

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OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE

50′ 0 25′ 50′

325+00

330+00

335+00

55+00

10+00

5+00

I-40 ON RAMP

I-40 EXIT RAMP

US 281

I-40 WESTBOUND

I-40 EASTBOUND

I-40 SERVICE RD

400′ PORTABLE LONGITUDINAL BARRIER (200′ TAPER / 200′ TANGENT)

CHANNELIZING DEVICES @ 50′ C/C

CZ ATTENUATOR

2,500′

STA. 337+70 BEGIN 2,500′ TANGENT LANE

SOLID YELLOW EDGE LINE

SOLID WHITE EDGE LINE

STA. 326+10 END 2,500′ TANGENT LANE

PHASE I, AND VII

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN		
CHECKED		SUGGESTED TRAFFIC CONTROL (SHEET 11 OF 13)
APPROVED		
SQUAD		

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. T011

8/20/2024

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OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE

50' 0 25' 50'

45+00

50+00

55+00

I-40 SERVICE RD

I-40 EXIT RAMP

I-40 EASTBOUND

I-40 WESTBOUND

CABLE BARRIER

I-40 ON RAMP

US-281

(1) W3-1
(1) TYPE 'A' LIGHT

KEEP RIGHT
(9) DRUMS @ 10' C/C
(5) R4-7A(R)

ROAD CLOSED
(3) TYPE III BARRICADES
(6) TYPE 'A' LIGHTS
(2) W1-6E(R)
(1) R11-2

650 L.F. PORTABLE
LONGITUDINAL BARRIER

STOP (3) R1-1E

(1) W3-1
(1) TYPE 'A' LIGHT

ROAD CLOSED
(3) TYPE III BARRICADES
(6) TYPE 'A' LIGHTS
(2) W1-6E(L)
(1) R11-2

SOLID WHITE EDGE LINE

(1) W3-1
(1) TYPE 'A' LIGHT

KEEP RIGHT
(9) DRUMS @ 10' C/C
(5) R4-7A(R)

STOP (3) R1-1E

(1) W3-1
(1) TYPE 'A' LIGHT

NOTE : FOR ADVANCE SIGNING REFER TO SUGGESTED TRAFFIC CONTROL SHEETS NO. 4 AND NO. 5.

PHASE III

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN		
CHECKED		SUGGESTED TRAFFIC CONTROL (SHEET 12 OF 13)
APPROVED		
SQUAD		

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. T012

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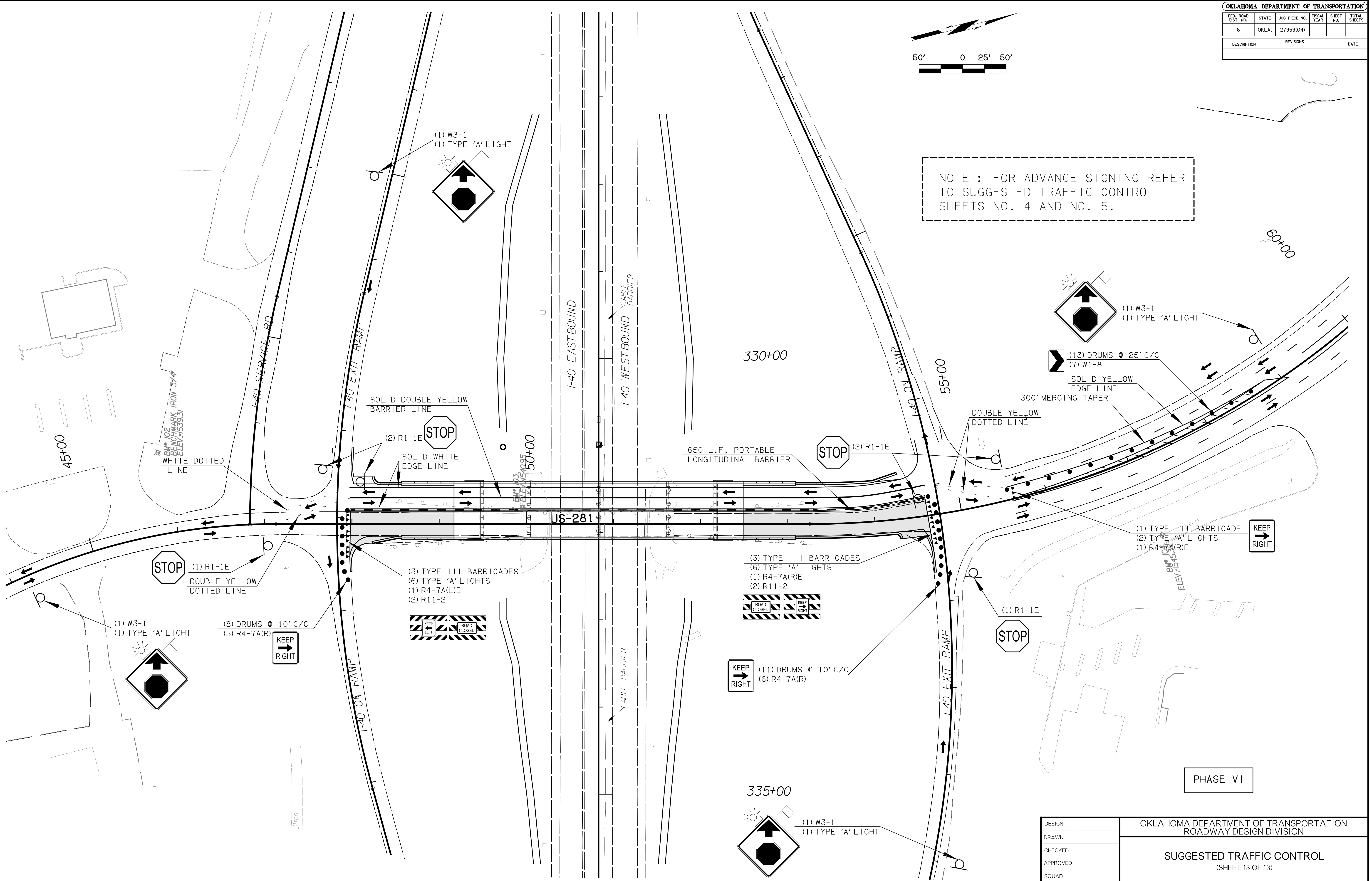
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

OKLAHOMA DEPARTMENT OF TRANSPORTATION

DESCRIPTION	REVISIONS	DATE



50' 0 25' 50'
NOTE : FOR ADVANCE SIGNING REFER TO SUGGESTED TRAFFIC CONTROL SHEETS NO. 4 AND NO. 5.
(1) W3-1
(1) TYPE 'A' LIGHT
I-40 SERVICE RD
I-40 EXIT RAMP
I-40 EASTBOUND
I-40 WESTBOUND
CABLE BARRIER
330+00
I-40 ON RAMP
55+00
60+00
45+00
50+00
BM# 102 BENCHMARK IRON 3/4" ELEV.:1539.31
WHITE DOTTED LINE
SOLID DOUBLE YELLOW BARRIER LINE
(2) R1-1E
STOP
SOLID WHITE EDGE LINE
650 L.F. PORTABLE LONGITUDINAL BARRIER
DOUBLE YELLOW DOTTED LINE
(13) DRUMS @ 25' C/C
(7) W1-8
SOLID YELLOW EDGE LINE
300' MERGING TAPER
US-281
(1) R1-1E
DOUBLE YELLOW DOTTED LINE
(3) TYPE III BARRICADES
(6) TYPE 'A' LIGHTS
(1) R4-7A(L)E
(2) R11-2
(1) R4-7A(R)E
(2) R11-2
ROAD CLOSED
KEEP LEFT
KEEP RIGHT
(1) TYPE III BARRICADE
(2) TYPE 'A' LIGHTS
(1) R4-7A(R)E
(8) DRUMS @ 10' C/C
(5) R4-7A(R)
(11) DRUMS @ 10' C/C
(6) R4-7A(R)
I-40 EXIT RAMP
335+00
PHASE VI

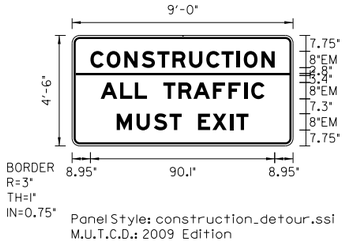
DESIGN	OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN	
CHECKED	SUGGESTED TRAFFIC CONTROL
APPROVED	(SHEET 13 OF 13)
SQUAD	

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. T013

8/20/2024

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE

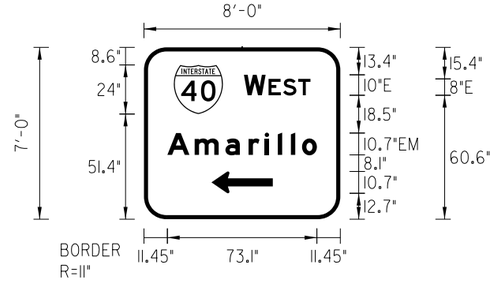


Panel Style: construction_detour.ssi
M.U.T.C.D.: 2009 Edition

SIGN NUMBER	SPECIAL SIGN NO. 1
WIDTH x HGHT.	9'-0" x 4'-6"
BORDER WIDTH	1"
CORNER RADIUS	3"
MOUNTING	Ground
SIGN AREA	40.5 Sq.Ft.
BACKGROUND	TYPE: Reflective
	COLOR: Orange
LEGEND/BORDER	TYPE: Non-reflective
	COLOR: Black

Dimensions are in inches.tenths Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)																					LENGTH	SERIES/SIZE
C	O	N	S	T	R	U	C	T	I	O	N											EM 2000
9	16.9	25.5	34	41.7	49	57.2	65.6	73	80.4	83.9	92.6										90.1	
A	L	L		T	R	A	F	F	I	C												EM 2000
14	23.5	30.7	36.6	44.6	52	59.3	68.8	76.4	84	87.6											80.1	
M	U	S	T		E	X	I	T														EM 2000
21.8	31.5	40	47.6	53.6	61.6	68.6	77.2	80.3													64.4	



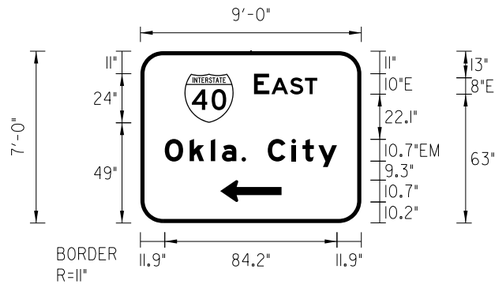
Panel Style: guide_exp_advance_minor.ssi
M.U.T.C.D.: 2009 Edition

SIGN NUMBER	SPECIAL SIGN NO. 2
WIDTH x HGHT.	8'-0" x 7'-0"
BORDER WIDTH	2"
CORNER RADIUS	11"
MOUNTING	Ground
SIGN AREA	56.0 Sq.Ft.
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White

SYMBOL	X	Y	WID	HT
MI_1	14.6	51.4	24	24
AR_Type D	33	12.7	10.7	30

Dimensions are in inches.tenths Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)																					LENGTH	SERIES/SIZE
W	E	S	T																			E 2000
48.9	60.9	68	75.4																		32.5	
A	m	a	r	i	l	l	o															EM 2000
11.5	24.8	39.8	51.2	59	65.4	71.9	77.3														73.1	



Panel Style: guide_exp_advance_minor.ssi
M.U.T.C.D.: 2009 Edition

SIGN NUMBER	SPECIAL SIGN NO. 3
WIDTH x HGHT.	9'-0" x 7'-0"
BORDER WIDTH	2"
CORNER RADIUS	11"
MOUNTING	Ground
SIGN AREA	63.0 Sq.Ft.
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White

SYMBOL	X	Y	WID	HT
MI_1	21.5	49	24	24
AR_Type D	39	10.3	10.7	30

Dimensions are in inches.tenths Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)																					LENGTH	SERIES/SIZE
E	A	S	T																			E 2000
55.5	64.1	73.1	80.5																		30.9	
O	k	l	a	.		C	i	t	y													EM 2000
11.9	24.1	34.4	39.9	49.5	51.6	62.3	73.9	79.2	87												84.2	

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN		
CHECKED		SPECIAL SIGN DETAILS
APPROVED		
SQUAD		

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. T014

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OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			
DESCRIPTION	REVISIONS				DATE

24" SOLID WHITE STOP LINE
(36')

STA.47+60, 41' LT. (1, 3, 4)
R1-1E
R6-1(R)
R6-1(L)

STA.47+55, 34' LT. (2)
R5-1E

12" YELLOW @45°

6" WHITE EDGE LINE

STA 45+93
MATCH EXISTING STRIPING

10'

6" DOUBLE YELLOW BARRIER LINE

(6, 8, 9) STA.48+08, 61' LT.
R1-1E
R6-1(R)
R6-1(L)

(7) STA.48+06, 57' LT.
R5-1E

12" WHITE @45°
10' SPACING

6" WHITE EDGE LINE

6"DOTTED WHITE LANE LINE

12" YELLOW @ 45°

MATCHLINE 52+40.00

150' OF 6" WHITE LANE LINE

13.5' 12' 12'

30' 55' 55'

10'

10'

6" WHITE EDGE LINE

6" DOUBLE YELLOW BARRIER LINE

6" DOTTED WHITE LANE LINE

(3) WHITE PAVEMENT MARKINGS (ARROW)

(11) STA.49+38, 55' LT.
SPECIAL SIGN NO. 3

East Okla City

West Amarillo

WEST SPUR
INTERSTATE 40 281

ROUTE ASSEMBLY NO. 2 (10)
STA.49+35, 26' RT.

EAST
INTERSTATE 40

ROUTE ASSEMBLY NO. 1 (5)
STA.47+60, 39' RT.

EAST WEST
INTERSTATE 40 INTERSTATE 40

ROUTE ASSEMBLY NO. 4 (23)
STA.56+08, 42' LT.

NO PARKING
STA.57+08, 44' LT. (25)
R8-3(A)

RIGHT LANE MUST TURN RIGHT
STA.57+00, 44' LT (24)
R3-7(R)

6" SOLID WHITE LANE LINE

RIGHT LANE MUST TURN RIGHT
STA.55+70 LT. (22)
R3-7(R)

STA 58+50.00
MATCH EXISTING STRIPING

6" WHITE EDGE LINE

6" DASHED WHITE LANE LINE

(5) WHITE PAVEMENT MARKINGS (ARROW)

6" DOUBLE YELLOW BARRIER LINE

150' 55' 55'(TYP.) 30' 10'

12" YELLOW DIAGONALS @ 45°

EAST IM3-2
INTERSTATE 40 IM1-1(2)
IM6-1(R)
RA-1
8.19 S.F.

WEST SPUR IM3-4 / (SPUR)
INTERSTATE 40 281 IM1-1(2) / M1-4(3)
IM5-1(L) / M6-3
RA-2
17.38 S.F.

EAST IM3-2
INTERSTATE 40 IM1-1(2)
IM5-1(L)
RA-3
8.19 S.F.

EAST WEST IM3-2 / IM3-4
INTERSTATE 40 INTERSTATE 40 IM1-1(2)
IM6-3 / IM6-1(R)
RA-4
16.38 S.F.

ROUTE ASSEMBLIES

(12) ROUTE ASSEMBLY NO. 3
STA.52+60, 54' LT.

EAST
INTERSTATE 40

12" WHITE

6" SOLID WHITE EDGE LINE

6" DOUBLE YELLOW BARRIER LINE

MATCHLINE 52+40.00

10' 55' 55' 30'

12' 12' 13.5'

150' OF 6" WHITE LANE LINE

6" WHITE EDGE LINE

STA.53+85, 38' RT.
SPECIAL SIGN NO. 2 (13)

(3) WHITE PAVEMENT MARKINGS (ARROW)

STA.54+50, 42'RT. (15)
R5-1E

STA.54+53, 52' RT. (14, 16, 17)
R1-1E
R6-1(R)
R6-1(L)

(19) STA.55+12, 48' RT.
R5-1E

(18, 20, 21) STA.55+08, 56' RT.
R1-1E
R6-1(R)
R6-1(L)

24" SOLID WHITE STOP LINE
(42')

DESIGN			OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN			
CHECKED			SIGNING AND STRIPING
APPROVED			
SQUAD			

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. T015

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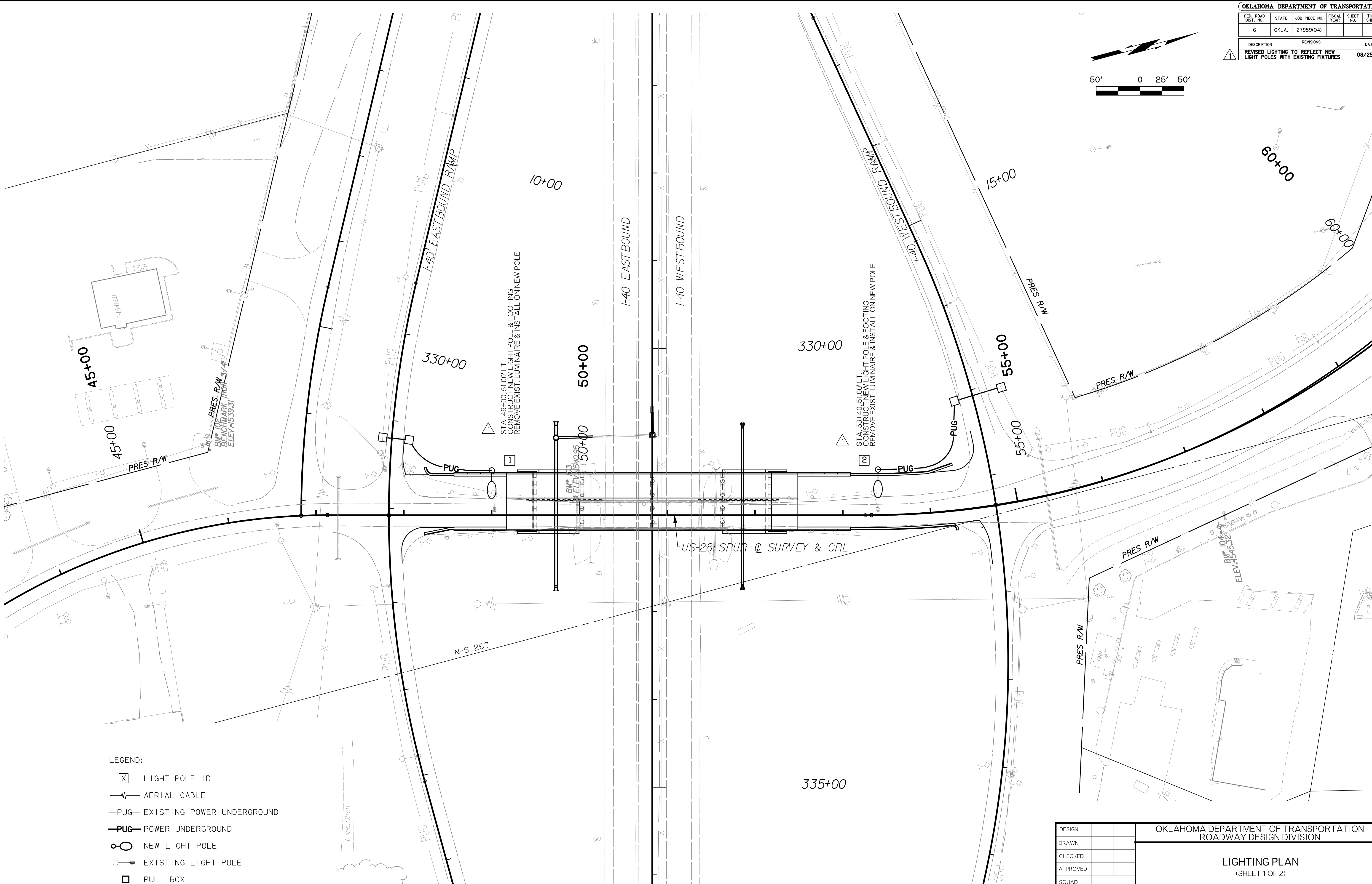
OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

DESCRIPTION	REVISIONS	DATE
⚠1 REVISED LIGHTING TO REFLECT NEW LIGHT POLES WITH EXISTING FIXTURES		08/25/25



LEGEND:

- ☒ LIGHT POLE ID
- AERIAL CABLE
- —PUG— EXISTING POWER UNDERGROUND
- **—PUG—** POWER UNDERGROUND
- NEW LIGHT POLE
- EXISTING LIGHT POLE
- ☐ PULL BOX

DESIGN	OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN	
CHECKED	LIGHTING PLAN (SHEET 1 OF 2)
APPROVED	
SQUAD	

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. T016

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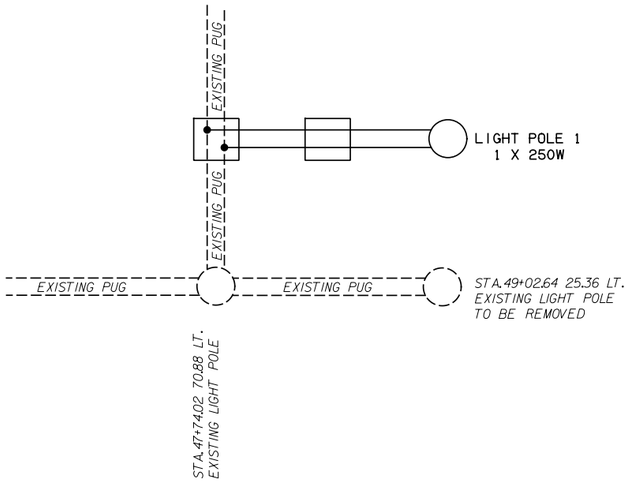
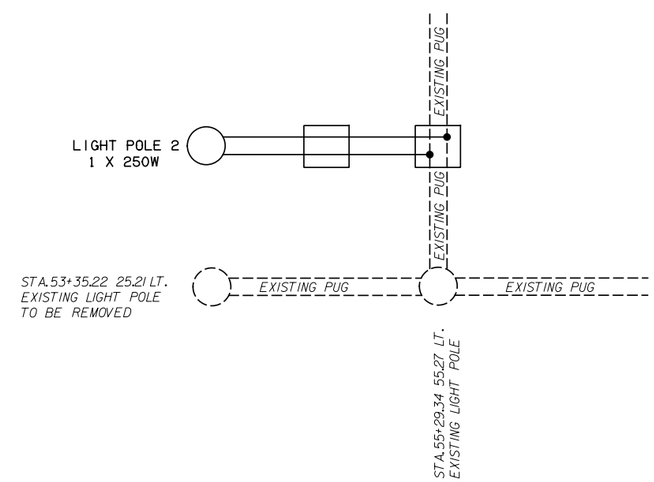
OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE





NOTES:

1. ALL CIRCUIT CONDUCTORS ARE SINGLE CONDUCTOR #4 XHHW. UNLESS OTHERWISE NOTED.
2. REFER TO PLAN DRAWING FOR EQUIPMENT LOCATION & CIRCUIT POSTING INFORMATION.

DESIGN		
DRAWN		
CHECKED		
APPROVED		
SQUAD		

OKLAHOMA DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION

LIGHTING PLAN
(WIRING DIAGRAM)
(SHEET 2 OF 2)

COUNTY CANADIAN HIGHWAY US-281 STATE JOB NO. 27959(04) SHEET NO. T017

8/20/2024

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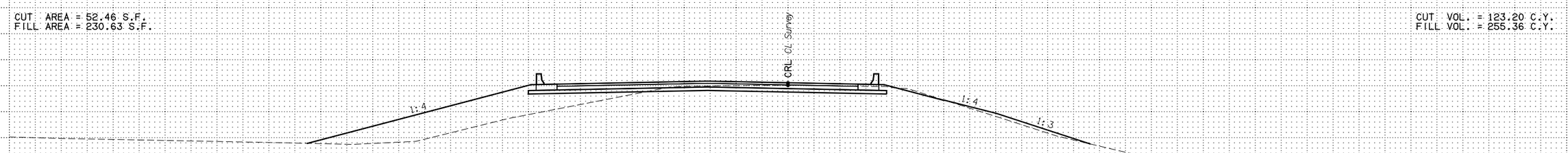
OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE

CUT AREA = 52.46 S.F.
FILL AREA = 230.63 S.F.

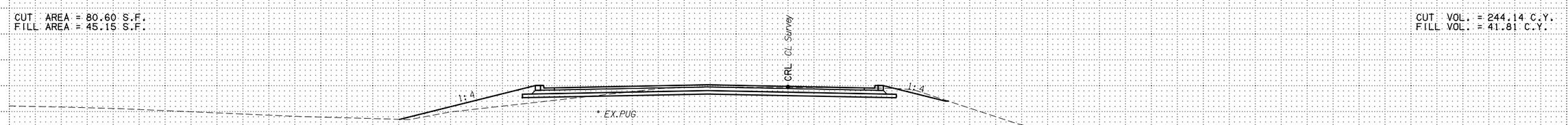
CUT VOL. = 123.20 C.Y.
FILL VOL. = 255.36 C.Y.



49+00.00
PGL= 1540.49
E.G.= 1540.1

CUT AREA = 80.60 S.F.
FILL AREA = 45.15 S.F.

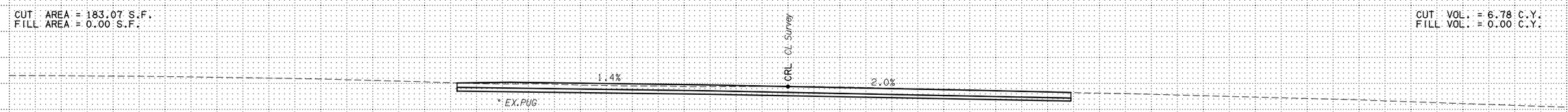
CUT VOL. = 244.14 C.Y.
FILL VOL. = 41.81 C.Y.



48+50.00
PGL= 1539.82
E.G.= 1539.7

CUT AREA = 183.07 S.F.
FILL AREA = 0.00 S.F.

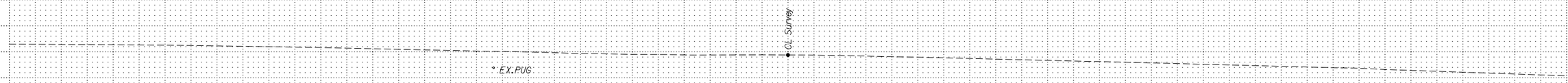
CUT VOL. = 6.78 C.Y.
FILL VOL. = 0.00 C.Y.



48+00.00
PGL= 1539.38
E.G.= 1539.4

CUT AREA = 0.00 S.F.
FILL AREA = 0.00 S.F.

CUT VOL. = 0.00 C.Y.
FILL VOL. = 0.00 C.Y.



47+98.00
BEGIN PROJECT US-281 J/P 27959(04)
E.G.= 1539.4

US-281 SPUR
US-281 OVER I-40 CANADIAN COUNTY
State Job No. 27959(04) Sheet No. X001

150 100 50 0 50 100 150

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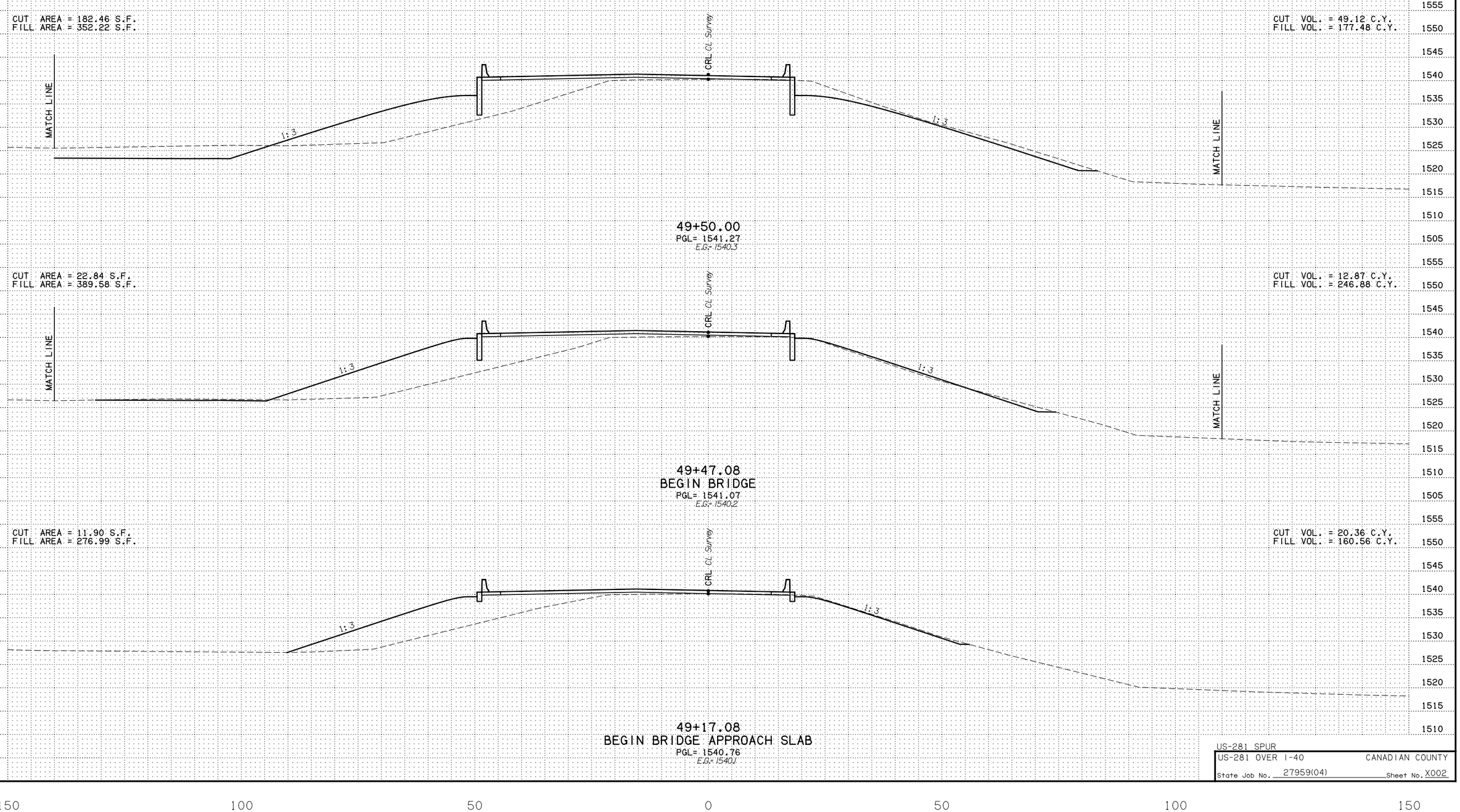
OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE



US-281 SPUR

US-281 OVER I-40 CANADIAN COUNTY

State Job No. 27959(04) Sheet No. X002

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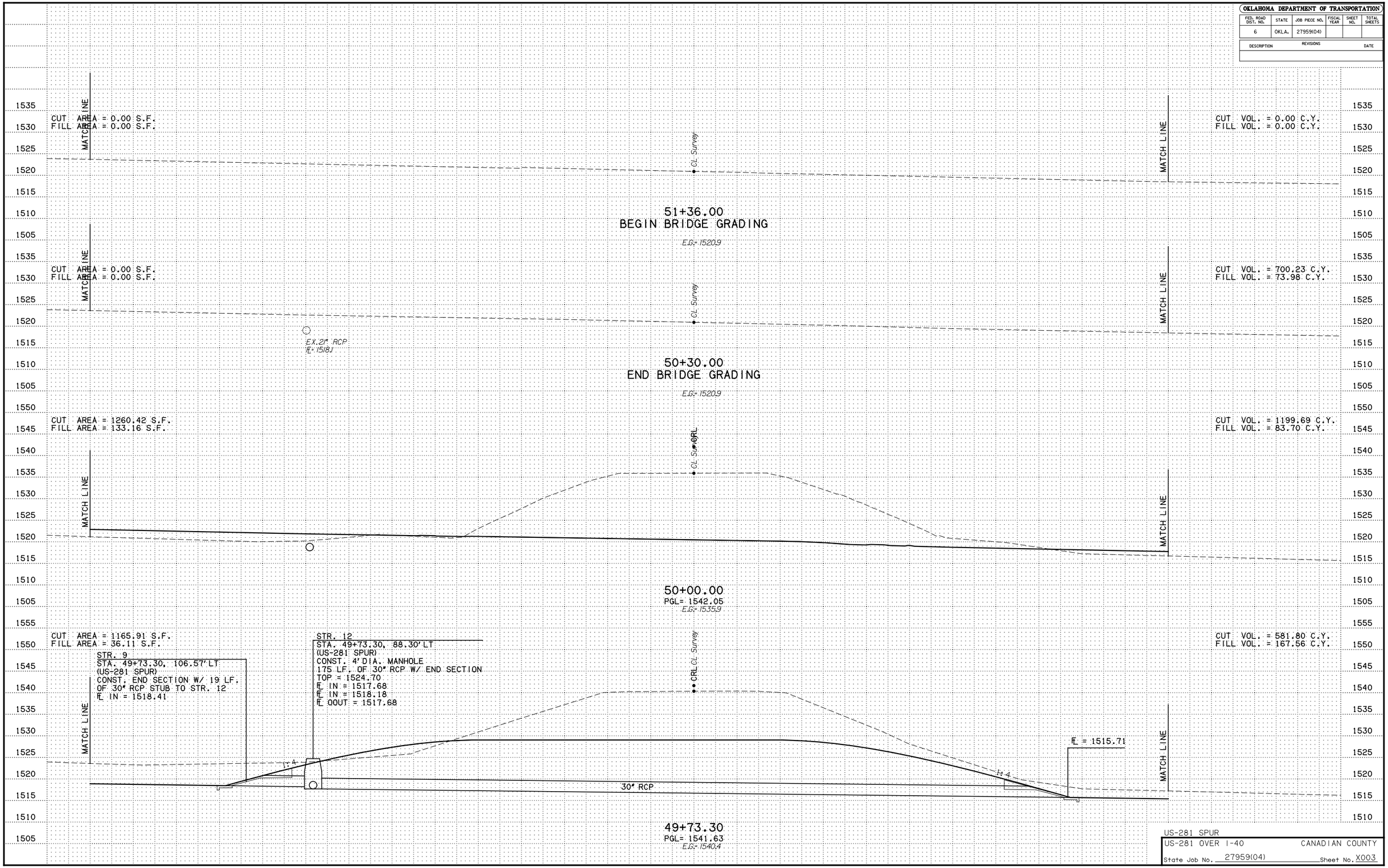
OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

DESCRIPTION	REVISIONS	DATE



US-281 SPUR

US-281 OVER I-40 CANADIAN COUNTY

State Job No. 27959(04) Sheet No. X003

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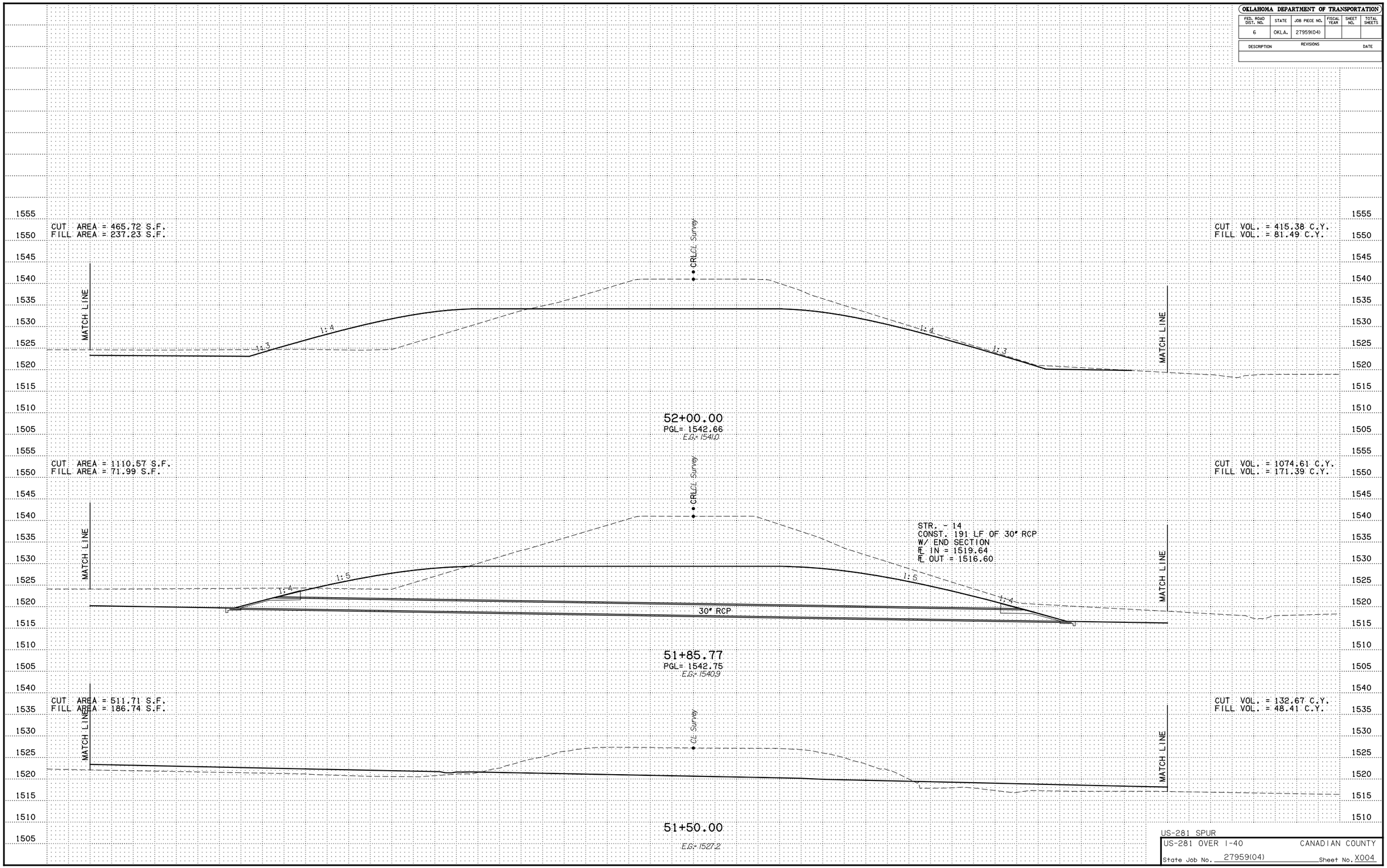
OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE



US-281 SPUR

US-281 OVER I-40 CANADIAN COUNTY

State Job No. 27959(04) Sheet No. X004

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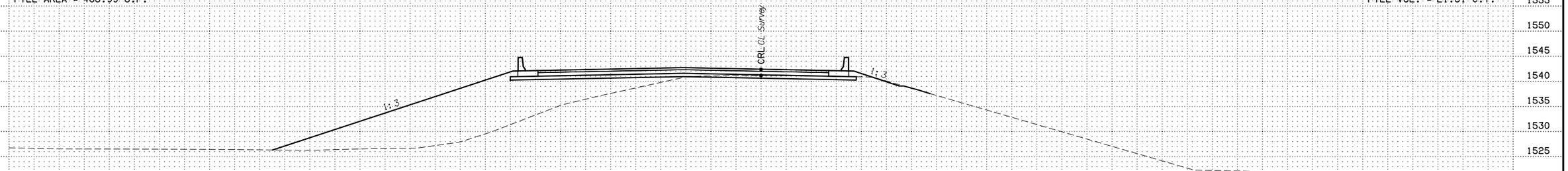
OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE

CUT AREA = 17.50 S.F.
FILL AREA = 463.99 S.F.

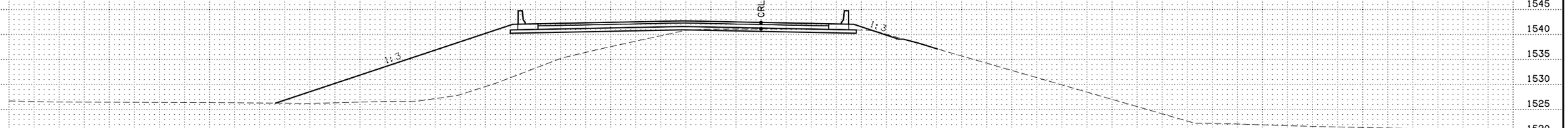
CUT VOL. = 0.80 C.Y.
FILL VOL. = 21.51 C.Y.



52+50.00
PGL= 1542.37
E.G.= 1541.1

CUT AREA = 17.04 S.F.
FILL AREA = 460.55 S.F.

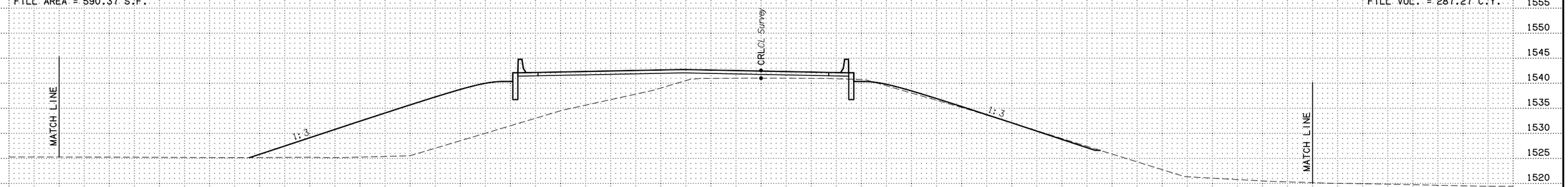
CUT VOL. = 13.83 C.Y.
FILL VOL. = 583.84 C.Y.



52+48.74
END BRIDGE APPROAH SLAB
PGL= 1542.38
E.G.= 1541.1

CUT AREA = 7.85 S.F.
FILL AREA = 590.37 S.F.

CUT VOL. = 164.38 C.Y.
FILL VOL. = 287.27 C.Y.



52+18.74
END BRIDGE
PGL= 1542.56
E.G.= 1541.0

US-281 SPUR
US-281 OVER I-40 CANADIAN COUNTY
State Job No. 27959(04) Sheet No. X005

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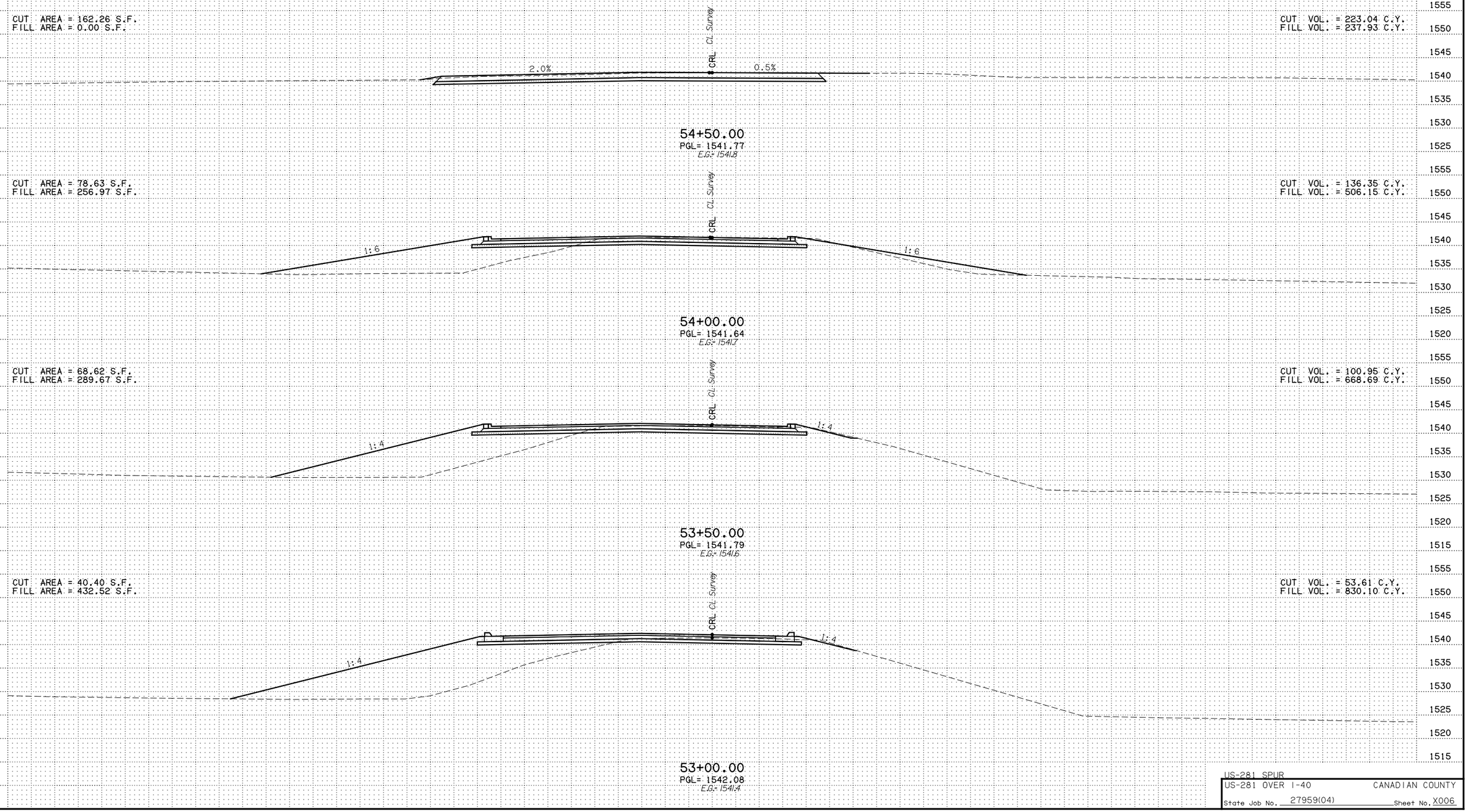
OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE



US-281 SPUR
US-281 OVER I-40 CANADIAN COUNTY
State Job No. 27959(04) Sheet No. X006

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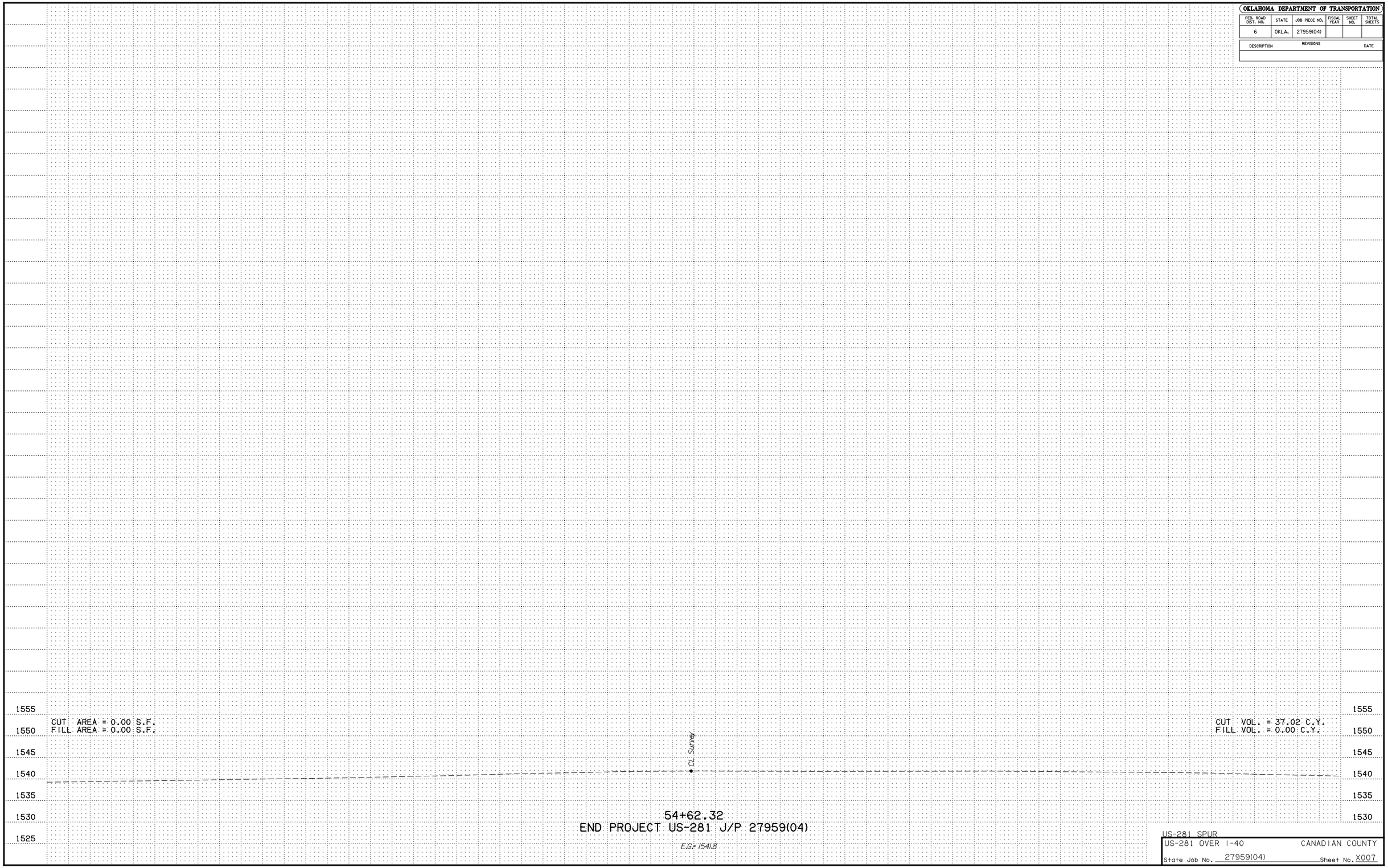
OKLAHOMA DEPARTMENT OF TRANSPORTATION

FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE



US-281 SPUR
US-281 OVER I-40 CANADIAN COUNTY
State Job No. 27959(04) Sheet No. X007

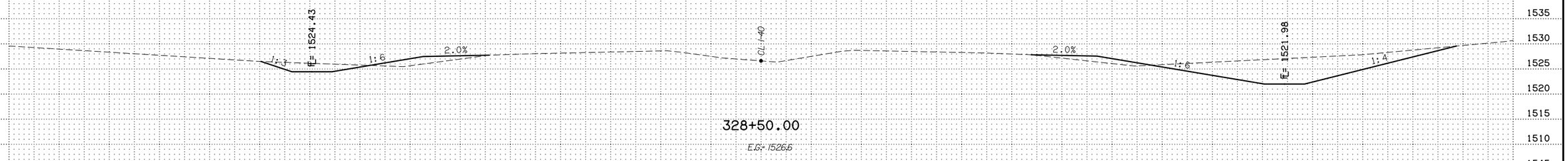
8/20/2024

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

DESCRIPTION	REVISIONS	DATE

CUT AREA = 195.04 S.F.
FILL AREA = 35.89 S.F.

CUT VOL. = 284.39 C.Y.
FILL VOL. = 55.76 C.Y.

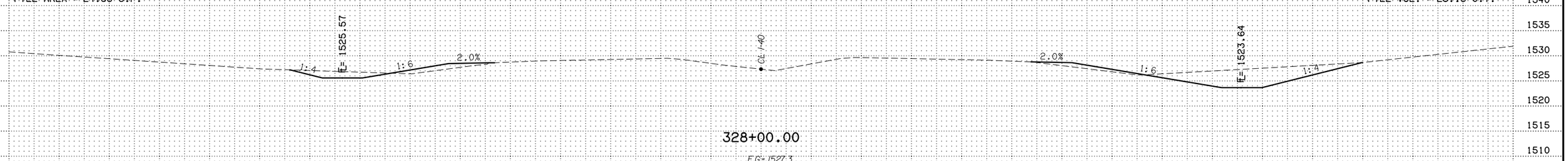


328+50.00

E.G.= 1526.6

CUT AREA = 112.10 S.F.
FILL AREA = 24.33 S.F.

CUT VOL. = 134.35 C.Y.
FILL VOL. = 28.13 C.Y.

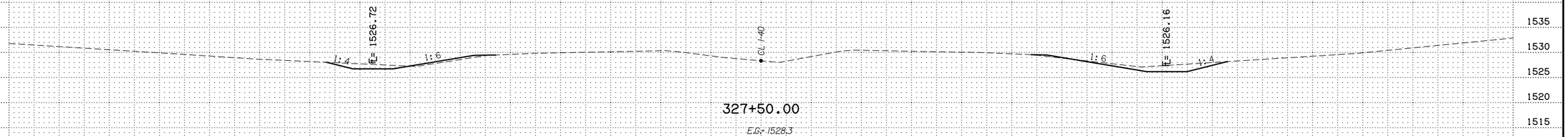


328+00.00

E.G.= 1527.3

CUT AREA = 33.00 S.F.
FILL AREA = 6.05 S.F.

CUT VOL. = 28.83 C.Y.
FILL VOL. = 3.37 C.Y.

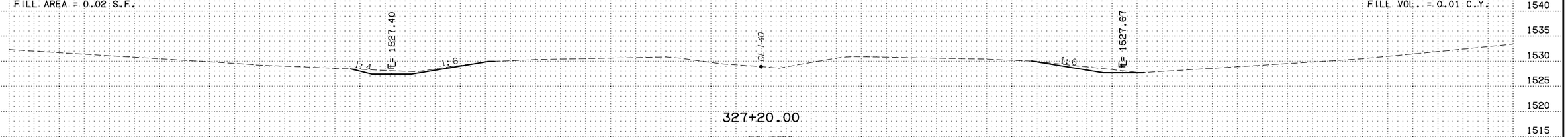


327+50.00

E.G.= 1528.3

CUT AREA = 18.89 S.F.
FILL AREA = 0.02 S.F.

CUT VOL. = 7.00 C.Y.
FILL VOL. = 0.01 C.Y.

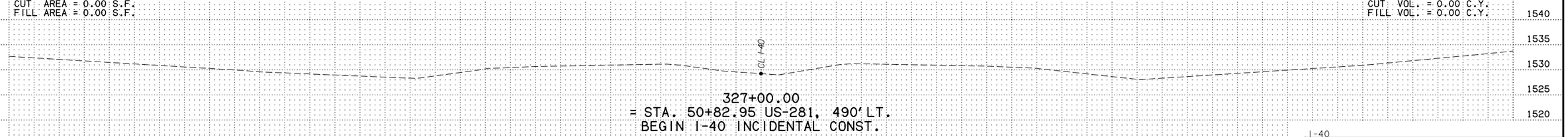


327+20.00

E.G.= 1528.9

CUT AREA = 0.00 S.F.
FILL AREA = 0.00 S.F.

CUT VOL. = 0.00 C.Y.
FILL VOL. = 0.00 C.Y.



327+00.00
= STA. 50+82.95 US-281, 490' LT.
BEGIN I-40 INCIDENTAL CONST.

E.G.= 1529.2

I-40
US-281 OVER I-40 CANADIAN COUNTY
State Job No. 27959(04) Sheet No. X008

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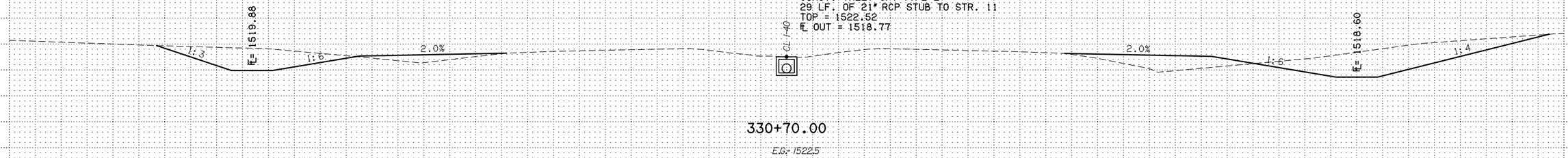
OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

DESCRIPTION	REVISIONS	DATE

CUT AREA = 264.81 S.F.
FILL AREA = 84.27 S.F.

STR. 10
STA. 50+82.92 120.00' LT. (US-281 SPUR)
CONST. INLET GPI-TYPE 2
29 LF. OF 21" RCP STUB TO STR. 11
TOP = 1522.52
FL OUT = 1518.77

CUT VOL. = 187.94 C.Y.
FILL VOL. = 65.00 C.Y.

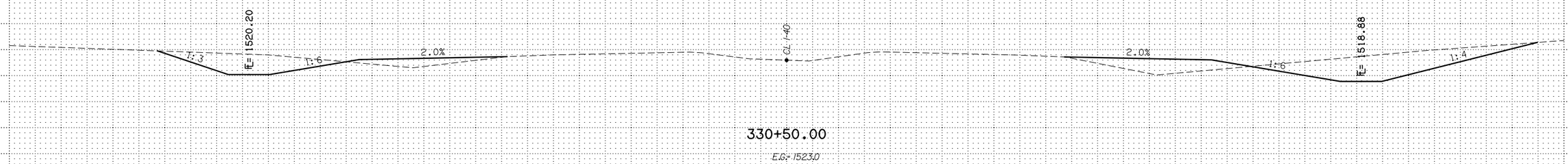


330+70.00

E.G.= 1522.5

CUT AREA = 242.62 S.F.
FILL AREA = 91.23 S.F.

CUT VOL. = 449.12 C.Y.
FILL VOL. = 160.63 C.Y.

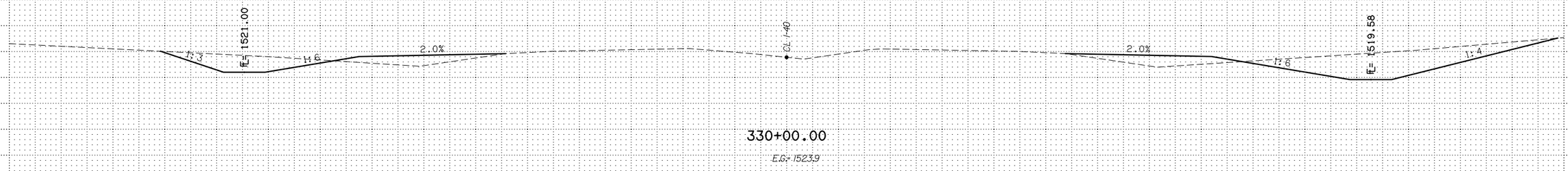


330+50.00

E.G.= 1523.0

CUT AREA = 242.43 S.F.
FILL AREA = 82.26 S.F.

CUT VOL. = 430.68 C.Y.
FILL VOL. = 139.40 C.Y.

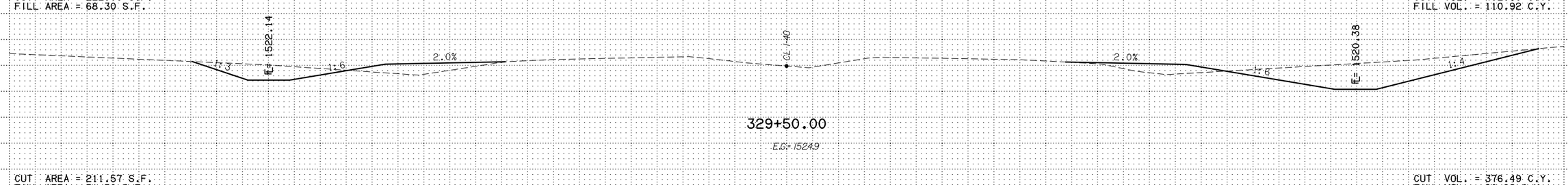


330+00.00

E.G.= 1523.9

CUT AREA = 222.70 S.F.
FILL AREA = 68.30 S.F.

CUT VOL. = 402.10 C.Y.
FILL VOL. = 110.92 C.Y.

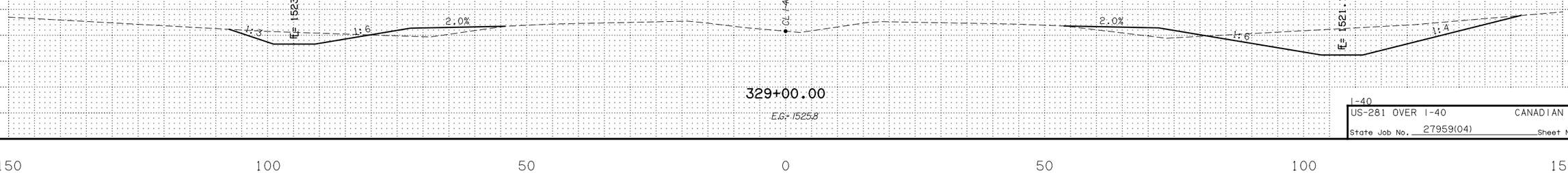


329+50.00

E.G.= 1524.9

CUT AREA = 211.57 S.F.
FILL AREA = 51.50 S.F.

CUT VOL. = 376.49 C.Y.
FILL VOL. = 80.92 C.Y.



329+00.00

E.G.= 1525.8

I-40
US-281 OVER I-40 CANADIAN COUNTY
State Job No. 27959(04) Sheet No. X009

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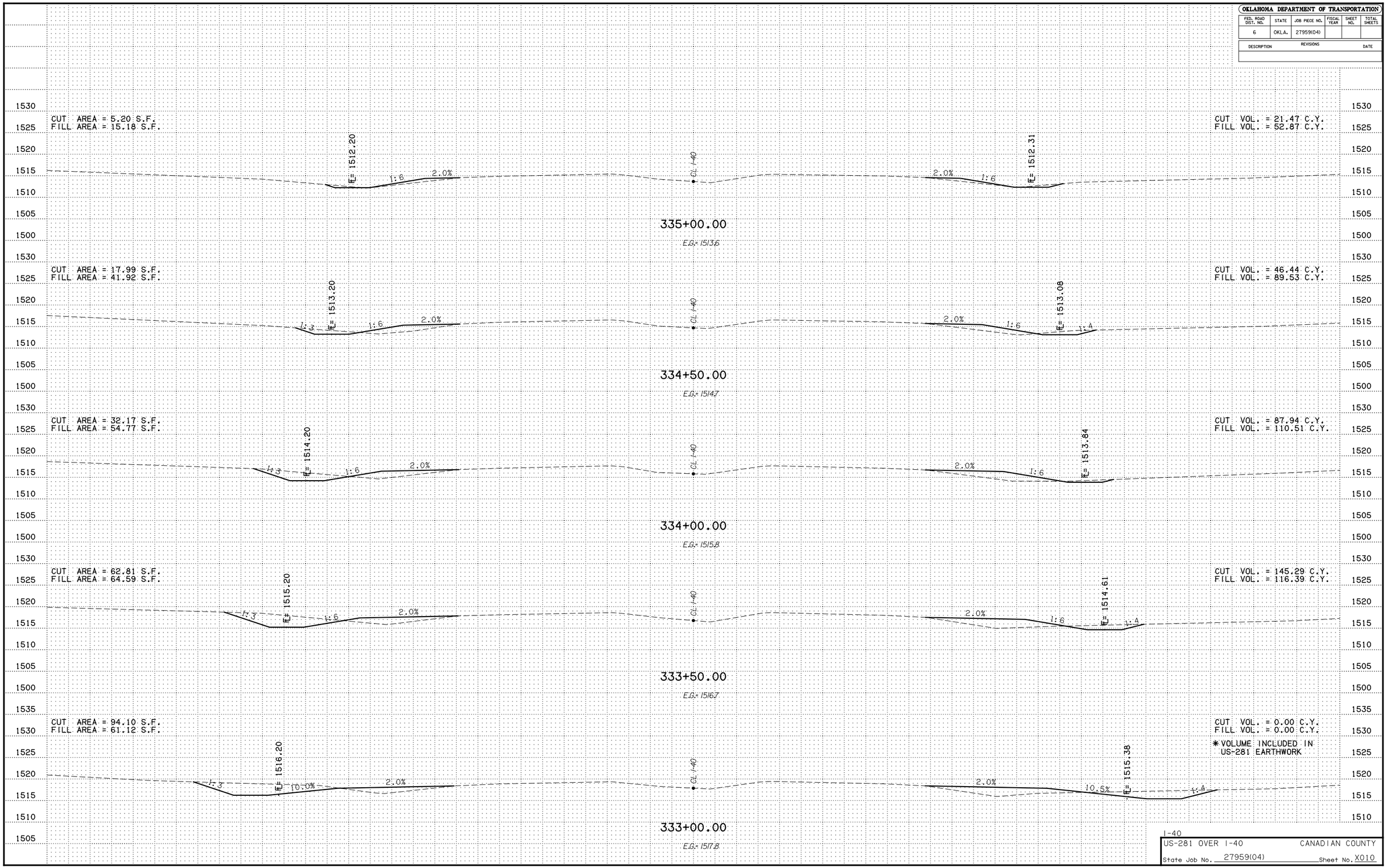
OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

DESCRIPTION	REVISIONS	DATE



I-40

US-281 OVER I-40 CANADIAN COUNTY

State Job No. 27959(04) Sheet No. X010

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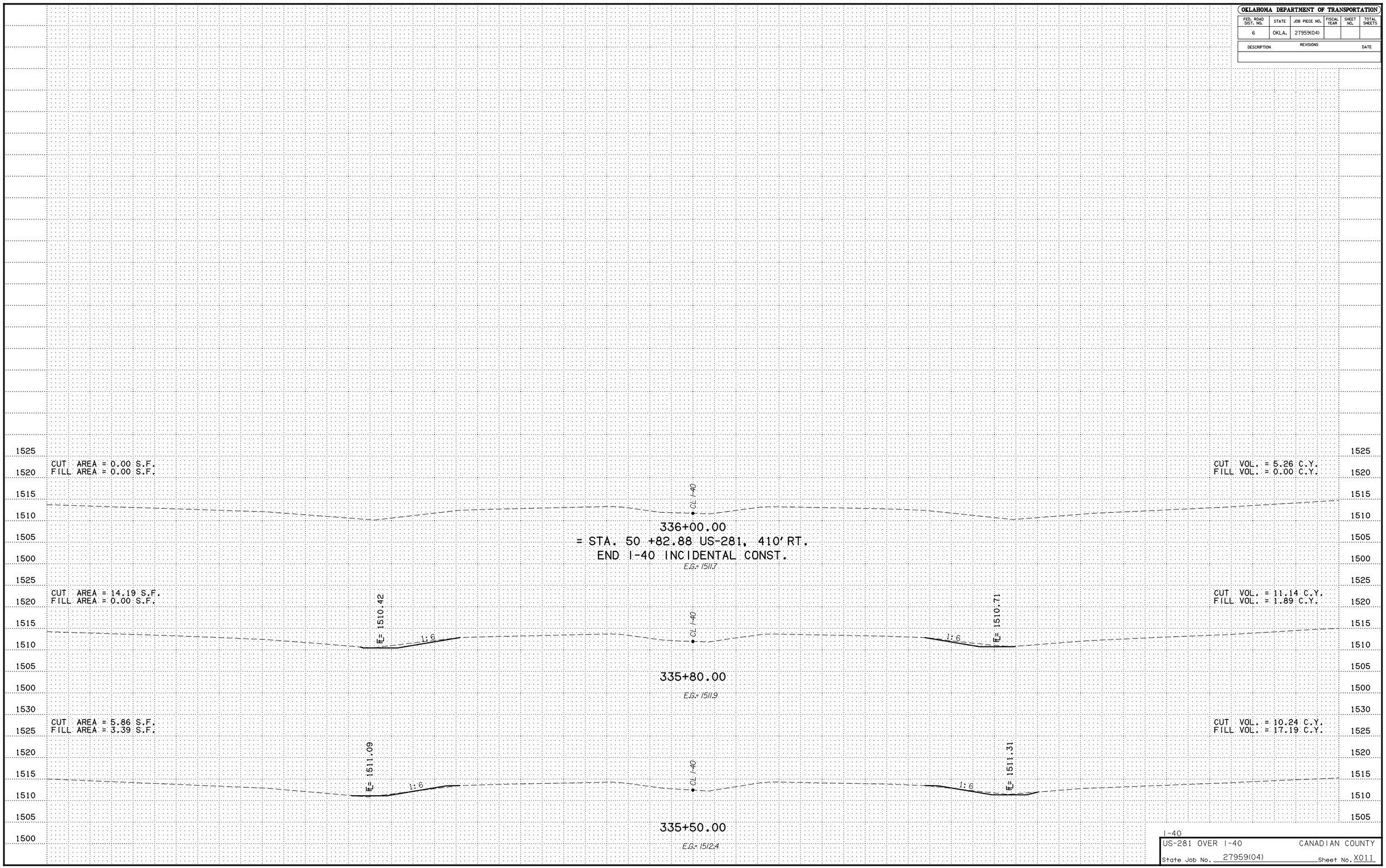
OKLAHOMA DEPARTMENT OF TRANSPORTATION

FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	27959(04)			

REVISIONS	
DESCRIPTION	DATE



I-40
US-281 OVER I-40 CANADIAN COUNTY
State Job No. 27959(04) Sheet No. X011