LEGEND OF SYMBOLS

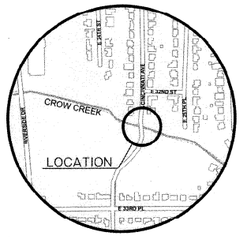
- EXISTING MANHOLE
- EXISTING CURB INLET
- PROPOSED CURB INLET
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING WATER METER
- EXISTING GAS VALVE
- GAS METER/GAS RISER
- STREET LIGHT
- POWER POLE
- GUY ANCHOR
- HCR EXISTING HANDICAP RAMP
- TRAFFIC SIGNAL PULLBOX
- POWER BOX (IN GROUND)
- POWER RISER
- TELEPHONE RISER
- SIGN
- MAILBOX
- CONTROL POINT
- SOIL BORINGS
- TREE
- GATE

- EXISTING FENCES
- EXISTING GUARD RAIL
- EXISTING ROADS, DRIVEWAYS, PARKING, AND SIDEWALKS
- C.R.L.
- PROPERTY LINE
- RIGHT-OF-WAY LINES-EXISTING
- EXISTING AERIAL POWER LINES
- EXISTING UNDERGROUND POWER LINES
- EXISTING SANITARY SEWERS
- EXISTING WATER LINES
- RCP EXISTING STORM SEWER

UTILITY CONTACTS

AT&T	ALFORD NICHOLS	918-596-4237
COX COMM.	BRANDON WADE	918-286-4716
ONG	JONATHON MEADOWS	918-831-8215
AEP/PSO	ADAM FIELDS	918-250-6257
CITY OF TULSA UTILITY COORDINATOR	TONY GLYNN	918-596-9245
MTTA	VALERIE COURCHESNE	918-699-0291
B.N.S.F.	WESLEY SWEETWOOD	918-323-6474

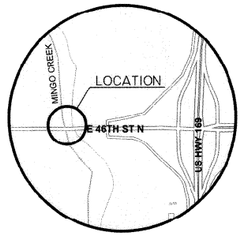
BRIDGE 166



VICINITY MAP

SCALE: NTS
SECTION 24, T19N, R12E
ATLAS PAGE: 96

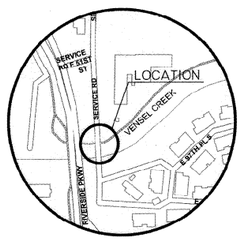
BRIDGES 288 & 288A



VICINITY MAP

SCALE: NTS
SECTIONS 6 & 7, T20N, R14E
ATLAS PAGES: 359, 438

BRIDGE 171



VICINITY MAP

SCALE: NTS
SECTION 20, T18N, R13E
ATLAS PAGE: 1277

1. HORIZONTAL CONTROL:
A. HORIZONTAL CONTROL FOR THIS SURVEY IS THE NAD83(1993) OKLAHOMA STATE PLANE COORDINATE SYSTEM NORTH ZONE.
B. ACCURACY - 3RD ORDER OR BETTER.

2. BEARINGS:
THE BEARINGS SHOWN HEREIN OR HEREON ARE "GRID" BEARINGS DERIVED FROM NGS OKLAHOMA STATE PLANE COORDINATE SYSTEM AND ARE NOT ASTRONOMICAL.

3. VERTICAL CONTROL:
A. LEVEL DATUM IS MEAN SEA LEVEL DATUM OF (NGS) NAVD 1988.
B. ACCURACY - 3RD ORDER OR BETTER.

IN ACCORDANCE WITH ODOT SECTION 105.14, THE COT IS ANTICIPATING THAT THE SUCCESSFUL CONTRACTOR WILL UTILIZE THE APPROPRIATE MEANS AND METHODS TO ACCOMPLISH THE WORK DESCRIBED IN THE PLANS WITHOUT CAUSING COLLATERAL DAMAGE TO THE EXISTING INFRASTRUCTURE.

CURRENT CITY OF TULSA STANDARD SPECIFICATIONS AND DETAILS GOVERN. ALL OTHER CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH 2019 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AS AMENDED AND ADOPTED BY CITY OF TULSA ORDINANCE 24616, JUNE 13, 2021.

CITY OF TULSA

CITY OF TULSA, OKLAHOMA

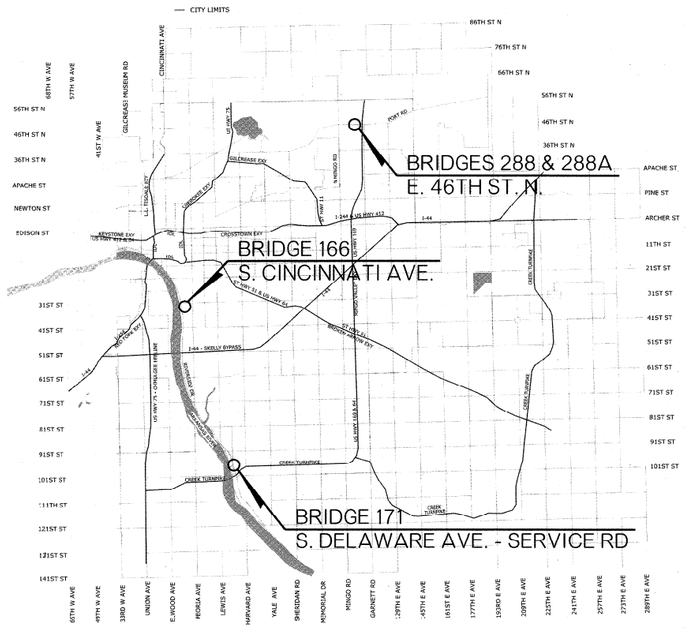
CONSTRUCTION PLANS FOR CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION

BRIDGES 166, 171, 288, 288A

PROJECT NO. 2436B0005Z-166, 171, 288, 288A

PUBLIC WORKS DEPARTMENT
TULSA, OKLAHOMA

ACCOUNT NO.
2436B0005Z.BRIDGES.BRIDGMR.4292.42923200-541104



ENTIRE PROJECT IS WITHIN THE CORPORATE AND URBAN LIMITS OF THE CITY OF TULSA

PROJECT LENGTH

BRIDGE 166 - 60.50' - 0.011 MILES
BRIDGE 171 - 162.50' - 0.031 MILES
BRIDGE 288 - 227.50' - 0.043 MILES
BRIDGE 288A - 227.50' - 0.043 MILES
EQUATIONS: NONE
EXCEPTIONS: NONE

PREPARED AND SUBMITTED BY

Kimley»Horn

1437 SOUTH BOULDER AVENUE, SUITE 930, TULSA, OK 74119
OK LICENCE NO. 2740 EXP. DATE 06/30/2025
(918) 209-3191

INDEX OF SHEETS

THE FOLLOWING CITY OF TULSA STANDARD DRAWINGS WILL BE USED FOR THIS PROJECT:

102	PROJECT SIGN
126	STANDARD SILT FENCE AND CONSTRUCTION ENTRANCE
608B	TRAFFIC SIGNS
625	REMOVAL OF TRAFFIC ITEMS
727 & 729	CONCRETE PAVEMENT STANDARD DETAILS FOR RESIDENTIAL AND COLLECTOR STREETS

THE FOLLOWING ODOT STANDARD DRAWINGS WILL BE USED FOR THIS PROJECT:

TSC2-3	TCS5-1	GA31-1
GMSI-1	TCS6-1	GHW1-1
PM1-1	TCS7-1	GHW2-1
PM3-1	THRI-1	
PM6-1	SKT-1	

APPROVED BY

CITY ENGINEER — DATE: 10/1/2025

ADVERTISEMENT DATE:

REGISTERED PROFESSIONAL ENGINEER — JEREMY P. STAHLE — 21725 — OKLAHOMA

JEREMY STAHLE
REGISTERED P.E. NO. 21725
(SHEET NOS. 1-7, 31-40)
DATE: 6/11/25

LICENSED PROFESSIONAL ENGINEER — AMY BACKEL — 27708 — OKLAHOMA

AMY BACKEL
REGISTERED P.E. NO. 27708
(SHEET NOS. 1-4, 8-30)
DATE: 6/11/25

BEFORE YOU DIG — 811 — 1-800-522-OKIE — CALL OKIE

PROJECT NO. 2436B0005Z-166, 171, 288, 288A

BASE BID - ROADWAY & TRAFFIC

PAY ITEM NO.	SPEC. NO.	ITEM DESCRIPTION	PAY ITEM NOTES	UNIT	QUANTITY
1	202(A)	UNCLASSIFIED EXCAVATION	E-3,4, R-1	CY	991
2	205(A)	TYPE A SALVAGED TOPSOIL		CY	264
3	220	SWPPP DOCUMENTATION AND MANAGEMENT	E-6,7,8,9	LSUM	1
4	230(A)	SOLID SLAB SODDING	E-10,11	SY	2,392
5	303(A)	AGGREGATE BASE TYPE A	S-2	CY	793
6	411(C)	SUPERPAVE, TYPE S4 (PG 70-28 OK)	S-5,6,7,8	TON	964
7	609(B)	COMBINED CURB AND GUTTER (6"-MOUNTABLE)	S-12,13	LF	1,355
8	619(B)	REMOVAL OF ASPHALT PAVEMENT	R-1,2,5	SY	2,377
9	619(B)	REMOVAL OF CURB & GUTTER	R-1,2,5	LF	1,356
10	619(B)	REMOVAL OF GUARDRAIL	4, R-1,2,5	LF	600
11	623(A)	BEAM GUARD RAIL-W-BEAM-SINGLE		LF	350
12	623(I)	GUARDRAIL BRIDGE CONN-THRIE BEAM (31")		EA	4
13	623(G)	GUARD RAIL END TREATMENT		EA	4
14	641	MOBILIZATION	1, G-2	LSUM	1
15	642	CONSTRUCTION STAKING	G-3,4	EA	1
16	855(A)	TRAFFIC STRIPE (4")(PLASTIC)	T-3	LF	9,030
17	855(A)	TRAFFIC STRIPE (8")(PLASTIC)	T-3	LF	164
18	855(B)	TRAFFIC STRIPE (PLASTIC)(ARROWS)	T-3	EA	2
19	855(B)	TRAFFIC STRIPE(PLASTIC)(SYMBOLS)	T-3	EA	2
20	857(C)	REMOVABLE PAVEMENT MARKING TAPE		LF	9,990
21	857(E)	(PL) CONST. ZONE PAVEMENT MARKERS (FLEX TAB) TYPE 2-2		EA	890
22	857(F)	PAVEMENT MARKING REMOVAL (STRIPING)		LF	9,194
23	857(F)	PAVEMENT MARKING REMOVAL (SYMBOLS)		EA	4
24	880(A)	ARROW DISPLAY	T-4	SD	300
25	880(B)	SIGNS 0.00 TO 6.25 SF	2, T-2,4,5	SD	3,585
26	880(B)	SIGNS 6.26 TO 15.99 SF	2, T-2,4,5	SD	4,325
27	880(B)	SIGNS 16.00 AND UP	2, T-2,4,5	SD	1,743
28	880(C)	BARRICADES (TYPE III)	2, T-2,4,5	SD	1,220
29	880(F)	DRUMS	2, T-2,4,5	SD	8,725
30	880(G)	TUBE CHANNELIZERS	T-2,4	SD	6,915
31	COT 608	GROUND SIGN	T-2	SF	45
32	COT 608	1-3/4" SIGN POST		LF	135
33	COT 608	2" SIGN POST		LF	36
34	SPECIAL	PROJECT SIGN (CITY OF TULSA)	3	EA	4

PAY ITEM NO.	SPEC. NO.	ITEM DESCRIPTION	PAY ITEM NOTES	UNIT	QUANTITY
35	501(H)	(PL) CELLULAR CONCRETE BACKFILL	(BR-17)	CY	4
36	502(B)	FALSEWORK AND JACKING	(BR-18)	LSUM	1
37	507(A)	STAINLESS STEEL FIXED BEARING ASSEMBLY	(BR-11)	EA	36
38	507(B)	STAINLESS STEEL EXP. BEARING ASSEMBLY	(BR-11)	EA	36
39	509	SPECIAL CONCRETE FINISH	(BR-4)	SY	168
40	509(B)	CLASS A CONCRETE	(BR-1) (BR-3)	CY	13
41	511(A)	REINFORCING STEEL	(BR-1) (BR-3)	LB	870
42	512(A)	PAINTING EXISTING STRUCTURE	(BR-10)	LSUM	1
43	512(B)	COLLECTION AND HANDLING OF WASTE	(BR-10)	LSUM	1
44	513(B)	CLASS B BRIDGE DECK REPAIR	(BR-2) (BR-5)	SY	136
45	513(B)	CLASS C BRIDGE DECK REPAIR	(BR-2) (BR-6)	SY	35
46	513(B)	(SP) ANODE	(BR-2)	EA	485
47	518(C)	RAPID CURE JOINT SEALANT	(BR-7)	LF	241
48	518(J)	PREFORMED SILICONE FOAM JOINTS	(BR-8)	LF	313
49	520(A)	PREPARATION OF CRACKS, ABOVE WATER	(BR-13)	LF	274
50	520(C)	EPOXY RESIN, ABOVE WATER	(BR-13)	GAL	13
52	522	(SP) TYPE C SUBSTRUCTURE REPAIR	(BR-12)	SF	107
53	523(C)	DECK AREA SEALED (FLOODCOATS)	(BR-3) (BR-9)	SY	3,137
54	524(A)	(SP) CARBON FIBER-REINFORCED POLYMER	(BR-15)	SF	312
55	535	CORROSION INHIBITOR (SURFACE APPLIED)	(BR-2) (BR-16)	SY	26

PAY ITEM NOTES - ROADWAY

(version 11/14/2018)

E-1 TO E-2: NOT USED

E-3: THE CONTRACTOR SHALL BE PAID FOR UNCLASSIFIED EXCAVATION ON THE BASIS OF PLAN QUANTITY. ANY ADDITIONAL EXCAVATION REQUIRED OR OVERRUN OF PLAN QUANTITY WILL BE PAID FOR ON THE BASIS OF UNIT PRICE BID FOR THE ITEM. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SURVEY TO VERIFY ANY ADDITIONAL QUANTITIES.

E-4: UNCLASSIFIED EXCAVATION INCLUDES REMOVAL OF AGGREGATE BASE AND MODIFIED SUBGRADE UNDER EXISTING PAVEMENT TO BE REPAIRED.

E-5: NOT USED

PAY ITEM NOTES - ROADWAY continued

(version 11/14/2018)

E-6: THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROL AND MAINTENANCE OF THE STORM WATER DRAINAGE FROM THE CONSTRUCTION SITE. STORM WATER PONDING ON THE CONSTRUCTION SITE THAT IS THE RESULT OF CONSTRUCTION WILL NOT BE ALLOWED. ALL COST ASSOCIATED WITH STORM WATER MANAGEMENT, AS WELL AS REMOVAL OF ALL SILT AND DEBRIS FROM ALL DRAINAGE STRUCTURES, STORM SEWER PIPES AND APPURTENANCES WITHIN THE PROJECT LIMITS AT END OF PROJECT, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THIS ITEM.

E-7: EROSION PROTECTION SHALL BE PLACED AS FOLLOW:

A) AROUND INLETS TO PREVENT INFLOW OF ERODED MATERIAL INTO STORM SEWER SYSTEM;

B) IN LOCATIONS THROUGHOUT PROJECT SITE, AS DETERMINED BY THE ENGINEER, TO PREVENT WASH OF ERODED MATERIAL ONTO ADJACENT PROPERTY;

C) FOR ENTIRE DURATION OF PROJECT, WITH MAINTENANCE AND REPLACEMENT, AS DIRECTED BY THE ENGINEER;

D) WITH PERIODIC REMOVAL OF SEDIMENT IN ACCORDANCE WITH STORMWATER MANAGEMENT PLAN.

ALL COST FOR ITEMS A-D ABOVE SHALL BE INCLUDED IN UNIT PRICE BID FOR THIS ITEM.

E-8: PRICE BID SHALL INCLUDE MAINTENANCE, SEDIMENT REMOVAL, DISPOSAL, AND REMOVAL OF FILTERS AT PROJECT COMPLETION.

E-9: INCLUDES 8 TYPE I-B FILTERS.

E-10: ESTIMATED QUANTITY IS BASED ON SODDING OF ALL DISTURBED AREAS OUTSIDE THE FINAL PAVING LIMITS AND WITHIN THE FINAL GRADING LIMITS AS INDICATED BY THE TOP-OF-CUT/TOE-OF-SLOPE LINE ON THE PLANS (EXCLUDING SURFACES OF STRUCTURES, FIXTURES AND APPURTENANCES). SOD SHALL BE OF LIKE-KIND TO EXISTING SOD. PRICE BID INCLUDES PLACEMENT AND COMPACTION OF SUITABLE BACKFILL. ANY EXISTING GRASSED AREAS BEYOND THE ABOVE STATED LIMITS THAT ARE DAMAGED AS A RESULT OF CONSTRUCTION OPERATIONS SHALL BE RESODDED TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S SOLE EXPENSE.

E-11: COST OF WATERING AND FERTILIZING SHALL BE INCLUDED. FERTILIZERS SHALL BE 10-20-10 AND SHALL BE APPLIED AT THE RATE OF 1.5 LBS PER 10 SQ YDS. FERTILIZER SHALL BE APPLIED PER SECTION 230.04H OF ODOT STANDARD SPECIFICATIONS. WATERING SHALL BE APPLIED AS NECESSARY UNTIL VEGETATION IS ESTABLISHED OR UNTIL THE WORK IS ACCEPTED AS COMPLETE.

S-1: NOT USED

S-2: INCLUDES COMPACTION OF AGGREGATE TO 98% AASHTO T180 MODIFIED PROCTOR.

S-3 TO S-4: NOT USED

S-5: THE COST OF TACK COAT, EDGE JOINT SEAL MATERIAL AND SCREENINGS FOR BLOTTING, AND ALL LABOR ASSOCIATED WITH THESE ITEMS, SHALL BE INCLUDED IN ASPHALT CONCRETE.

S-6: ESTIMATED AT 112 LBS PER SQ YD PER 1 INCH THICK.

S-7: ODOT PAY FACTOR FOR AVERAGE LOT DENSITY SHALL NOT BE USED FOR THIS PROJECT. FAILURE TO REACH AVERAGE LOT DENSITY OF 92%-97% WILL RESULT IN REJECTION OF WORK.

S-8: A HIGHER GRADE OF ASPHALT BINDER THAN IS INDICATED ON THE PLANS MAY BE USED, BUT AT NO ADDITIONAL COST TO THE CITY.

S-9 TO S-11: NOT USED

S-12: THE USE OF FLY-ASH IN CONCRETE IS PROHIBITED.

S-13: INCLUDES ALL COST OF SAWED JOINTS AND SEALING OF ALL JOINTS INCLUDING LONGITUDINAL JOINTS.

S-14 TO S-23: NOT USED

R-1: WASTE MATERIAL TO BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE IN A MANNER APPROVED BY THE ENGINEER.

R-2: ALL SAW CUTTING AND REMOVAL SHALL BE INCLUDED IN THE COST OF THE ITEM TO BE ADJUSTED, REMOVED, REPAIRED, OR REPLACED.

R-3 TO R-4: NOT USED

R-5: ITEMS TO BE REMOVED MAY OR MAY NOT BE PRESENT IN ANY SPECIFIED CONDITION.

R-6: NOT USED

G-1: NOT USED

G-2: MAXIMUM OVERALL DOLLAR AMOUNT AND SCHEDULE OF PAYMENT SHALL BE IN ACCORDANCE WITH SECTION 641 OF THE OKLAHOMA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, CURRENT EDITION. EXCLUDES MOBILIZATION FOR WATERLINE WORK.

G-3: CONSTRUCTION STAKING SHALL INCLUDE SURVEYING AND THE FURNISHING, PLACING, AND MAINTAINING OF THE CONSTRUCTION LAYOUT STAKES NECESSARY FOR THE PROPER COMPLETION AND INSPECTION OF THE ENTIRE PROJECT.

G-4: THE COST TO REPLACE REMOVED OR DAMAGED SECTION CORNERS AND ALL OTHER PERMANENT RIGHT OF WAY MARKERS SHALL BE INCLUDED IN THE PRICE BID FOR THIS ITEM. NO ADDITIONAL PAYMENT WILL BE MADE.

G-5 TO G-10: NOT USED

D-1 TO D-15: NOT USED

T-1: ALL TRAFFIC MATERIALS REMOVED SHALL BE HANDLED PER COT SPECIFICATION 625 REMOVAL OF TRAFFIC ITEMS.

T-2: REFLECTORIZED SHEETING ON SIGNS AND BARRICADES SHALL BE OF A CUBIC PRISMATIC TYPE AND SHALL MEET THE SPECIFICATIONS ESTABLISHED FOR ASTM D 4956-01 TYPE IX RETROREFLECTIVE SHEETING. REFLECTORIZED SHEETING ON DRUMS AND TUBE CHANNELIZERS SHALL BE OF A HIGH-INTENSITY TYPE AND SHALL MEET THE SPECIFICATIONS ESTABLISHED FOR ASTM D 4956-01 TYPE III RETROREFLECTIVE SHEETING.

T-3: ALL PLASTIC PAVEMENT MARKINGS SHALL BE:

EXTRUDED-APPLIED THERMOPLASTIC (USE ON ASPHALT AND CONCRETE PAVEMENT). THERMOPLASTIC PAVEMENT MARKINGS SHALL ONLY BE APPLIED WHEN THE SURFACE TEMPERATURE EXCEED 55°F FOR ALL OF THE SIX HOURS PRIOR TO INSTALLATION AND MAXIMUM WIND GUSTS ARE BELOW 15 MPH AT THE TIME OF APPLICATION. PRICE BID TO INCLUDE FLEX TABS OR LIKE KIND FOR POST CONSTRUCTION LANE MARKING/SEPARATION. MECHANICALLY APPLIED PREFORMED PLASTIC TAPE ("COLD TAPE") WILL NOT BE ACCEPTED.

T-4: PAYMENT SHALL BE MADE ON A SIGN- DAY BASIS ONLY FOR TRAFFIC CONTROL DEVICES THAT ARE PROPERLY INSTALLED AND IN GOOD WORKING ORDER. COSTS FOR DELIVER, INSTALLATION, RELOCATION, MAINTENANCE, REMOVAL AND REPLACEMENT, AS NEEDED AT THE DISCRETION OF THE ENGINEER, INCLUDED IN UNIT PRICE BID.

T-5: IF WARNING LIGHTS ARE TO BE USED ON TRAFFIC CONTROL DEVICES, TYPE "A" LIGHTS SHALL ONLY BE USED ON DEVICES WARNING OF UNEXPECTED HAZARDS, AND SHALL NOT BE USED FOR DELINEATION OF THE TRAVELED WAY. ONLY TYPE "C" WARNING LIGHTS SHALL BE USED FOR DELINEATION OF THE TRAVELED WAY, AND TYPE "C" LIGHTS SHALL NOT BE USED FOR ANY OTHER PURPOSE.

T-6: THE PAY ITEM FOR FLAGGER SHALL BE PAID FOR ON A FLAG DAY (F.D.) BASIS. ONE F.D. IS ONE COMPLETE WORKDAY AS PERFORMED BY THE CONTRACTOR AS SET FORTH IN THE CONTRACT DOCUMENTS AND SPECIFICATIONS.

PAY ITEM NOTES - ROADWAY continued

1: ALL COSTS ASSOCIATED WITH GAINING AND MAINTAINING ACCESS UNDER ALL BRIDGES, INCLUDING THE USE OF COFFERDAMS AND DEWATERING, SHALL BE INCLUDED IN THIS ITEM OF WORK.

2: COSTS FOR TYPE A AND TYPE C LIGHTS SHALL BE INCLUDED IN THIS ITEM OF WORK.

3. ONE SIGN SHALL BE PLACED AT EACH BRIDGE.

4: GUARDRAIL SHALL BE REMOVED IN SUCH A MANNER THAT ALL MATERIAL CAN BE SALVAGED FOR CITY USE. BOLTS, SUPPORTS AND OTHER HARDWARE SHALL BE REMOVED FROM RAILS, PLATES AND POSTS. ALL PARTS SHALL BE SORTED AND STORED AT 420 W 23RD STREET. RAILS, PLATES AND POSTS SHALL BE PROPERLY STACKED. MISCELLANEOUS HARDWARE SHALL BE STACKED OR BOXED. REASONABLE CARE SHALL BE EXERCISED IN HANDLING, STORAGE AND PRESERVATION OF MATERIALS, TO ENSURE MAXIMUM SALVAGE VALUE FOR THE ENTIRE OPERATION.

PAY ITEM NOTES - BRIDGE

(BR-1) ALL COSTS ASSOCIATED WITH CONSTRUCTING ANGULAR ARCHITECTURE ENHANCEMENTS ARE INCLUDED IN THESE ITEMS OF WORK. EPOXY MATERIAL SHALL BE SELECTED FROM THE ODOT QUALIFIED PRODUCTS LIST (QPL).

(BR-2) ESTIMATED QUANTITY.

(BR-3) PAYMENT FOR THIS ITEM WILL BE BASED ON THE PLAN QUANTITY ONLY. SEE SECTION 109.01B OF THE STANDARD SPECIFICATIONS.

(BR-4) SPECIAL CONCRETE FINISH SHALL BE CIM 1000, OR APPROVED EQUAL. THIS ITEM SHALL BE APPLIED TO ABUTMENTS AND PIERS AS DIRECTED IN THE PLANS. EDGES OF THE SPECIAL CONCRETE FINISH SHALL BE MASKED WITH TAPE PRIOR TO APPLICATION TO ENSURE CLEAN STRAIGHT LINES ARE OBTAINED. ANY AREAS CONTAINING SPECIAL CONCRETE FINISH OUTSIDE OF THE AREAS AS INDICATED IN THE PLANS SHALL BE CLEANED TO THE SATISFACTION OF THE ENGINEER AT THE EXPENSE OF THE CONTRACTOR.

(BR-5) REMOVE EXISTING OVERLAYS, ASPHALT, UNSOUND CONCRETE, AND FOREIGN MATERIALS FROM THE SURFACE. USE A CHAIN DRAG, OR OTHER ENGINEER APPROVED METHOD, TO LOCATE DELAMINATIONS IN THE BRIDGE DECK. BEFORE REMOVAL, OBTAIN THE ENGINEER'S APPROVAL FOR DECK REMOVAL AREAS.

THIS REPAIR CONSISTS OF REMOVING AND REPLACING PORTIONS OF UNSOUND CONCRETE ON THE BRIDGE DECK DOWN TO THE BOTTOM MAT OF REINFORCING STEEL IN ACCORDANCE WITH SECTION 513.04 D(2) OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

THE CONTRACTOR SHALL NOT REMOVE CONCRETE BELOW THE LEVEL SPECIFIED. IF SOUND CONCRETE IS NOT REACHED BY THIS LEVEL OF REPAIR, THE CONTRACTOR SHALL IMMEDIATELY REPORT THIS TO THE ENGINEER FOR FURTHER ACTION. THE ACTUAL LOCATION AND EXTENT OF THE REPAIR SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER. PAYMENT SHALL BE FOR THE ACTUAL REPAIRS MADE. NO PAYMENT SHALL BE MADE FOR THE WORK NOT PERFORMED.

THE EXISTING DECK REINFORCING STEEL SHALL BE CLEANED, STRAIGHTENED, AND LEFT IN PLACE. EXISTING NON-EPOXY COATED REINFORCING STEEL AND DECK AREAS EXPOSED SHALL BE TREATED WITH CORROSION INHIBITOR. CORROSION INHIBITOR SHALL BE APPLIED ACCORDING TO THE SPECIFICATIONS. ALL COSTS OF THE REPAIR INCLUDING LABOR, EQUIPMENT, MATERIAL, INCLUDING CORROSION INHIBITOR, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SHOWN SHALL BE INCLUDED IN THE PRICE BID PER SQUARE YARD OF "CLASS 'B' BRIDGE DECK REPAIR".

(BR-6) REMOVE EXISTING OVERLAYS, ASPHALT, UNSOUND CONCRETE, AND FOREIGN MATERIALS FROM THE SURFACE. USE A CHAIN DRAG, OR OTHER ENGINEER APPROVED METHOD, TO LOCATE DELAMINATIONS IN THE BRIDGE DECK. BEFORE REMOVAL, OBTAIN THE ENGINEER'S APPROVAL FOR DECK REMOVAL AREAS.

THIS REPAIR CONSISTS OF REMOVING AND REPLACING PORTIONS OF UNSOUND CONCRETE ON THE BRIDGE DECK FOR THE FULL DEPTH OF THE DECK IN ACCORDANCE WITH SECTION 513.04 D(3) OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AS ADOPTED.

THE CONTRACTOR SHALL PROVIDE FORMS IN ACCORDANCE WITH SECTION 502 OF THE STANDARD SPECIFICATION. THE ACTUAL LOCATION AND EXTENT OF THE REPAIR SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER. PAYMENT SHALL BE FOR THE ACTUAL REPAIRS MADE. NO PAYMENT SHALL BE MADE FOR THE WORK NOT PERFORMED.

THE EXISTING DECK REINFORCING STEEL SHALL BE CLEANED, STRAIGHTENED, AND LEFT IN PLACE. EXISTING NON-EPOXY COATED REINFORCING STEEL AND DECK AREAS EXPOSED SHALL BE TREATED WITH CORROSION INHIBITOR. CORROSION INHIBITOR SHALL BE APPLIED ACCORDING TO THE SPECIFICATIONS. ALL COSTS OF THE REPAIR INCLUDING LABOR, EQUIPMENT, MATERIAL, INCLUDING CORROSION INHIBITOR AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SHOWN SHALL BE INCLUDED IN THE PRICE BID PER SQUARE YARD OF "CLASS 'C' BRIDGE DECK REPAIR".

(BR-7) RESEAL EXISTING CONSTRUCTION JOINTS WITH BACKER ROD AND RAPID CURE JOINT SEALANT PLACED IN ACCORDANCE WITH SECTION 415 AND SUBSECTION 701.08G(1) OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND AS SHOWN IN THE PLANS.

THE CONTRACTOR SHALL TAKE CARE NOT TO CUT INTO EXISTING DECK REINFORCING OR STRUCTURAL STEEL, UNLESS IT IS SPECIFICALLY REQUESTED BY THE PLANS. ANY DAMAGE TO THE REINFORCING, EXISTING BEAMS, COVER PLATES, SHEAR CONNECTORS OR STRUCTURAL BRACING DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, TO THE SATISFACTION OF THE ENGINEER.

ALL COSTS INCLUDING LABOR, EQUIPMENT, MATERIAL, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SHOWN IN THE PLANS SHALL BE INCLUDED IN THE UNIT PRICE BID PER LINEAR FOOT OF "RAPID CURE JOINT SEALANT".

(PAY ITEM NOTES CONTINUED ON NEXT SHEET)

REGISTERED PROFESSIONAL ENGINEER — JEREMY P. STAHLE — 21725 — OKLAHOMA — 9/9/25

LICENSED PROFESSIONAL ENGINEER — AMY BACKEL — 21708 — 9/9/25 — OKLAHOMA

REVISION	BY	DATE

PAY QUANTITIES AND NOTES

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

PLAN SCALE: N/A	DRAWN	RJM	11/24	APPROVED:
	DESIGNED	JPS	11/24	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	MLD	9/4/25	
HORIZONTAL: N/A	LEAD ENGR.	JPS	9/12/25	
	FIELD MGR.	RJM	9/26	
VERTICAL N/A	RECOMMENDED: DESIGN MANAGER	MLD	9.25	CITY ENGINEER

FILE: 06127476-Pay Quantities-Notes.dgn — DATE: 10/1/2025
ATLAS PAGE NO: 96,359,438,1277 — SHEET 2 OF 40 SHEETS

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PAY ITEM NOTES - BRIDGE continued

(BR-8) REHABILITATE THE EXISTING EXPANSION JOINT AS SHOWN IN THE PLANS BY REBUILDING THE JOINT WITH ELASTOMERIC MORTAR AS SHOWN IN THE PLANS. ENSURE THAT THE NEW ELASTOMERIC MORTAR MATCHES GRADE WITH SURFACE CONCRETE OR ASPHALT OVERLAY.

THE CONTRACTOR SHALL NOT REMOVE THE PORTION OF EXISTING STEEL RECEPTOR AT THE JOINT AS SHOWN IN THE PLANS. ANY SUCH DAMAGE SHOULD BE REPORTED TO THE ENGINEER FOR REMEDIAL ACTION. THE CONTRACTOR SHALL TAKE CARE NOT TO CUT INTO EXISTING DECK REINFORCING. ANY DAMAGE TO EXISTING REINFORCING, BEAMS OR DIAPHRAGMS DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE ENGINEER.

RESEAL EXISTING EXPANSION JOINT AS SHOWN IN THE PLANS WITH PREFORMED SILICONE FOAM JOINT. MATERIAL IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS 518.04(F).

ALL COSTS INCLUDING THE COST OF ELASTOMERIC MORTAR, LABOR, EQUIPMENT, MATERIAL, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SHOWN IN THE PLANS SHALL BE INCLUDED IN THE UNIT PRICE BID PER LINEAR FOOT OF "PREFORMED SILICONE FOAM JOINTS".

(BR-9) A FLOOD COAT DECK SEAL SHALL BE APPLIED TO THE BRIDGE DECK, SIDEWALKS, AND APPROACH SLABS AS SHOWN IN THE PLANS.

THE CONTRACTOR MUST PREVENT THE FLOOD COAT DECK SEAL FROM PENETRATING ANY JOINT THAT HAS BEEN SEALED WITH SILICONE. IF FLOOD COAT DECK SEAL PENETRATES ANY SILICONE JOINT THE CONTRACTOR, AT HIS OWN EXPENSE, WILL BE REQUIRED TO:

1) AFTER BULK CURE, REMOVE ALL FLOOD COAT DECK SEAL FROM THESE JOINTS.
2) REMOVE AND REPLACE THE SILICONE JOINT SEALANT.

THE APPLICATION OF THE FLOOD COAT SHALL BE IN ACCORDANCE WITH SECTION 523.04E OF THE STANDARD SPECIFICATION AS ADOPTED AND SHALL BE PERFORMED ONLY AFTER ALL OTHER WORK IS COMPLETE. THE CONTRACTOR SHALL ENSURE THAT THE APPLICATION IS DRY BEFORE ALLOWING NORMAL TRAFFIC TO RESUME. AFTER THE FLOOD COAT HAS COMPLETELY DRIED, TRAFFIC STRIPING OF THE AFFECTED DECK SHALL BE APPLIED AS INDICATED IN THE PLANS.

ALL COSTS INCLUDING LABOR, EQUIPMENT, MATERIAL, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK DESCRIBED ABOUT AND AS SHOWN IN THE PLANS SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE YARD OF "DECK AREA SEALED (FLOOD COATS)".

(BR-10) THESE ITEMS ARE FOR CLEANING AND PAINTING THE FOLLOWING SURFACES:

1) ALL EXPOSED FACES OF THE EXISTING BRIDGE RAIL ON BRIDGE 171.

ALL SURFACES TO BE PAINTED WILL BE PREPARED ACCORDING TO SSPC-SP10 SPECIFICATIONS. ONCE CLEANED, PROVIDE AN ORGANIC ZINC/EPOXY/URETHANE (OZ-E-U) SYSTEM (FOR PRIMING AND PAINTING0 THAT MEETS THE REQUIREMENTS OF SECTION 730 OF THE STANDARD SPECIFICATIONS AS ADOPTED (ONLY ONE COAT OF PRIMER IS REQUIRED FOR TOP OF BEAMS AND DIAPHRAGMS IN CONTACT WITH CONCRETE).

USE A COLOR AS SELECTED BY THE CITY FROM TEST SAMPLES TO BE PROVIDED BY THE CONTRACTOR.

ALL COSTS ASSOCIATED WITH CLEANING AND PAINTING WILL BE INCLUDED IN THE LUMP SUM OF "PAINTING EXISTING STRUCTURE" AND "COLLECTION AND HANDLING OF WASTE".

SSPC QP-1 CERTIFICATION WILL BE REQUIRED.

(BR-11) NEW ANCHOR BAR ASSEMBLIES SHALL BE ANCHORED INTO THE CONCRETE OF THE EXISTING BRIDGE AS SHOWN IN THE PLANS. ANCHORAGE OF NEW ANCHOR BAR ASSEMBLIES INTO THE CONCRETE OF THE EXISTING BRIDGE SHALL BE CONDUCTED IN ACCORDANCE WITH SECTION 509.04.D.(3) OF THE STANDARD SPECIFICATIONS AND IN A MANNER APPROVED BY THE ENGINEER.

DRILLING INTO THE EXISTING CONCRETE TO INSTALL THE ANCHORAGES SHALL BE ACCOMPLISHED WITHOUT CUTTING THE EXISTING CONCRETE REINFORCING STEEL BARS. PRIOR TO DRILLING, THE CONTRACTOR SHALL LOCATE AND MARK THE EXISTING CONCRETE REINFORCING STEEL BARS WITH NONDESTRUCTIVE TOOLS, EQUIPMENT AND METHODS APPROVED BY THE ENGINEER. IF THE EXISTING REINFORCING STEEL BARS ARE ENCOUNTERED DURING DRILLING, THE DRILLING SHALL CEASE AND THE HOLE SHALL BE GROUTED. THE HOLE SHALL THEN BE RELOCATED TO CLEAR THE EXISTING REINFORCING STEEL BARS. ANY ADJUSTMENT IN THE LOCATIONS OF THE NEW ANCHOR BAR ASSEMBLIES FROM THE PLAN LOCATIONS SHOWN SHALL BE THE MINIMUM AMOUNT NECESSARY TO AVOID CUTTING THE EXISTING CONCRETE REINFORCING STEEL BARS AND SHALL BE APPROVED BY THE ENGINEER.

ALL COSTS TO ANCHOR THE NEW ANCHOR BAR ASSEMBLIES INTO THE EXISTING BRIDGE CONCRETE AS SPECIFIED OR AS SHOWN IN THE PLANS INCLUDING THE COST OF LOCATING THE EXISTING CONCRETE REINFORCING STEEL BARS, DRILLING, REPAIRING FLAWED DRILLED HOLES, ADJUSTING THE LENGTH OF THE NEW ANCHOR BARS ASSEMBLIES AS PER THE ANCHORAGE ASSEMBLY MANUFACTURER OR THE STANDARD SPECIFICATIONS, ANCHORING INTO THE EXISTING CONCRETE, EPOXY OR BONDING AGENTS, MATERIAL, LABOR, EQUIPMENT AND INCIDENTALS SHALL BE INCLUDED IN OTHER ITEMS OF WORK.

(BR-12) THE EXISTING ABUTMENTS AND PIERS CONTAIN DELAMINATED AND/OR SPALLED CONCRETE WHICH SHALL BE REPAIRED WITH TYPE B SUBSTRUCTURE REPAIR AND TYPE C SUBSTRUCTURE REPAIR. THE REPAIRS SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 522 OF THE SPECIAL PROVISIONS. THE LOCATIONS AND EXTENTS OF THE REPAIRS ARE SHOWN IN THE PLANS. ADDITIONAL QUANTITIES ARE INCLUDED TO BE USED AT THE OTHER LOCATIONS SELECTED BY THE ENGINEER. PAYMENT WILL BE ONLY MADE FOR THE ACTUAL REPAIR QUANTITIES USED. ALL REPAIRS SHALL BE COMPLETED WHILE THE BEAMS AND BEARING ABOVE THE REPAIR AREAS ON THE ABUTMENTS AND PIERS ARE JACKED.

ALL COSTS TO COMPLETE THE REPAIRS AS SPECIFIED OR SHOWN IN PLANS INCLUDING THE COST OF REMOVALS, DISPOSAL OF REMOVED MATERIALS, ALL REQUIRED REPAIR MATERIALS INCLUDING CORROSION INHIBITOR AND REINFORCING STEEL, MATERIAL, LABOR, EQUIPMENT AND INCIDENTALS SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE FEET OF "TYPE B SUBSTRUCTURE REPAIR"AND "TYPE C SUBSTRUCTURE REPAIR."

(BR-13) THE ABUTMENTS AND PIERS CONTAIN CRACKS WHICH SHALL BE REPAIRED BY CLEANING AND INJECTING WITH EPOXY. THE CRACK REPAIRS SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 520 OF THE STANDARD SPECIFICATIONS. THE LOCATIONS AND EXTENTS OF THE CRACK REPAIRS ARE SHOWN IN THE PLANS. ADDITIONAL QUANTITIES ARE INCLUDED TO BE USED AT OTHER LOCATIONS SELECTED BY THE ENGINEER. PAYMENT WILL ONLY BE MADE FOR THE ACTUAL CRACK REPAIR QUANTITIES USED.

ALL COSTS TO COMPLETE THE REPAIRS AS SPECIFIED OR SHOWN IN PLANS INCLUDING THE COST OF MATERIAL, LABOR, EQUIPMENT AND INCIDENTALS SHALL BE INCLUDED IN THE UNIT PRICE BID PER LINEAR FEET OF "PREPARATION OF CRACKS, ABOVE WATER" AND THE UNIT PRICE BID PER GALLON OF "EPOXY RESIN, ABOVE WATER."

(BR-14) NOT USED

(BR-15) THIS ITEM IS FOR APPLYING TWO LAYERS OF CARBON FIBER-REINFORCED POLYMER TO THE BRIDGE 288 AND 288A BEAM ENDS AT THE LOCATIONS AND EXTENT SHOWN IN THE PLANS AND AS APPROVED BY THE ENGINEER, IN ACCORDANCE WITH SPECIAL PROVISIONS 524-3. THE QUANTITY SHOWN IS APPROXIMATE. THE EXTENT WILL BE FIELD DETERMINED WITH THE APPROVAL OF THE ENGINEER. PAYMENT WILL BE MADE FOR EACH LAYER OF CARBON FIBER-REINFORCED POLYMER APPLIED.

(BR-16) THIS ITEM IS FOR APPLYING CORROSION INHIBITOR (SURFACE APPLIED) TO SURFACES PRIOR TO CARBON FIBER-REINFORCED POLYMER APPLICATION AND OTHER SURFACES AS DIRECTED BY THE ENGINEER, IN ACCORDANCE WITH SPECIAL PROVISIONS 535-1. THE QUANTITY SHOWN IS APPROXIMATE. APPLY CORROSION INHIBITOR PRIOR TO PLACEMENT OF PNEUMATICALLY PLACED MORTAR.

(BR-17) THIS ITEM IS FOR BACKFILLING VOIDS UNDER THE EXISTING BRIDGE ABUTMENT. PAYMENT WILL ONLY BE MADE FOR THE ACTUAL QUANTITIES INSTALLED AND ACCEPTED. ALL COSTS TO COMPLETE THE BACKFILL AS SHOWN IN THE PLANS INCLUDING THE COST OF PUMPING, LABOR, MATERIAL, AND INCIDENTALS SHALL BE INCLUDED IN THE PRICE BID PER CUBIC YARD OF "CELLULAR CONCRETE BACKFILL." TO BE CELLFILL, OR APPROVED EQUAL, AND INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

PAY ITEM NOTES - BRIDGE continued

(BR-18) FALSEWORK AND JACKING
INSTALLATION OF FALSEWORK ON THE BRIDGES WILL BE REQUIRED AS FOLLOWS:

1. ON BRIDGES 288 AND 288A TO LIFT AND TEMPORARILY SUPPORT THE EXISTING BEAM ENDS AS REQUIRED TO REPLACE THE EXISTING BEARING ASSEMBLIES AND MAKE SUBSTRUCTURE REPAIRS.

ANY DISPLACEMENT TO THE SUPERSTRUCTURE WHILE JACKING SHALL BE THE MINIMUM AMOUNT NECESSARY TO REMOVE THE LOADS FROM THE BEARINGS. WHEN LIFTING, THE DIFFERENTIAL VERTICAL DISPLACEMENT BETWEEN ADJACENT BEAM ENDS SHALL BE NO MORE THAN 1/4". THE JACKING AND INSTALLATION OF FALSEWORK SHALL NOT RESULT IN DAMAGE TO THE BRIDGE OR ANY NEW MATERIAL ATTACHED TO THE BRIDGE. ANY DAMAGE TO THE BRIDGE OR NEW MATERIAL ATTACHED TO THE BRIDGE RESULTING FROM THE JACKING OR INSTALLATION OF FALSEWORK SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE ENGINEER.

THE CONTRACTOR SHALL SUBMIT A PLAN OF THE FALSEWORK TO THE ENGINEER FOR APPROVAL. THE PLAN SHALL INCLUDE A LAYOUT OF FALSEWORK AND STRUCTURAL CALCULATIONS FOR THE DESIGN OF THE FALSEWORK. THE SUBMITTED PLAN SHALL BE DESIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF OKLAHOMA. THE PLAN AND STRUCTURAL CALCULATIONS SHALL BE PREPARED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, LATEST EDITION AND SECTION 502 OF THE STANDARD SPECIFICATIONS. INSTALLATION OF THE FALSEWORK SHALL NOT BEGIN UNTIL THE CONTRACTOR HAS RECEIVED APPROVAL OF THE SUBMITTED PLAN FROM THE ENGINEER.

ALL COSTS NECESSARY TO COMPLETE THE WORK AS SPECIFIED OR AS SHOWN IN THE PLANS INCLUDING THE COST OF FALSEWORK, ENGINEER SERVICES, MATERIAL, LABOR, EQUIPMENT, AND INCIDENTALS SHALL BE INCLUDED IN THE UNIT PRICE BID PER LUMP SUM OF "FALSEWORK AND JACKING".

GENERAL CONSTRUCTION NOTES - ROADWAY

1. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS GOVERNING SAFETY, HEALTH AND SANITATION. THE CONTRACTOR SHALL PROVIDE ALL SAFEGUARDS, SAFETY DEVICES AND PROTECTIVE EQUIPMENT, AND TAKE ANY OTHER NEEDED ACTION ON AS HIS OWN RESPONSIBILITY OR AS THE ENGINEER MAY DETERMINE REASONABLY NECESSARY TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACT.
2. PAY ITEMS SHALL BE AS SPECIFIED ON THE CITY OF TULSA OR ON THE ODOT STANDARD DRAWINGS EXCEPT AS MODIFIED BY THE CONTRACT.
3. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK IN EACH AREA. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT RESULT FROM HIS FAILURE TO LOCATE AND PRESERVE ANY ALL UTILITIES.
4. THE CONTRACTOR SHALL GIVE THE NOTIFICATION CENTER OF OKLAHOMA ONE-CALL SYSTEM, INC. NOTICE OF ANY EXCAVATION NO SOONER THAN TEN DAYS NOR LATER THAN 48 HOURS , EXCLUDING SATURDAYS, SUNDAYS AND LEGAL HOLIDAYS, PRIOR TO THE COMMENCEMENT OF WORK. PHONE 1-800-522-6543. A MINIMUM OF ONE WEEK'S NOTICE SHALL BE REQUIRED FOR ALL LANE AND SIDEWALK CLOSURES.
5. THE CONTRACTOR SHALL TAKE REASONABLE PRECAUTIONS TO PREVENT EXCESS MOISTURE FROM INCLEMENT WEATHER OR OTHER SOURCES FROM ENTERING ANY STREET EXCAVATION. IF EXCESS MOISTURE DOES ENTER THE EXCAVATION THROUGH THE NEGLIGENCE OF THE CONTRACTOR AND THE ADJOINING PAVEMENT IS ADVERSELY EFFECTED BY THE EXCESS MOISTURE, THE CONTRACTOR SHALL REPLACE THE ADJOINING PAVEMENT AND SUBBASE AT HIS SOLE EXPENSE.
6. THE CONTRACTOR SHALL PRESERVE THE INTEGRITY OF THE SANITARY SEWER STRUCTURES AND ALL OTHER UTILITY STRUCTURES WITHIN THE PROJECT EXTENTS.
7. THE CONTRACTOR SHALL WORK IN COOPERATION WITH THE CITY OF TULSA TO ESTABLISH, INSTALL, MAINTAIN, AND OPERATE COMPLETE, ADEQUATE, AND SAFE TRAFFIC CONTROLS DURING THE ENTIRE CONSTRUCTION PERIOD. ALL FLAGMEN, BARRICADES, AND TRAFFIC CONTROL DEVICES SHALL BE APPROVED BY THE FIELD ENGINEERING REPRESENTATIVE.
8. CONSTRUCTION SIGNAGE WILL BE INSTALLED IN A MANNER APPROVED BY THE ENGINEER, IN ACCORDANCE WITH CHAPTER VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT ADDITION, AND APPLICABLE ODOT STANDARD DRAWINGS. THE CONTRACTOR SHALL PROVIDE A PROPOSED TRAFFIC CONTROL PLAN FOR APPROVAL BY THE ENGINEER PRIOR TO BEGINNING WORK.
9. THE CONTRACTOR SHALL NOTIFY THE CITY OF TULSA FIELD ENGINEERING A MINIMUM OF 48 HOURS PRIOR TO COMMENCING WORK OR PRIOR TO REMOVING TRAFFIC SIGNS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF ALL EXISTING TRAFFIC SIGNS AND MARKINGS REMOVED OR DAMAGED AS LISTED IN THE SIGNAGE SCHEDULE FOR THE PROJECT. ALL SIGNS AND POLES PROVIDED SHALL BE NEW AND UNDAMAGED AND SHALL MEET THE REQUIREMENTS OF COT SPECIFICATION 608 TRAFFIC SIGNS. ALL TRAFFIC MATERIALS REMOVED SHALL BE HANDLED PER COT SPECIFICATION 625 REMOVAL OF TRAFFIC ITEMS.
11. THE CONTRACTOR WILL BE RESPONSIBLE FOR PREPARATION AND DISTRIBUTION OF A WRITTEN NOTICE TO RESIDENTS 48 HOURS PRIOR TO BEGINNING PAVEMENT REMOVAL AND MILLING AND OVERLAY OPERATIONS.
12. LOCAL AND THROUGH TRAFFIC SHALL BE MAINTAINED THROUGH THE PROJECT AT ALL TIMES.
13. ALL PUBLIC AND PRIVATE STREETS AND DRIVES SHALL BE ACCESSIBLE AT ALL TIMES.
14. ALL BROKEN CONCRETE, WASTE MATERIAL, AND OTHER DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE LIMITS OF THE PROJECT AND DISPOSED OF IN A MANNER APPROVED BY THE ENGINEER. NO ADDITIONAL PAYMENT WILL BE MADE FOR THE DISPOSAL OF THIS MATERIAL.
15. ALL EXCAVATED MATERIAL NOT REQUIRED IN THE PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF BY THE CONTRACTOR IN A MANNER ACCEPTABLE TO THE ENGINEER WITHOUT COST TO THE CITY. THE CONTRACTOR WILL BE REQUIRED TO OBTAIN AN EARTH CHANGE PERMIT IF ANY MATERIAL IS STORED ON THE PROJECT SITE AND/OR DISPOSED OF WITHIN THE CITY LIMITS.
16. ALL TREES, BRUSH AND OTHER DEBRIS THAT MIGHT INTERFERE WITH THE FLOW OF WATER IS TO BE CLEANED OUT TO THE RIGHT-OF-WAY LINE IN A MANNER APPROVED BY THE ENGINEER. ALL COST TO BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF WORK. TREES OUTSIDE THE FILL SLOPES AND THE TOP OF CUT SLOPES SHALL NOT BE DISTURBED EXCEPT WITH THE WRITTEN APPROVAL OF THE ENGINEER.
17. WHERE MATERIALS ARE TRANSPORTED IN THE PROSECUTION OF WORK, VEHICLES SHALL NOT BE LOADED BEYOND THE CAPACITY RECOMMENDED BY THE VEHICLE MANUFACTURER OR AS PRESCRIBED BY ANY FEDERAL, STATE OR LOCAL LAW OR REGULATION.
18. ANY DAMAGE TO THE ROADWAY PAVEMENT, CURB, DRIVEWAYS OR SIDEWALK CAUSED BY THE CONTRACTOR'S OPERATION SHALL BE REPAIRED TO THE ENGINEER'S SATISFACTION AND SHALL BE ACCOMPLISHED AT THE CONTRACTOR'S SOLE EXPENSE. ALL DISTURBED ITEMS SHALL BE REPAIRED TO MATCH EXISTING MATERIALS AND PATTERNING.
19. IF THE CONTRACTOR ENCOUNTERS VOIDS WHEN PATCHING STREETS, THE CONTRACTOR SHALL CALL FIELD ENGINEERING FOR AN INSPECTION BEFORE PROCEEDING WITH WORK.
20. THE PROJECT SHALL BE CONSTRUCTED WITH CONTINUOUS FLOW OF MATERIAL SUPPLIED TO THE PROJECT SUCH THAT THE LAYDOWN MACHINE WILL REMAIN IN MOTION. ANY DELAY IN FORWARD PROGRESSION OF THE LAYDOWN MACHINE MAY REQUIRE A TRANSVERSE JOINT AS DIRECTED BY THE ENGINEER.
21. NO FLY ASH IS ALLOWED TO BE USED ON THIS PROJECT.
22. PHYSICAL TESTING FOR QUALITY ASSURANCE SHALL BE FURNISHED BY THE CITY.
23. CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY QUALITY CONTROL TESTING TO ENSURE THAT PROJECT REQUIREMENTS ARE MET.

GENERAL CONSTRUCTION NOTES -ROADWAY continued

24. MASONRY STRUCTURES SHALL NOT BE CONSTRUCTED WITHIN THE STREET RIGHT-OF-WAY.
25. ALL CONCRETE CURB AND GUTTERS SHALL BE MONOLITHIC POURS. DOWELED-ON CURBS WILL NOT BE ALLOWED.
26. NO LIFTING HOLES WILL BE ALLOWED ON ANY REINFORCED CONCRETE PIPES OR REINFORCED CONCRETE BOXES.
27. CURB RAMP CONSTRUCTION SHALL COMPLY WITH THE CURRENT AMERICANS WITH DISABILITIES ACT STANDARDS.
28. REFLECTORIZED SHEETING ON SIGNS AND BARRICADES SHALL BE OF A CUBIC PRISMATIC TYPE AND SHALL MEET THE SPECIFICATIONS ESTABLISHED FOR ASTM D 4956-01 TYPE IX RETROREFLECTIVE SHEETING. REFLECTORIZED SHEETING ON DRUMS AND TUBE CHANNELIZERS SHALL BE OF A HIGH-INTENSITY TYPE AND SHALL MEET THE SPECIFICATIONS ESTABLISHED FOR ASTM D 4956-01 TYPE III RETROREFLECTIVE SHEETING.
29. ALL SANITARY AND STORM SEWER MANHOLE CASTINGS AND LIDS THAT ARE LOCATED IN THE STREET AND ARE DISTURBED BY THE CONTRACTOR SHALL BE REPLACED WITH NEW LIDS AND CASTINGS AND THE OLD ONES SHALL BE SALVAGED AND DELIVERED TO THE METAL RECYCLE BINS IN THE STOCKROOM AREA AT SEWER OPERATIONS AND MAINTENANCE, 9319 E. 42ND STREET NORTH, BETWEEN THE HOURS OF 7:30 AM AND 3:00 PM MONDAY THROUGH FRIDAY.
30. THE SIGN PLACEMENT STATIONING AND LOCATIONS SHOWN ON THE PLAN SHEETS AND SUMMARY SHEETS ARE APPROXIMATE. EXACT STATIONING AND LOCATIONS SHALL BE VERIFIED BY THE CONTRACTOR SO THAT THE SIGN IS INSTALLED IN ACCORDANCE WITH CITY OF TULSA STANDARDS, CURRENT AMERICANS WITH DISABILITIES ACT STANDARDS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES 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.
31. POST LENGTHS SHOWN ON SIGN SUMMARY ARE APPROXIMATE. EXACT LENGTHS SHALL BE DETERMINED BY A FIELD SURVEY CONDUCTED BY THE CONTRACTOR.
32. ALL ASPHALT STREETS THAT ARE TO BE RECONSTRUCTED SHALL BE LEFT WITH A DRIVABLE SURFACE AT ALL TIMES. THE CONTRACTOR WILL NOT BE ALLOWED TO MILL OFF ALL THE ASPHALT BEFORE EXCAVATION BEGINS.
33. THE CONTRACTOR SHALL REPLACE ANY SECTION CORNERS OR OTHER PERMANENT RIGHT OF WAY MARKERS REMOVED OR DISTURBED AS A RESULT OF THE CONSTRUCTION OF THIS PROJECT. REPLACEMENT OF SECTION CORNERS OR ANY OTHER MONUMENTS SHALL BE PERFORMED BY A LICENSED LAND SURVEYOR AUTHORIZED TO PERFORM WORK IN THE STATE OF OKLAHOMA.
34. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL AND MAINTENANCE OF THE STORMWATER DRAINAGE. STORMWATER PONDING ON THE CONSTRUCTION SITE THAT IS THE RESULT OF CONSTRUCTION WILL NOT BE ALLOWED.
35. STRAW OR HAY BALES AS STORMWATER BEST MANAGEMENT PRACTICES ARE NO LONGER ALLOWED ON CONSTRUCTION PROJECTS.
36. THE CONTRACTOR MUST CALL 1-800-458-4251 IMMEDIATELY IF A NATURAL GAS PIPELINE IS CUT, DAMAGED, OR OTHERWISE DISTURBED.
37. PRIOR TO FINAL ACCEPTANCE, ALL EXPOSED CURB SURFACES SHALL BE CLEANED OF ALL DISCOLORATION SUCH AS ASPHALT STAIN, TIRE MARKS, OR OTHER DISFIGUREMENT.
38. ALL FEATURES OF THIS PROJECT INCLUDING, BUT NOT LIMITED TO, SIDEWALKS, CURB RAMPS, AND CROSSWALKS SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT, ACCESSIBILITY GUIDELINES, AND THE PROPOSED ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY, PUBLISHED ON JULY 26, 2011 BY THE U.S. ACCESS BOARD. WHERE SPATIAL LIMITATIONS OR EXISTING FEATURES WITHIN THE LIMITS OF THE PROJECT PREVENT FULL COMPLIANCE WITH THIS ACT, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER UPON DISCOVERY OF SUCH FEATURES. THE CONTRACTOR SHALL NOT PROCEED WITH ANY ASPECT OF THE WORK, WHICH IS NOT IN FULL COMPLIANCE WITH THE ADA WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER. ANY WORK WHICH IS NOT PERFORMED WITHIN THE GUIDELINES OF THE ADA, FOR WHICH THE CONTRACTOR DOES NOT HAVE WRITTEN APPROVAL, SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
39. ALL TRENCH WIDTHS & BEDDING MATERIAL SHALL BE AS SHOWN ON COT STANDARD PIPE BEDDING DETAIL, STANDARD NO. 751. SPECIFIED TRENCH WIDTHS SHALL BE MAINTAINED FULL DEPTH FROM THE FLOWLINE TO THE GRADING TEMPLATE. THE CONTRACTOR SHALL KEEP THE OPEN TRENCH DRAINED.
40. THE CONTRACTOR SHALL NOTIFY THE METROPOLITAN TULSA TRANSIT AUTHORITY (MTTA) A MINIMUM OF 48 HOURS PRIOR TO COMMENCING WORK, LANE CLOSURES OR PRIOR TO DETOURING TRAFFIC.
41. CONTRACTOR SHALL NOT STORE EQUIPMENT OR MATERIALS IN THE FLOODPLAIN.

REGISTERED PROFESSIONAL ENGINEER JEREMY P. STAHLE 21725 OKLAHOMA
5/9/25

LICENSED PROFESSIONAL ENGINEER AMY BACKEL 27708 5/9/25 OKLAHOMA

GENERAL CONSTRUCTION NOTES

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

REVISION	BY	DATE					
			PLAN SCALE: N/A	DRAWN	RJM	11/24	APPROVED:
				DESIGNED	JPS	11/24	
				SURVEY			
			PROFILE SCALE:	PROJ. MGR.	MLD	4/30/25	
			HORIZONTAL: N/A	LEAD ENGR.	BS	9/1/25	
				FIELD MGR.		9/25	
			VERTICAL: N/A	RECOMMENDED	HBS	9.25	
				DESIGN MANAGER			CITY ENGINEER
			FILE: 061274716-Pay Quantities-Notes.dgn				DATE: 10/1/2025
			ATLAS PAGE NO: 96,359,438,1277				SHEET 3 OF 40 SHEETS

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SIGN SUMMARY

SIGN LOCATION NO.	LOCATION	EXISTING SIGN	PROPOSED SIGN INFORMATION				SQUARE POST		REMARKS
			NOTATION	TYPE	DIMENSIONS INCHES	AREA S.F.	2" L.F.	13/4" L.F.	
1	NE CORNER OF BRIDGE 166	OBJECT MARKER (LEFT)	OM3-L	TYPE 3	12X36	3	3	11	REMOVE AND REPLACE EXISTING SIGN AND POST
2	NW CORNER OF BRIDGE 166	OBJECT MARKER (RIGHT)	OM3-R	TYPE 4	12X36	3	3	11	INSTALL SIGN AND POST
3	SE CORNER OF BRIDGE 166	OBJECT MARKER (RIGHT)	OM3-R	TYPE 5	12X36	3	3	11	INSTALL SIGN AND POST
4	SW CORNER OF BRIDGE 166	OBJECT MARKER (LEFT)	OM3-L	TYPE 6	12X36	3	3	11	INSTALL SIGN AND POST
5	NE CORNER OF BRIDGE 171	OBJECT MARKER (LEFT)	OM3-L	TYPE 7	12X36	3	3	11	INSTALL SIGN AND POST
6	NW CORNER OF BRIDGE 171	OBJECT MARKER (RIGHT)	OM3-R	TYPE 8	12X36	3	3	11	INSTALL SIGN AND POST
7	SE CORNER OF BRIDGE 171	OBJECT MARKER (RIGHT)	OM3-R	TYPE 9	12X36	3	3	11	REMOVE AND REPLACE EXISTING SIGN AND POST
8	SW CORNER OF BRIDGE 171	OBJECT MARKER (LEFT)	OM3-L	TYPE 10	12X36	3	3	11	INSTALL SIGN AND POST
9	NW CORNER OF BRIDGE 288A	OBJECT MARKER (LEFT)	OM3-L	TYPE 3	12X36	3	3	11	REMOVE AND REPLACE EXISTING SIGN AND POST
10	SW CORNER OF BRIDGE 288A	OBJECT MARKER (RIGHT)	OM3-R	TYPE 3	12X36	3	3	12.5	REMOVE AND REPLACE EXISTING SIGN AND POST
11		MINGO CREEK	CUSTOM	CREEK MARKER	36X18	4.5			
12	NE CORNER OF BRIDGE 288	OBJECT MARKER (RIGHT)	OM3-R	TYPE 3	12X36	3	3	12.5	REMOVE AND REPLACE EXISTING SIGN AND POST
13		MINGO CREEK	CUSTOM	CREEK MARKER	36X18	4.5			
14	SE CORNER OF BRIDGE 288	OBJECT MARKER (LEFT)	OM3-L	TYPE 3	12X36	3	3	11	REMOVE AND REPLACE EXISTING SIGN AND POST
					TOTALS	45	36	135	

SUMMARY OF CONSTRUCTION QUANTITIES

BASE BID - ROADWAY & TRAFFIC						BRIDGE SITE			
ITEM NO.	SPEC. NO.	ITEM DESCRIPTION	PAY ITEM NOTES	UNIT	QUANTITY	BRIDGE 166	BRIDGE 171	BRIDGE 288	BRIDGE 288A
1	202(A)	UNCLASSIFIED EXCAVATION	E-3,4, R-1	CY	991			571	420
2	205(A)	TYPE A SALVAGED TOPSOIL		CY	264			171	93
3	220	SWPPP DOCUMENTATION AND MANAGEMENT	E-6,7,8,9	LSUM	1				
4	230(A)	SOLID SLAB SODDING	E-10,11	SY	2,392			1,552	840
5	303(A)	AGGREGATE BASE TYPE A	S-2	CY	793			457	336
6	411(C)	SUPERPAVE, TYPE S4 (PG 70-28 OK)	S-5,6,7,8	TON	964			569	395
7	609(B)	COMBINED CURB AND GUTTER (6"-MOUNTABLE)	S-12,13	LF	1,355			768	587
8	619(B)	REMOVAL OF ASPHALT PAVEMENT	R-1,2,5	SY	2,377			1,371	1,006
9	619(B)	REMOVAL OF CURB & GUTTER	R-1,2,5	LF	1,356			769	587
10	619(B)	REMOVAL OF GUARDRAIL	4, R-1,2,5	LF	600			300	300
11	623(A)	BEAM GUARD RAIL-W-BEAM-SINGLE		LF	350			175	175
12	623(I)	GUARDRAIL BRIDGE CONN-THRIE BEAM (31")		EA	4			2	2
13	623(G)	GUARD RAIL END TREATMENT		EA	4			2	2
14	641	MOBILIZATION	1, G-2	LSUM	1				
15	642	CONSTRUCTION STAKING	G-3,4	EA	1				
16	855(A)	TRAFFIC STRIPE (4")(PLASTIC)	T-3	LF	9,030		748	4,141	4,141
17	855(A)	TRAFFIC STRIPE (8")(PLASTIC)	T-3	LF	164				164
18	855(B)	TRAFFIC STRIPE (PLASTIC)(ARROWS)	T-3	EA	2			2	
19	855(B)	TRAFFIC STRIPE(PLASTIC)(SYMBOLS)	T-3	EA	2	2			
20	857(C)	REMOVABLE PAVEMENT MARKING TAPE		LF	9,990			5,160	4,830
21	857(E)	(PL) CONST. ZONE PAVEMENT MARKERS (FLEX TAB) TYPE 2-2		EA	890			460	430
22	857(F)	PAVEMENT MARKING REMOVAL (STRIPING)		LF	9,194		748	4,141	4,305
23	857(F)	PAVEMENT MARKING REMOVAL (SYMBOLS)		EA	4	2		2	
24	880(A)	ARROW DISPLAY	T-4	SD	300			150	150
25	880(B)	SIGNS 0.00 TO 6.25 SF	2, T-2,4,5	SD	3,585	240	315	1,505	1,525
26	880(B)	SIGNS 6.26 TO 15.99 SF	2, T-2,4,5	SD	4,325	720	765	1,420	1,420
27	880(B)	SIGNS 16.00 AND UP	2, T-2,4,5	SD	1,743	240	255	624	624
28	880(C)	BARRICADES (TYPE III)	2, T-2,4,5	SD	1,220	480	90	455	195
29	880(F)	DRUMS	2, T-2,4,5	SD	8,725		900	4,335	3,490
30	880(G)	TUBE CHANNELIZERS	T-2,4	SD	6,915		1,485	2,350	3,080
31	COT 608	GROUND SIGN	T-2	SF	45	12	12	10.5	10.5
32	COT 608	1-3/4" SIGN POST		LF	135	44	44	23.5	23.5
33	COT 608	2" SIGN POST		LF	36	12	12	6	6
34	SPECIAL	PROJECT SIGN (CITY OF TULSA)	3	EA	4	1	1	1	1
BASE BID - BRIDGE									
35	501(H)	(PL) CELLULAR CONCRETE BACKFILL	(BR-17)	CY	4		4		
36	502(B)	FALSEWORK AND JACKING	(BR-18)	LSUM	1			0.5	0.5
37	507(A)	STAINLESS STEEL FIXED BEARING ASSEMBLY	(BR-11)	EA	36			18	18
38	507(B)	STAINLESS STEEL EXP. BEARING ASSEMBLY	(BR-11)	EA	36			18	18
39	509	SPECIAL CONCRETE FINISH	(BR-4)	SY	168		64	86	18
40	509(B)	CLASS A CONCRETE	(BR-3)	CY	13	7	2	2	2
41	511(A)	REINFORCING STEEL	(BR-3)	LB	870	730	60	40	40
42	512(A)	PAINTING EXISTING STRUCTURE	(BR-10)	LSUM	1		1		
43	512(B)	COLLECTION AND HANDLING OF WASTE	(BR-10)	LSUM	1		1		
44	513(B)	CLASS B BRIDGE DECK REPAIR	(BR-2) (BR-5)	SY	136	5	34	79	18
45	513(B)	CLASS C BRIDGE DECK REPAIR	(BR-2) (BR-6)	SY	35	5	10	10	10
46	513(B)	(SP) ANODE	(BR-2)	EA	485	38	87	222	138
47	518(C)	RAPID CURE JOINT SEALANT	(BR-7)	LF	241	39	36	83	83
48	518(J)	PREFORMED SILICONE FOAM JOINTS	(BR-8)	LF	313	39	108	83	83
49	520(A)	PREPARATION OF CRACKS, ABOVE WATER	(BR-13)	LF	274		93	74	107
50	520(C)	EPOXY RESIN, ABOVE WATER	(BR-13)	GAL	13		5	4	4
52	522	(SP) TYPE C SUBSTRUCTURE REPAIR	(BR-12)	SF	107		31	48	28
53	523(C)	DECK AREA SEALED (FLOODCOATS)	(BR-3) (BR-9)	SY	3,137	425	654	1,029	1,029
54	524(A)	(SP) CARBON FIBER-REINFORCED POLYMER	(BR-15)	SF	312			156	156
55	535	CORROSION INHIBITOR (SURFACE APPLIED)	(BR-2) (BR-16)	SY	26	26			

GENERAL BRIDGE NOTES

1. SPECIFICATIONS
ALL CONSTRUCTION AND MATERIAL'S SHALL BE IN ACCORDANCE WITH THE 2019 OKLAHOMA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AS AMENDED AND ADOPTED BY CITY OF TULSA ORDINANCE 24616, JUNE 13, 2021, AND THE CURRENT CITY OF TULSA ENGINEERING SERVICES DEPARTMENT'S STANDARD SPECIFICATIONS AND STANDARD DETAILS AND STANDARD DRAWINGS AND CITY OF TULSA SPECIAL PROVISIONS.

2. VERIFICATION OF EXISTING CONDITIONS
THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS NECESSARY TO COMPLETE THE WORK AS SHOWN AND SHALL BE SOLELY RESPONSIBLE FOR THE ACCURACY THEREOF. BIDDERS SHALL FULLY INFORM THEMSELVES OF THE NATURE OF THE WORK AND CONDITION UNDER WHICH IT WILL BE PERFORMED. THE CONTRACTOR SHALL ADOPT METHODS CONSISTENT WITH GOOD CONSTRUCTION PRACTICE AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT DAMAGE TO THE BRIDGE OR ATTACHMENTS. ANY DAMAGE TO THE BRIDGE STRUCTURE OR ROADWAY DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, TO THE SATISFACTION OF THE ENGINEER.

3. PLANS
CONSTRUCTION PLANS FOR THE EXISTING STRUCTURE(S) MAY BE OBTAINED FROM THE CITY OF TULSA PUBLIC WORKS DEPARTMENT.
PHYSICAL ADDRESS:
TULSA PUBLIC WORKS DEPARTMENT
175 E. 2ND STREET S, 13TH FLOOR
TULSA, OKLAHOMA 74103
918-596-2100

4. REMOVED MATERIAL
ALL MATERIAL AND DEBRIS REMOVED DURING THIS PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF IN A MANNER APPROVED BY THE ENGINEER, UNLESS SPECIFIED OTHERWISE BY THE CITY INSPECTOR. THE CITY RETAINS THE RIGHT TO REQUEST MATERIALS OF INTEREST BE SALVAGED AND DELIVERED TO THE PUBLIC WORKS DEPARTMENT BY THE CONTRACTOR.

5. LANE CLOSURES
THE ENGINEER RESERVES THE RIGHT TO PROHIBIT LANE CLOSURES DURING HOLIDAYS OR SPECIAL EVENTS.

6. CLEANING OF DECK DRAINS AND DRAINS AT END OF BRIDGE
ALL PARAPET/RAIL OPENINGS, DECK DRAINS AND DRAINS AT THE ENDS OF BRIDGE SHALL BE CHECKED FOR FUNCTIONALITY AND CLEARED OF ALL DEBRIS AS NEEDED TO ENSURE THAT WATER DRAINS FROM THE BRIDGE NORMALLY. THE METHOD FOR CLEANING THE DRAINS SHALL BE APPROVED BY THE ENGINEER AND SHALL BE PAID FOR IN OTHER ITEMS OF WORK.

7. CLEANING BRIDGE SEATS AND PIER CAPS
ALL BRIDGE SEATS AND PIER CAPS SHALL BE SWEPT CLEAN OF ALL DEBRIS. ALL COSTS CLEANING THE BRIDGE SEATS AND PIER CAPS SHALL BE PAID FOR IN OTHER ITEMS OF WORK.

8. PERMITTING REQUIREMENTS
THE CONTRACTOR MUST PREVENT ALL MATERIALS REMOVED FROM ALL BRIDGES OVER CHANNELS FROM ENTERING THE WATER AND/OR LOWER BANK AREA OF THE CHANNELS BELOW THE BRIDGES. ADDITIONALLY, NO PROVISIONS HAVE BEEN MADE FOR WORK ROADS. IF THE CONTRACTOR IS UNABLE TO MEET THESE REQUIREMENTS OR SHOULD THE CONTRACTOR DEEM A WORK ROAD NECESSARY, THE CONTRACTOR, WITH APPROVAL OF THE ENGINEER, MUST OBTAIN ALL NECESSARY PERMITS, INCLUDING A U.S. ARMY CORPS OF ENGINEERS SECTION 404 PERMIT.

REGISTERED PROFESSIONAL ENGINEER — JEREMY P. STAHLE — 21725 — OKLAHOMA — 5/9/25

LICENSED PROFESSIONAL ENGINEER — AMY BACKEL — 21708 — 5/9/25 — OKLAHOMA

REVISION	BY	DATE

GENERAL CONSTRUCTION NOTES AND SUMMARY TABLE SHEET

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

PLAN SCALE: N/A	DRAWN	RJM	11/24	APPROVED:
	DESIGNED	JPS	11/24	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	AMB	6/30/25	
	LEAD ENGR.	JPS	9/1/25	
HORIZONTAL: N/A	FIELD MGR.		9/25	
	RECOMMENDED:	HAS	9.25	
VERTICAL N/A	DESIGN MANAGER			CITY ENGINEER

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STORM WATER MANAGEMENT PLAN

SITE DESCRIPTION

PROJECT LIMITS: BRIDGE 166 ON S. CINCINNATI AVE. - FROM BEGINNING OF APPROACH TO END OF APPROACH

PROJECT DESCRIPTION: BRIDGE MAINTENANCE AND REHABILITATION

SUGGESTED SEQUENCE OF EROSION CONTROL ACTIVITIES:

1. INSTALL TEMPORARY SEDIMENT FILTERS AROUND DRAINAGE INLETS TO THE NORTH AND SOUTH OF THE BRIDGE.
2. CONSTRUCT BRIDGE REHABILITATION AS SHOWN ON PLANS
3. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES WHEN PROJECT IS COMPLETE AND ACCEPTED BY OWNER.

SOIL TYPE: CHOSKA-SEVERN-URBAN LAND COMPLEX

TOTAL AREA OF THE CONSTRUCTION SITE: 0.08 ACRES

ESTIMATED AREA TO BE DISTURBED: NONE

OFFSITE AREA TO BE DISTURBED: (FOR CONTRACTOR USE)

TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION: 0.08 ACRES

TOTAL IMPERVIOUS AREA POST-CONSTRUCTION: 0.08 ACRES

POST-CONSTRUCTION RUNOFF COEFFICIENT OF THE SITE: 0.95

LATITUDE & LONGITUDE OF CENTER OF PROJECT: 36°06'59.09"N, 95°58'54.41"W

PROJECT WILL DISCHARGE TO:

NAME OF RECEIVING WATERS: CROW CREEK

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

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

IF YES, LIST IMPAIRMENT: MACROINVERTEBRATE BIO

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

LAKE THUNDERBIRD TMDL: YES [ ] NO [X]

MS4 ENTITY YES [X] NO [ ]

IF YES, LOCATION: CITY OF TULSA

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
_____ PERMANENT SODDING, SPRIGGING OR SEEDING
_____ VEGETATIVE MULCHING
_____ SOIL RETENTION BLANKET
_____ 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
_____ TEMPORARY SILT FENCE
_____ TEMPORARY SILT DIKES
_____ TEMPORARY FIBER LOG
_____ DIVERSION, INTERCEPTOR OR PERIMETER DIKES
_____ DIVERSION, INTERCEPTOR OR PERIMETER SWALES
_____ ROCK FILTER DAMS
_____ 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
X 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
_____ LOADED HAUL TRUCKS TO BE COVERED WITH TARPAULIN
_____ 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

BEFORE YOU DIG 1-800-522-OKIE CALL OKIE

REGISTERED PROFESSIONAL ENGINEER JEREMY P. STAHLE 21725 OKLAHOMA 5/9/25

REVISION	BY	DATE

STORM WATER MANAGEMENT PLAN
(BRIDGE 166)

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

PLAN SCALE: N/A	DRAWN	HCM	11/24	APPROVED:
	DESIGNED	ANB	11/24	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	MLB	6/26/25	
	LEAD ENGR.	JPS	9/11/25	
HORIZONTAL: N/A	FIELD MGR.			
	RECOMMENDED:	HAS	9.25	
VERTICAL N/A	DESIGN MANAGER			CITY ENGINEER

FILE: Stormwater Management Plan.dgn — DATE: 10/1/2025

ATLAS PAGE NO: 96,359,438,1277 — SHEET 5 OF 40 SHEETS

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REVISED 8-1-2022

STORM WATER MANAGEMENT PLAN

SITE DESCRIPTION

PROJECT LIMITS: BRIDGE 171 ON SERVICE RD. EAST OF RIVERSIDE PARKWAY - FROM BEGINNING OF APPROACH TO END OF APPROACH

PROJECT DESCRIPTION: BRIDGE MAINTENANCE AND REHABILITATION

SUGGESTED SEQUENCE OF EROSION CONTROL ACTIVITIES:

1. INSTALL TEMPORARY SILT FENCE ALONG EDGE OF SHOULDERS TO THE NORTH AND SOUTH OF APPROACHES.
2. CONSTRUCT BRIDGE REHABILITATION AS SHOWN ON PLANS
3. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES WHEN PROJECT IS COMPLETE AND ACCEPTED BY OWNER.

SOIL TYPE: WYNONA SILTY CLAY LOAM

TOTAL AREA OF THE CONSTRUCTION SITE: 0.08 ACRES

ESTIMATED AREA TO BE DISTURBED: NONE

OFFSITE AREA TO BE DISTURBED: (FOR CONTRACTOR USE)

TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION: 0.15 ACRES

TOTAL IMPERVIOUS AREA POST-CONSTRUCTION: 0.15 ACRES

POST-CONSTRUCTION RUNOFF COEFFICIENT OF THE SITE: 0.95

LATITUDE & LONGITUDE OF CENTER OF PROJECT: 36°01'23.12"N, 95°56'56.26"W

PROJECT WILL DISCHARGE TO:

NAME OF RECEIVING WATERS: VENSEL CREEK NORTH

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 [X]	NO [ ]
IF YES, LOCATION: CITY OF TULSA		

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
- ____ PERMANENT SODDING, SPRIGGING OR SEEDING
- ____ VEGETATIVE MULCHING
- ____ SOIL RETENTION BLANKET
- ____ 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
- ____ TEMPORARY SILT DIKES
- ____ TEMPORARY FIBER LOG
- ____ DIVERSION, INTERCEPTOR OR PERIMETER DIKES
- ____ DIVERSION, INTERCEPTOR OR PERIMETER SWALES
- ____ ROCK FILTER DAMS
- ____ TEMPORARY SLOPE DRAIN
- ____ PAVED DITCH W/ DITCH LINER PROTECTION
- ____ TEMPORARY DIVERSION CHANNELS
- ____ TEMPORARY SEDIMENT BASINS
- ____ TEMPORARY SEDIMENT TRAPS
- ____ TEMPORARY SEDIMENT FILTERS
- X TEMPORARY SEDIMENT REMOVAL
- ____ RIP RAP
- ____ INLET PROTECTION
- ____ TEMPORARY BRUSH SEDIMENT BARRIERS
- ____ SANDBAG BERMS
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NOTES:

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WASTE MATERIALS:

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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

BEFORE YOU DIG 811 1-800-522-OKIE CALL OKIE

REGISTERED PROFESSIONAL ENGINEER JEREMY P. STAHLE 21725 OKLAHOMA 5/9/25

REVISION	BY	DATE

STORM WATER MANAGEMENT PLAN (BRIDGE 171)

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

PLAN SCALE: N/A	DRAWN	HCM	11/24	APPROVED:
	DESIGNED	ANB	11/24	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	MD	6/30/25	
	LEAD ENGR.	JPS	9/1/25	
HORIZONTAL: N/A	FIELD MGR.	JPS	9/1/25	
VERTICAL N/A	RECOMMENDED	HBS	9.25	CITY ENGINEER
	DESIGN MANAGER			

FILE: Stormwater Management Plan.dgn — DATE: 10/1/2025
ATLAS PAGE NO: 96,359,438,1277 — SHEET 6 OF 40 SHEETS

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REVISED 8-1-2022

STORM WATER MANAGEMENT PLAN

SITE DESCRIPTION

PROJECT LIMITS: BRIDGE 288 AND 288A ON 46TH ST. N. - FROM APPROX. 520 FT WEST OF THE CENTERLINE OF MINGO CREEK TO APPROX. 465 FT EAST OF THE CENTERLINE OF MINGO CREEK.

PROJECT DESCRIPTION: BRIDGE MAINTENANCE AND REHABILITATION

SUGGESTED SEQUENCE OF EROSION CONTROL ACTIVITIES:

1. INSTALL TEMPORARY SILT FENCE IN THE MEDIANS DOWNSTREAM OF THE TEMPORARY PAVEMENT AND ALONG THE OUTSIDE SHOULDERS OF BOTH BRIDGES.
2. SALVAGE TOPSOIL AND CONSTRUCT TEMPORARY PAVEMENT IN BOTH MEDIANS.
3. CONSTRUCT BRIDGE REHABILITATION AS SHOWN ON PLANS
4. REMOVE TEMPORARY PAVEMENT IN MEDIANS, BACKFILL, TOPSOIL AND INSTALL SOLID SLAB SOD.
5. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES WHEN PROJECT IS COMPLETE AND ACCEPTED BY OWNER.

SOIL TYPE: WYNONA SILTY CLAY LOAM

TOTAL AREA OF THE CONSTRUCTION SITE: 1.01 ACRES

ESTIMATED AREA TO BE DISTURBED: 0.33 ACRES

OFFSITE AREA TO BE DISTURBED: (FOR CONTRACTOR USE)

TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION: 0.68 ACRES

TOTAL IMPERVIOUS AREA POST-CONSTRUCTION: 0.68 ACRES

POST-CONSTRUCTION RUNOFF COEFFICIENT OF THE SITE: 0.75

LATITUDE & LONGITUDE OF CENTER OF PROJECT: 36°13'14.04"N, 95°51'29.16"W

PROJECT WILL DISCHARGE TO:

NAME OF RECEIVING WATERS: MINGO CREEK

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

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

IF YES, LIST IMPAIRMENT: MACROINVERTEBRATE BIO

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

LAKE THUNDERBIRD TMDL: YES [ ] NO [X]

MS4 ENTITY YES [X] NO [ ]

IF YES, LOCATION: CITY OF TULSA

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
- ____ PERMANENT SODDING, SPRIGGING OR SEEDING
- ____ VEGETATIVE MULCHING
- ____ SOIL RETENTION BLANKET
- ____ 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
- ____ TEMPORARY SILT DIKES
- ____ TEMPORARY FIBER LOG
- ____ DIVERSION, INTERCEPTOR OR PERIMETER DIKES
- ____ DIVERSION, INTERCEPTOR OR PERIMETER SWALES
- ____ ROCK FILTER DAMS
- ____ TEMPORARY SLOPE DRAIN
- ____ PAVED DITCH W/ DITCH LINER PROTECTION
- ____ TEMPORARY DIVERSION CHANNELS
- ____ TEMPORARY SEDIMENT BASINS
- ____ TEMPORARY SEDIMENT TRAPS
- ____ 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
- LOADED HAUL TRUCKS TO BE COVERED WITH TARPAULIN
- ____ 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
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BEFORE YOU DIG 811 1-800-522-OKIE CALL OKIE

REGISTERED PROFESSIONAL ENGINEER JEREMY P. STAHLE 21725 OKLAHOMA 5/9/25

REVISION	BY	DATE

STORM WATER MANAGEMENT PLAN
(BRIDGES 288 & 288A)

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

PLAN SCALE: N/A	DRAWN	HCM	11/24	APPROVED:
	DESIGNED	ANB	11/24	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	MLD	6/30/25	
HORIZONTAL: N/A	LEAD ENGR.	JPS	7/11/25	
	FIELD MGR.		9/25	
VERTICAL N/A	RECOMMENDED: DESIGN MANAGER	HAS	9.25	CITY ENGINEER
FILE: Stormwater Management Plan.dgn				DATE: 10/11/2025
ATLAS PAGE NO: 96,359,438,1277				SHEET 7 OF 40 SHEETS

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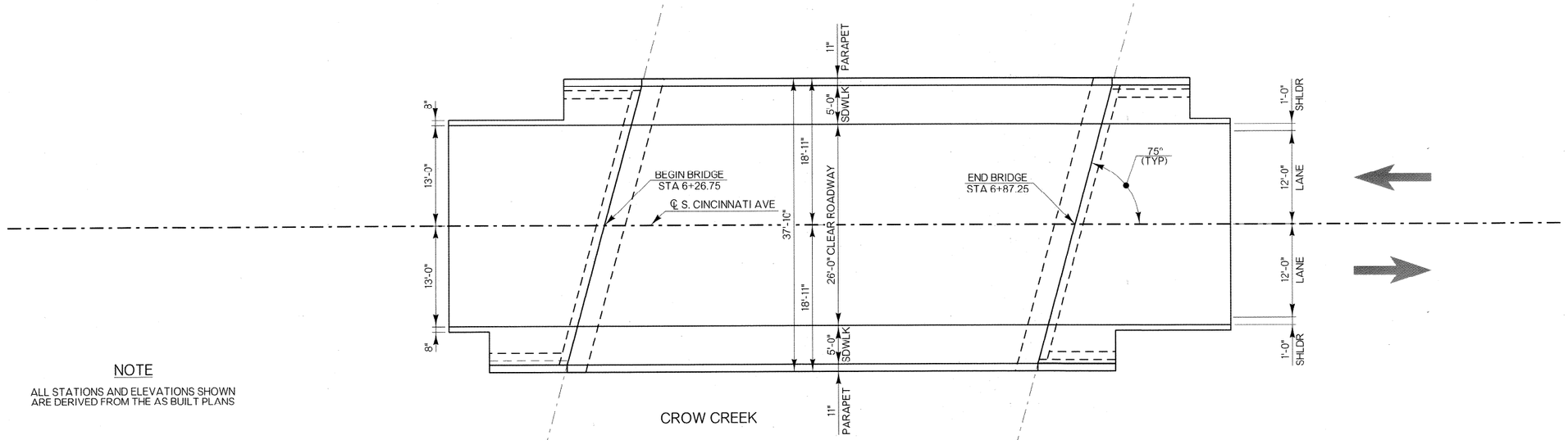
REVISED 8-1-2022



PLAN

NOTE

ALL STATIONS AND ELEVATIONS SHOWN ARE DERIVED FROM THE AS BUILT PLANS

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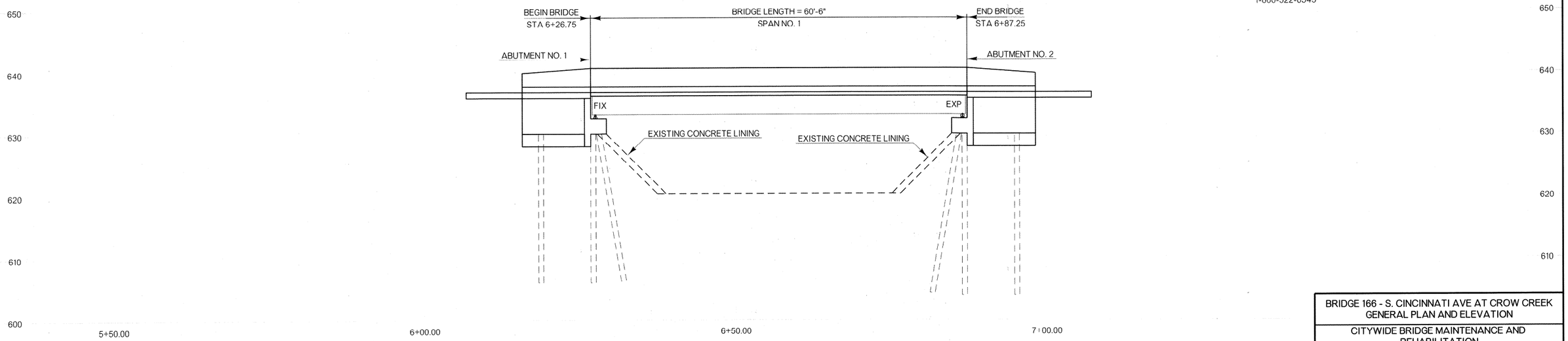
UTILITIES

UTILITY LINE LOCACTOR (OKIE) 405-840-5032 1-800-522-6543



ELEVATION

SUMMARY OF QUANTITIES - BRIDGE 166					
ITEM	UNIT	ABUTMENTS	SUPERSTRUCTURE	APPROACH SLABS	TOTAL
CLASS A CONCRETE	CY	7	-	-	7
REINFORCING STEEL	LB	730	-	-	730
CLASS B BRIDGE DECK REPAIR	SY	-	5	-	5
CLASS C BRIDGE DECK REPAIR	SY	-	5	-	5
(SP) ANODE	EA	-	38	-	38
RAPID CURE JOINT SEALANT	LF	-	39	-	39
PREFORMED SILICONE FOAM JOINTS	LF	-	39	-	39
DECK AREA SEALED (FLOODCOATS)	SY	-	265	160	425
CORROSION INHIBITOR (SURFACE APPLIED)	SY	26	-	-	26

LICENSED PROFESSIONAL ENGINEER AMY BACKEL 27108 5/9/25 OKLAHOMA

REVISION	BY	DATE

BRIDGE 166 - S. CINCINNATI AVE AT CROW CREEK
GENERAL PLAN AND ELEVATION

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

PLAN SCALE: N/A	DRAWN	HCM	11/24	APPROVED:
	DESIGNED	ANB	11/24	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	NLD	6/30/25	
HORIZONTAL: N/A	LEAD ENGR.	BS	9/1/25	
	FIELD MGR.		9/25	
VERTICAL N/A	RECOMMENDED DESIGN MANAGER	HBS	9-25	CITY ENGINEER
FILE: 166_BRG_LAY_01.dgn				DATE: 10/1/2025
ATLAS PAGE NO: 96,359,438,1277				SHEET 8 OF 40 SHEETS

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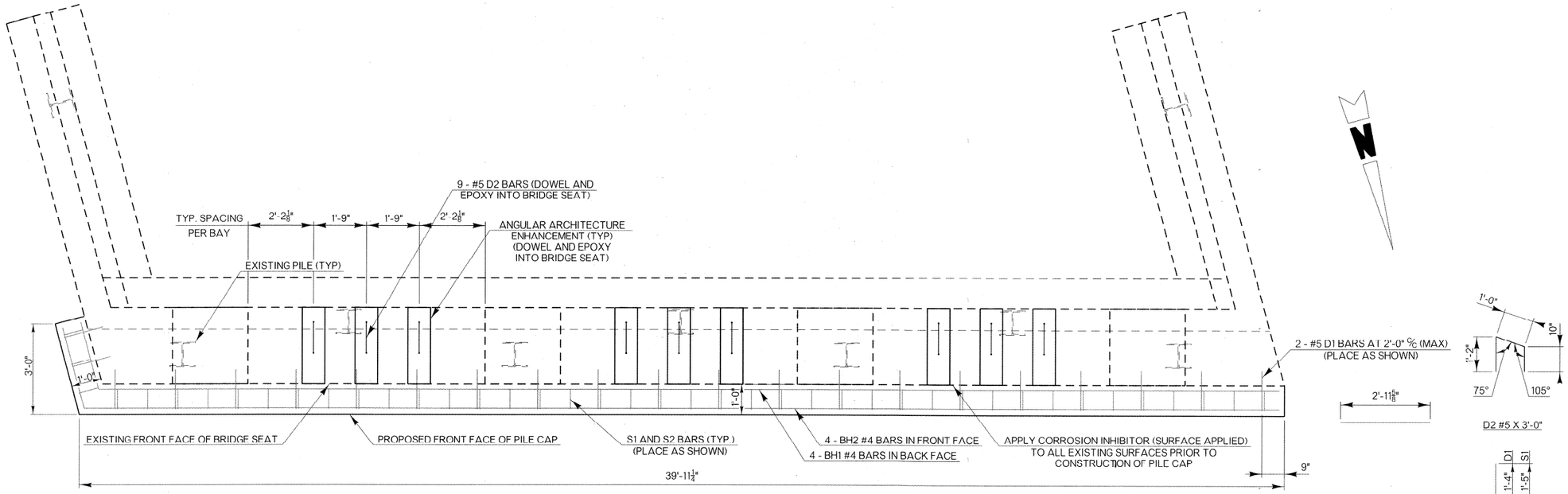


PLAN OF PROPOSED PILE CAP AT ABUTMENT NO. 1
ANGULAR ARCHITECTURE ENHANCEMENT INSTALLATION SHALL BE SIMILAR AT ABUTMENT NO. 2, OPPOSITE HAND

DETAILS OF BENT REINFORCING STEEL

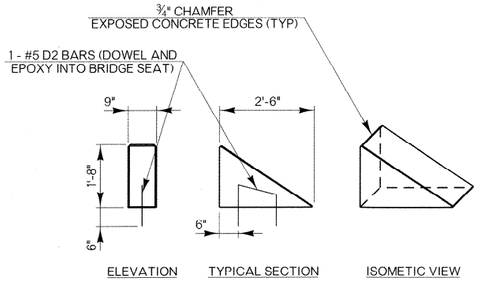
BAR LIST - ABUTMENT NO. 1				
MARK	SIZE	NO.	FORM	LENGTH
BH1	#4	4	BNT.	41'-5"
BH2	#4	4	BNT.	42'-5"
D1	#5	44	BNT.	2'-1"
D2	#5	9	BNT.	3'-0"
① S1	#5	42	BNT.	2'-3"
① S2	#5	42	BNT.	5'-9"

① BARS MAY BE FIELD TRIMMED TO FIT SITE CONDITIONS

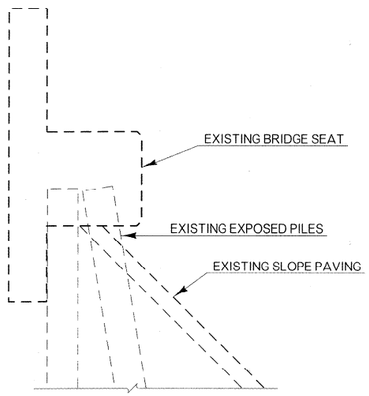
BAR LIST - ABUTMENT NO. 2				
MARK	SIZE	NO.	FORM	LENGTH
D2	#5	9	BNT.	3'-0"

SUMMARY OF QUANTITIES - ABUTMENT NO. 1		
ITEM	UNIT	TOTAL
CLASS A CONCRETE	CY	6
REINFORCING STEEL	LB	700
CORROSION INHIBITOR (SURFACE APPLIED)	SY	26

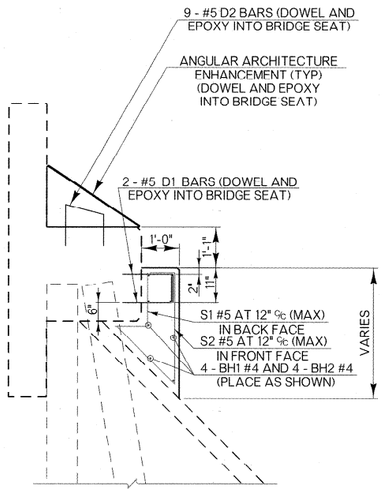
SUMMARY OF QUANTITIES - ABUTMENT NO. 2		
ITEM	UNIT	TOTAL
CLASS A CONCRETE	CY	1
REINFORCING STEEL	LB	30



ANGULAR ARCHITECTURE ENHANCEMENTS
INSTALL 9 AT EACH ABUTMENT, COSTS INCLUDED IN "CLASS A CONCRETE" AND "REINFORCING STEEL"



EXISTING ABUTMENT TYPICAL SECTION
SHOWN NORMAL TO BRIDGE SEAT



PROPOSED PILE CAP TYPICAL SECTION
SHOWN NORMAL TO BRIDGE SEAT

REVISION	BY	DATE

BRIDGE 166 - S. CINCINNATI AT CROW CREEK
DETAILS OF PILE CAP AT ABUTMENT NO. 1

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

PLAN SCALE: N/A	DRAWN	HCM	11/24	APPROVED:
	DESIGNED	ANB	11/24	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.		6/30/25	
HORIZONTAL: N/A	LEAD ENGR.		9/1/25	
	FIELD MGR.		9/25	
VERTICAL N/A	RECOMMENDED DESIGN MANAGER		9.25	CITY ENGINEER
FILE: 166_BRG_TYP_01.dgn			DATE: 10/1/2025	
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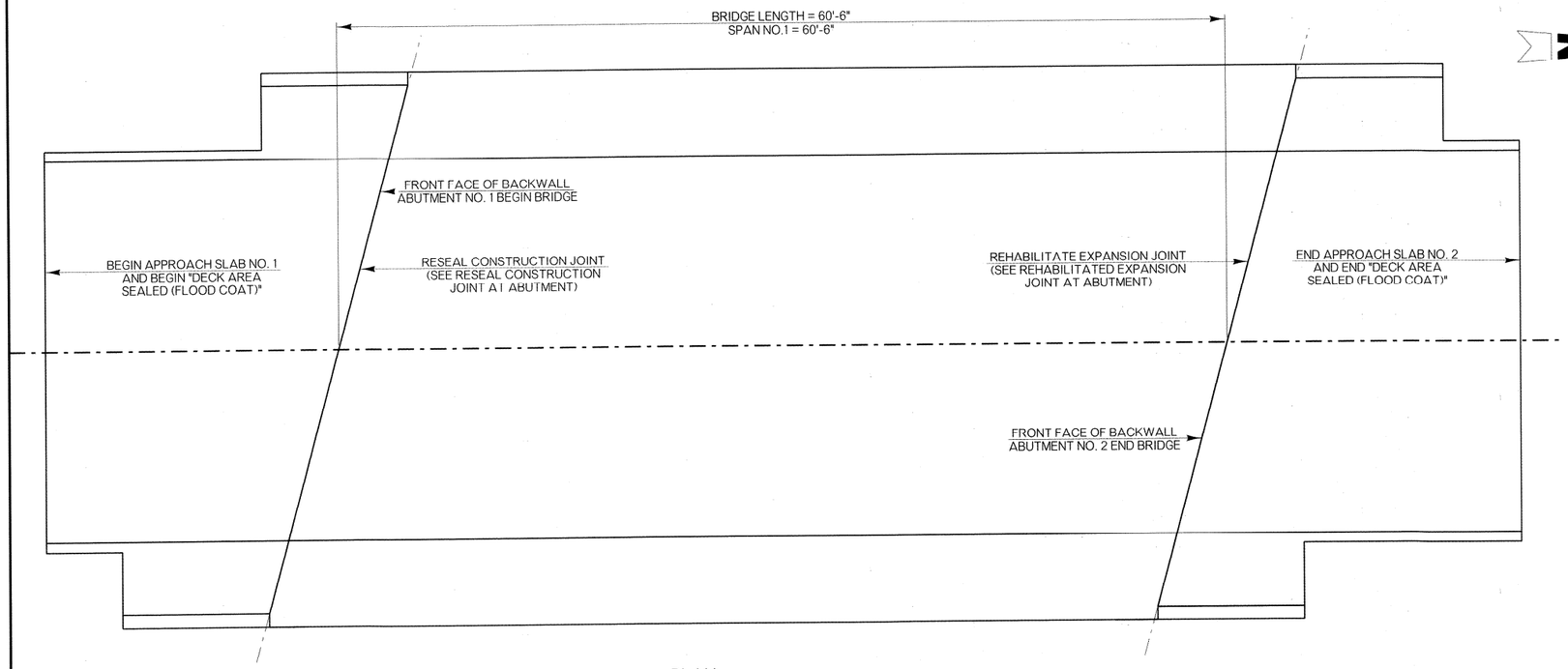
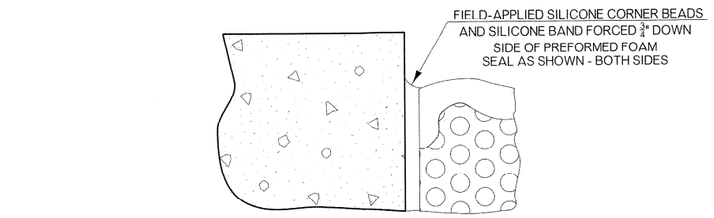
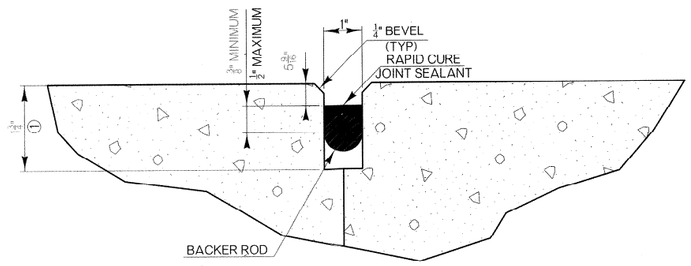


PLAN

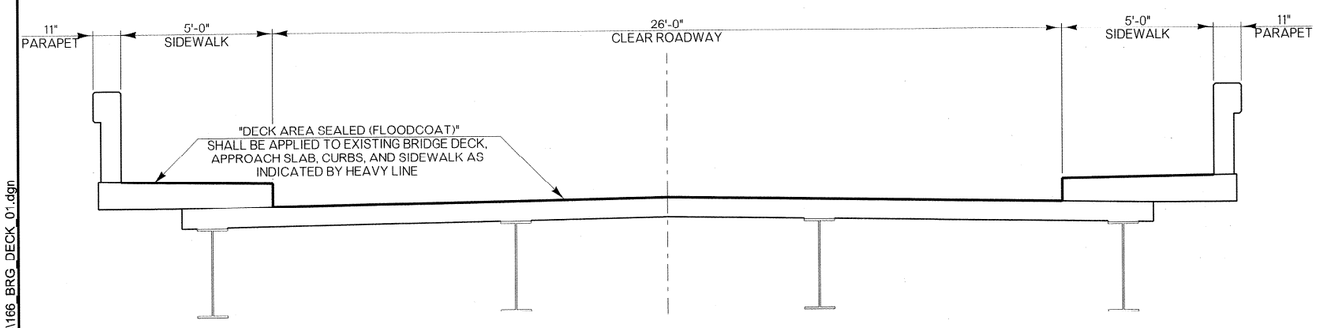


DETAIL 'A'

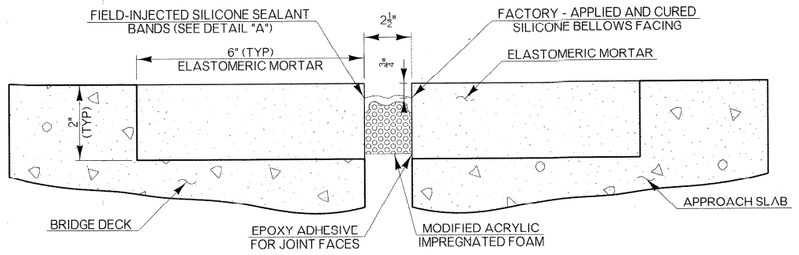


RESEAL CONSTRUCTION JOINT
AT ABUTMENT

① SAW TO THE DEPTH SHOWN TO PROVIDE CLEAN, STRAIGHT SURFACES.



TYPICAL SECTION



REHABILITATED EXPANSION JOINT
AT ABUTMENT

NOTE: THE JOINT OPENING SIZES MAY VARY AND THE CONTRACTOR SHALL MEASURE THE OPENINGS AND USE THE SIZE OF MATERIAL APPROPRIATE.

SUMMARY OF QUANTITIES - SUPERSTRUCTURE AND APPROACH SLABS

ITEM	UNIT	SUPERSTRUCTURE	APPROACH SLAB NO. 1	APPROACH SLAB NO. 2	TOTAL
CLASS B BRIDGE DECK REPAIR	SY	5	-	-	5
CLASS C BRIDGE DECK REPAIR	SY	5	-	-	5
(SP) ANODE	EA	38	-	-	38
RAPID CURE JOINT SEALANT	LF	39	-	-	39
PREFORMED SILICONE FOAM JOINTS	LF	39	-	-	39
DECK AREA SEALED (FLOODCOATS)	SY	265	80	80	425

NOTES

CLASS B BRIDGE DECK REPAIR AND CLASS C BRIDGE DECK REPAIR QUANTITIES ARE ESTIMATED FROM THE LATEST INSPECTION REPORT.

INDIVIDUAL CRACKS IN THE BRIDGE DECK AND APPROACH SLABS ARE NOT REQUIRED TO BE SEALED PRIOR TO APPLICATION OF THE FLOOD COAT.

REGISTERED PROFESSIONAL ENGINEER
AMY BACKEL
27108
5/9/25
OKLAHOMA

REVISION	BY	DATE

BRIDGE 166 - S. CINCINNATI AVE AT CROW CREEK
DETAILS OF BRIDGE REPAIR

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

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	FIELD MGR.			
VERTICAL N/A	RECOMMENDED:	HBS	9.25	CITY ENGINEER
	DESIGN MANAGER			
FILE: 166_BRG_DECK_01.dgn				DATE: 10/1/2025
ATLAS PAGE NO: 96,359,438,1277				SHEET 10 OF 40 SHEETS

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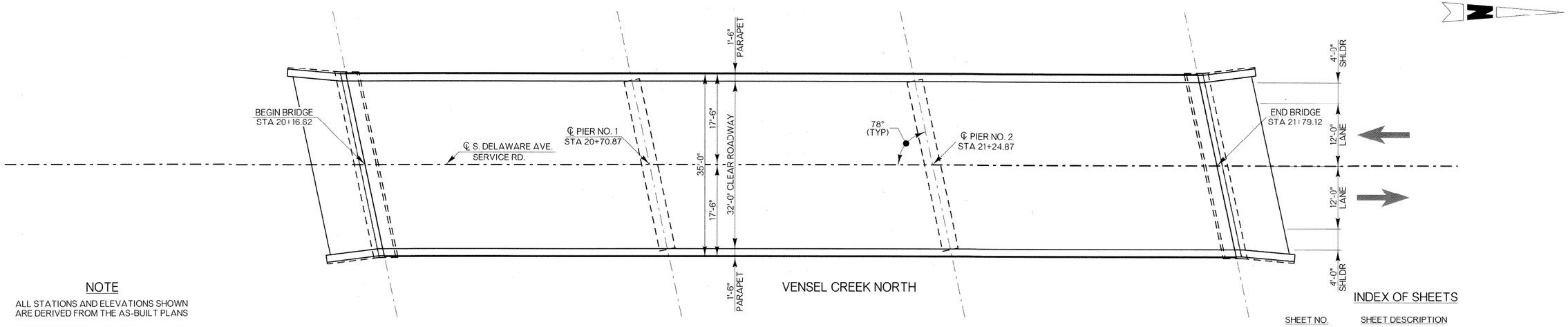

PLAN

NOTE

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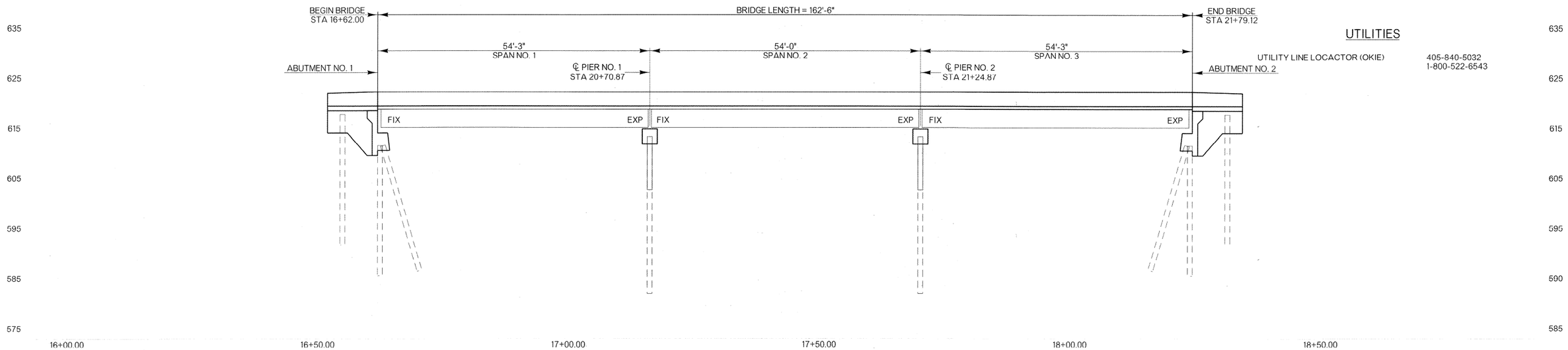

ELEVATION

UTILITIES

UTILITY LINE LOCACTOR (OKIE)	405-840-5032
	1-800-522-6543

SUMMARY OF QUANTITIES - BRIDGE 171						
ITEM	UNIT	ABUTMENTS	PIERS	SUPERSTRUCTURE	APPROACH SLABS	TOTAL
(PL) CELLULAR CONCRETE BACKFILL	CY	4	-	-	-	4
SPECIAL CONCRETE FINISH	SY	30	34	-	-	64
CLASS A CONCRETE	CY	2	-	-	-	2
REINFORCING STEEL	LB	60	-	-	-	60
PAINTING EXISTING STRUCTURE	LSUM	-	-	1	-	1
COLLECTION AND HANDLING OF WASTE	LSUM	-	-	1	-	1
CLASS B BRIDGE DECK REPAIR	SY	-	-	34	-	34
CLASS C BRIDGE DECK REPAIR	SY	-	-	10	-	10
(SP) ANODE	EA	19	22	46	-	87
RAPID CURE JOINT SEALANT	LF	-	-	36	-	36
PREFORMED SILICONE FOAM JOINTS	LF	-	-	108	-	108
PREPARATION OF CRACKS, ABOVE WATE	LF	40	40	-	13	93
EPOXY RESIN, ABOVE WATER	GAL	2	2	-	1	5
(SP) TYPE C SUBSTRUCTURE REPAIR	SF	19	12	-	-	31
DECK AREA SEALED (FLOODCOATS)	SY	-	-	578	76	654

LICENSED PROFESSIONAL ENGINEER
AMY BACKEL
21708
5/9/25
OKLAHOMA

REVISION	BY	DATE

BRIDGE 171 - S. DELAWARE AVE - SERVICE RD.
GENERAL PLAN AND ELEVATION

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
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	DESIGNED	ANB	11/24	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	ALD	6/30/25	
	LEAD ENGR.	ES	9/11/25	
HORIZONTAL: N/A	FIELD MGR.		9/25	
VERTICAL N/A	RECOMMENDED DESIGN MANAGER	HAS	9.25	CITY ENGINEER

FILE: 171_BRG_LAY_01.dgn
DATE: 10/1/2025
ATLAS PAGE NO: 96,359,438,1277
SHEET 11 OF 40 SHEETS

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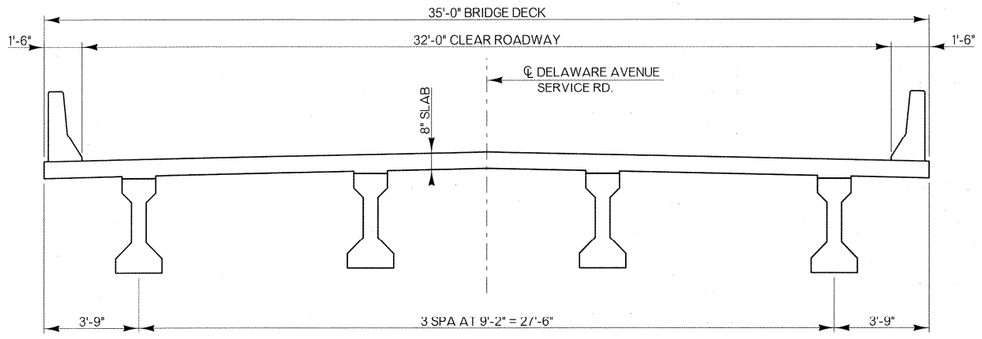
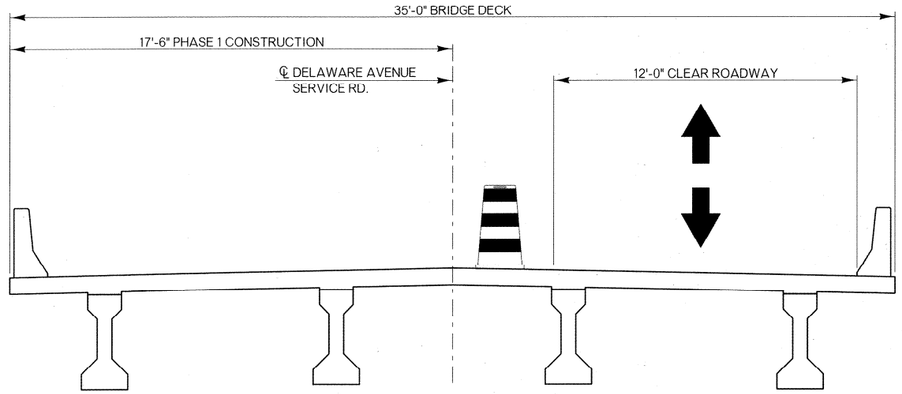
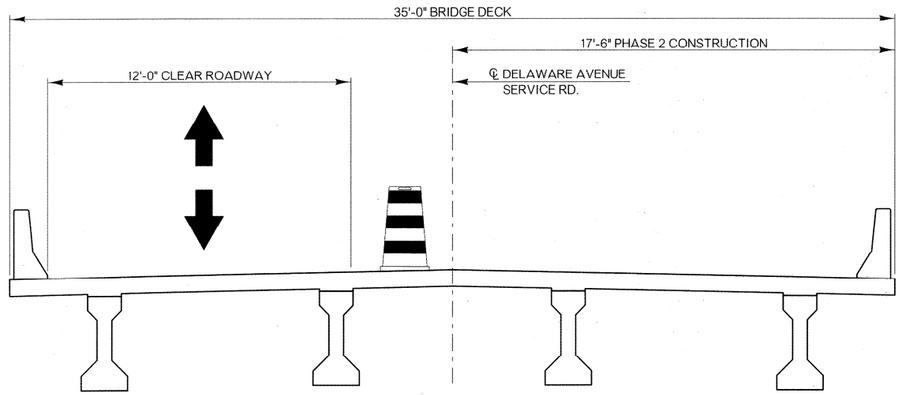


EXISTING STRUCTURE TYPICAL SECTION



TYPICAL SECTION - PHASE 1 CONSTRUCTION



TYPICAL SECTION - PHASE 2 CONSTRUCTION

REVISION	BY	DATE

BRIDGE 171 - S. DELAWARE AVE - SERVICE RD.
BRIDGE CONSTRUCTION SEQUENCING

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

PLAN SCALE: N/A	DRAWN	HCM	11/24	APPROVED:
	DESIGNED	ANB	11/24	
	SURVEY			
PROFILE SCALE: N/A	PROJ. MGR.	MLD	6/30/25	
	LEAD ENGR.	BS	7/1/25	
HORIZONTAL: N/A	FIELD MGR.		5/9/25	
VERTICAL N/A	RECOMMENDED: DESIGN MANAGER	HAS	9.25	CITY ENGINEER

FILE: 171_BRG_TYP_01.dgn
DATE: 10/1/2025
ATLAS PAGE NO: 96,359,438,1277
SHEET 12 OF 40 SHEETS

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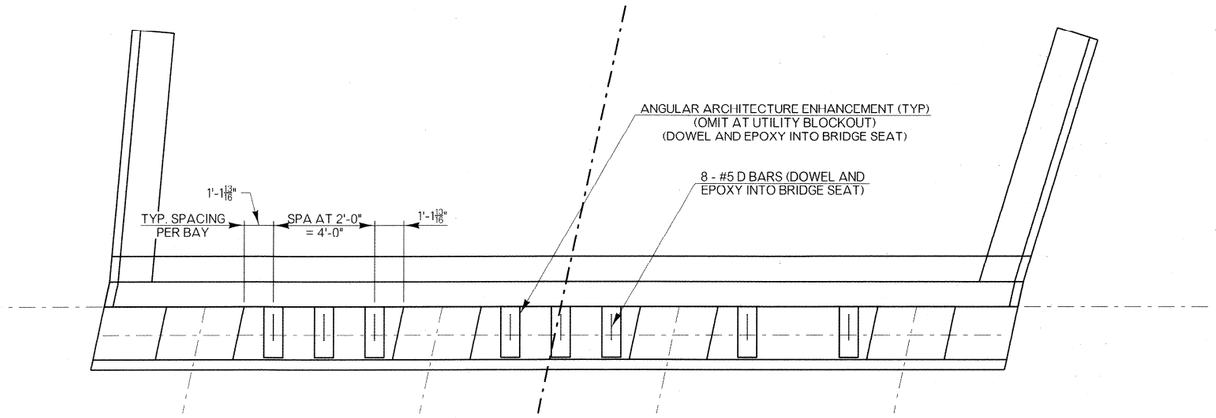
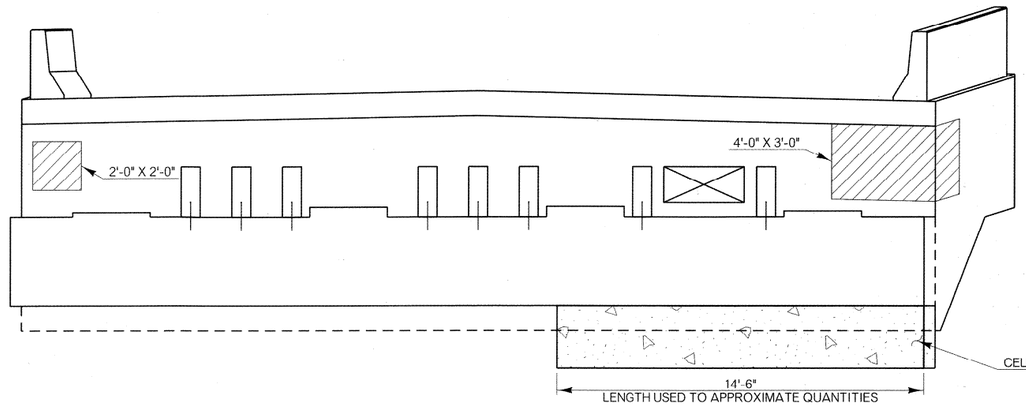
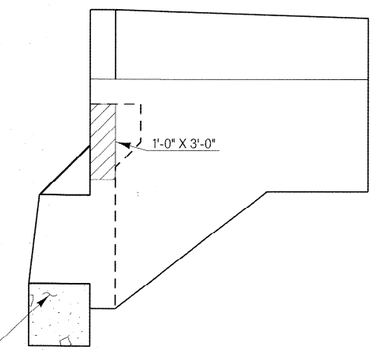


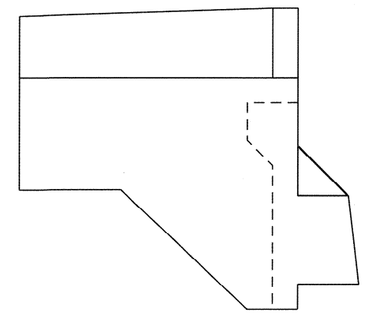
PLAN OF ABUTMENT NO. 1



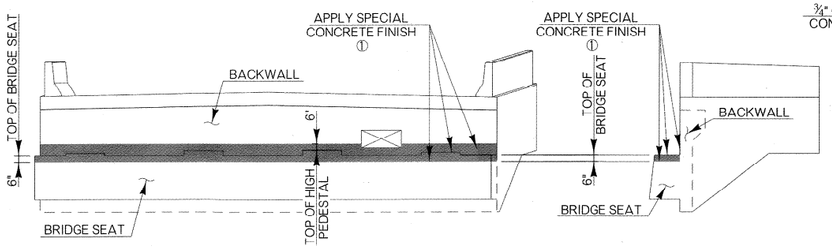
ELEVATION OF ABUTMENT NO. 1



ELEVATION OF WEST WING AT ABUTMENT NO. 1

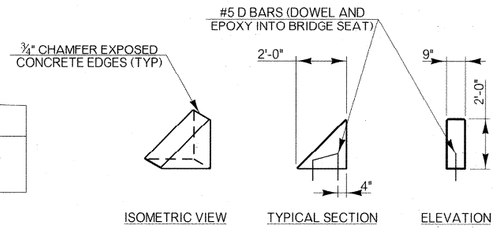


ELEVATION OF EAST WING AT ABUTMENT NO. 1



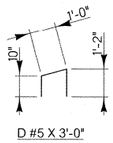
ELEVATION OF ABUTMENT

END VIEW OF ABUTMENT



ANGULAR ARCHITECTURE ENHANCEMENTS

COSTS INCLUDED IN "CLASS A CONCRETE" AND "REINFORCING STEEL"



DETAILS OF BENT REINFORCING STEEL

DETAILS OF SPECIAL CONCRETE FINISH AT ABUTMENTS

① APPLY SPECIAL CONCRETE FINISH TO THE FOLLOWING ABUTMENT SURFACES:

1. TOP OF BRIDGE SEAT AND TOP OF ALL PEDESTALS.
2. SIDE EDGES AND FRONT EDGES OF ALL PEDESTALS.
3. FRONT FACE OF BACKWALL AND EXPOSED ENDS OF WINGS AT BACKWALL TO A LEVEL OF 6" ABOVE HIGH PEDESTAL.
4. FRONT FACE AND SIDES OF BRIDGE SEAT TO A LEVEL OF 6" BELOW BRIDGE SEAT.

BAR LIST - ABUTMENT NO. 1				
MARK	SIZE	NO.	FORM	LENGTH
D	#5	8	BNT.	3'-0"

SUMMARY OF QUANTITIES - ABUTMENT NO. 1		
ITEM	UNIT	TOTAL
(PL) CELLULAR CONCRETE BACKFILL	CY	4
SPECIAL CONCRETE FINISH	SY	15
CLASS A CONCRETE	CY	1
REINFORCING STEEL	LB	30
(SP) ANODE	EA	19
PREPARATION OF CRACKS, ABOVE WATER	LF	20
EPOXY RESIN, ABOVE WATER	GAL	1
(SP) TYPE C SUBSTRUCTURE REPAIR	SF	19

LEGEND

CELLULAR CONCRETE BACKFILL

TYPE C SUBSTRUCTURE REPAIR

EXISTING BLOCK-OUT FOR UTILITIES

BRIDGE 171 - S. DELAWARE AVE - SERVICE RD.
DETAILS OF ABUTMENT REPAIR

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

REVISION	BY	DATE

PLAN SCALE: N/A
PROFILE SCALE: N/A
HORIZONTAL: N/A
VERTICAL N/A

DRAWN	HCM	11/24
DESIGNED	ANB	11/24
SURVEY		
PROJ. MGR.		6/30/25
LEAD ENGR.		9/1/25
FIELD MGR.		9/25
RECOMMENDED		9.25
DESIGN MANAGER		

APPROVED: CITY ENGINEER

FILE: 171_BRG_ABUT_01.dgn
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LICENSED PROFESSIONAL ENGINEER AMY BACKEL 27708 5/9/25 OKLAHOMA

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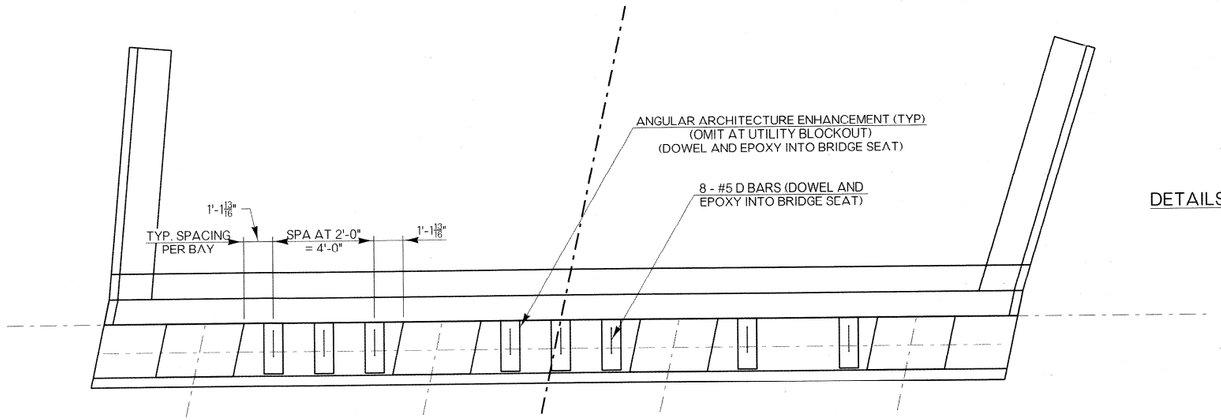
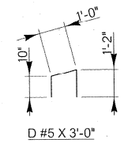
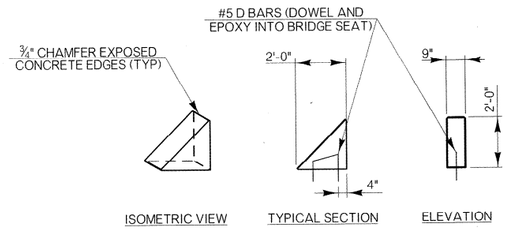


PLAN OF ABUTMENT NO. 2

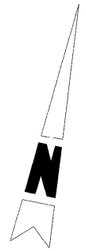


DETAILS OF BENT REINFORCING STEEL

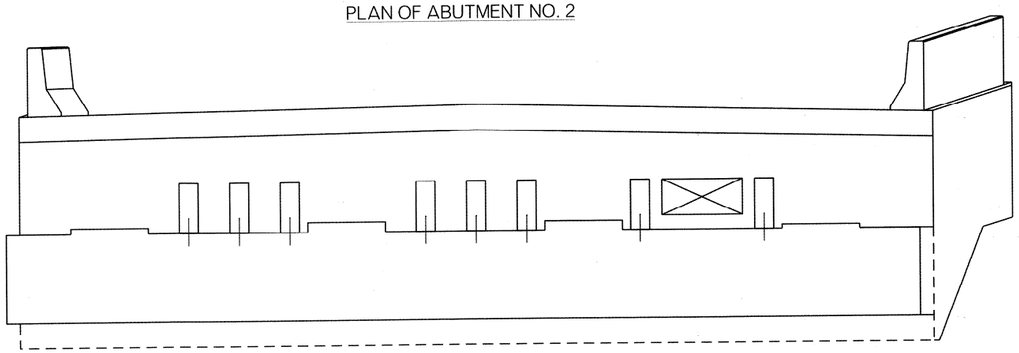


ANGULAR ARCHITECTURE ENHANCEMENTS

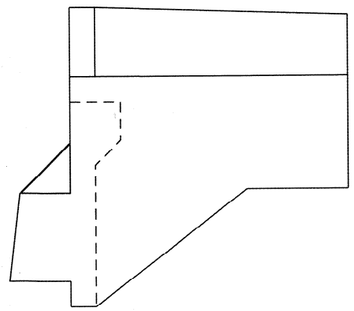
COSTS INCLUDED IN "CLASS A CONCRETE" AND "REINFORCING STEEL"



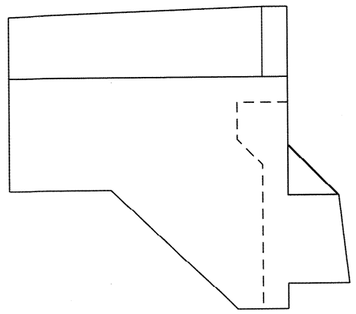
BAR LIST - ABUTMENT NO. 2				
MARK	SIZE	NO.	FORM	LENGTH
D	#5	8	BNT.	3'-0"



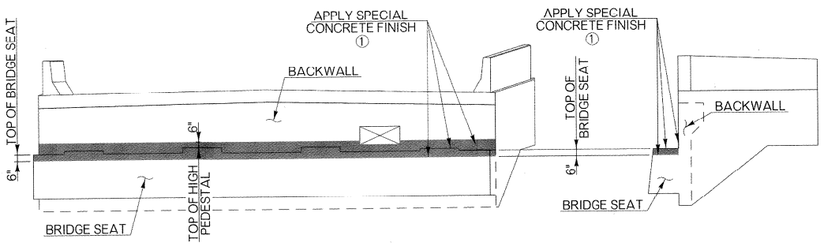
ELEVATION OF ABUTMENT NO. 2



ELEVATION OF EAST WING ABUTMENT NO. 2



ELEVATION OF WEST WING ABUTMENT NO. 2



ELEVATION OF ABUTMENT

END VIEW OF ABUTMENT

DETAILS OF SPECIAL CONCRETE FINISH AT ABUTMENTS

① APPLY SPECIAL CONCRETE FINISH TO THF FOLLOWING ABUTMENT SURFACES:
1. TOP OF BRIDGE SEAT AND TOP OF ALL PEDESTALS.
2. SIDE EDGES AND FRONT EDGES OF ALL PEDESTALS.
3. FRONT FACE OF BACKWALL AND EXPOSED ENDS OF WINGS AT BACKWALL TO A LEVEL OF 6" ABOVE HIGH PEDESTAL.
4. FRONT FACE AND SIDES OF BRIDGE SEAT TO A LEVEL OF 6" BELOW BRIDGE SEAT.

SUMMARY OF QUANTITIES - ABUTMENT NO. 2		
ITEM	UNIT	TOTAL
SPECIAL CONCRETE FINISH	SY	15
CONCRETE CLASS A	CY	20
REINFORCING STEEL	LB	1
PREPARATION OF CRACKS, ABOVE WATER	LF	30
EPOXY RESIN, ABOVE WATER	GAL	1

NOTE

NO CRACK REPAIR OR SUBSTRUCTURE REPAIR NEEDS WERE IDENTIFIED AT ABUTMENT NO. 2. QUANTITIES OF "PREPARATION OF CRACKS, ABOVE WATER" AND "EPOXY RESIN, ABOVE WATER" ARE INCLUDED TO BE USED AT LOCATIONS AS DIRECTED BY THE ENGINEER. PAYMENT WILL ONLY BE MADE FOR THE ACTUAL CRACK REPAIR QUANTITIES COMPLETED.

LICENSED PROFESSIONAL ENGINEER
AMY BACKEL
27708
5/9/25
OKLAHOMA

LEGEND

- CRACK REPAIRS
- TYPE C SUBSTRUCTURE REPAIR
- BLOCK-OUT FOR TELE. CONDUIT

BRIDGE 171 - S. DELAWARE AVE - SERVICE RD.
DETAILS OF ABUTMENT REPAIR

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

REVISION	BY	DATE

PLAN SCALE: N/A
PROFILE SCALE: N/A
HORIZONTAL: N/A
VERTICAL N/A

DRAWN	HCM	11/24
DESIGNED	ANB	11/24
SURVEY		
PROJ. MGR.	MLD	9/30/25
LEAD ENGR.	AB	9/4/25
FIELD MGR.	DMW	9/25
RECOMMENDED: DESIGN MANAGER	HAS	9.25

APPROVED: CITY ENGINEER
DATE: 10/1/2025

FILE: 171_BRG_ABUT_02.dgn
ATLAS PAGE NO: 96,359,438,1277
SHEET 14 OF 40 SHEETS

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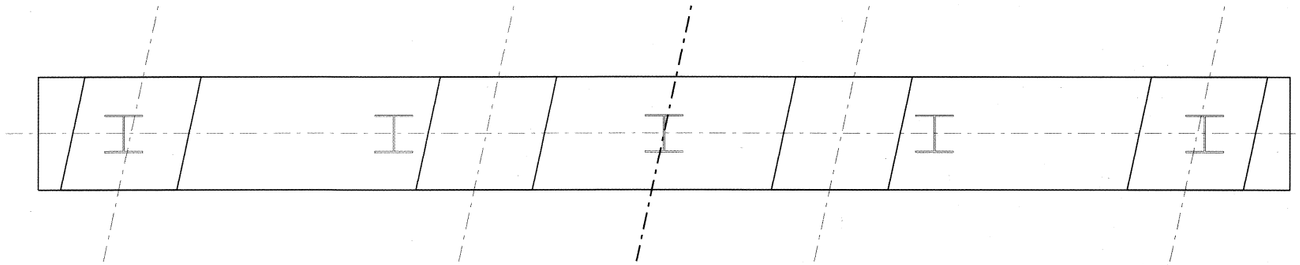
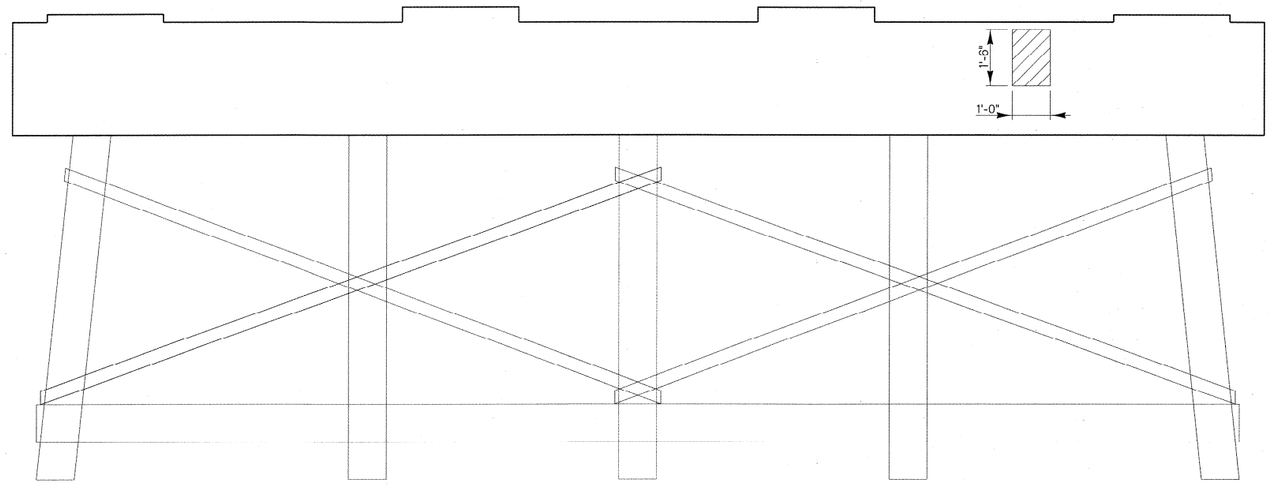
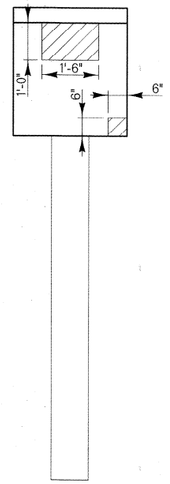


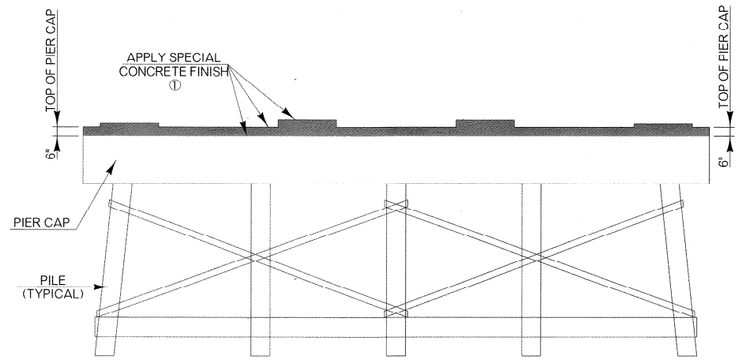
PLAN VIEW OF PIER NO. 1



PIER NO. 1 (LOOKING NORTH)



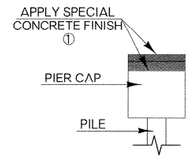
WEST END OF PIER NO. 1



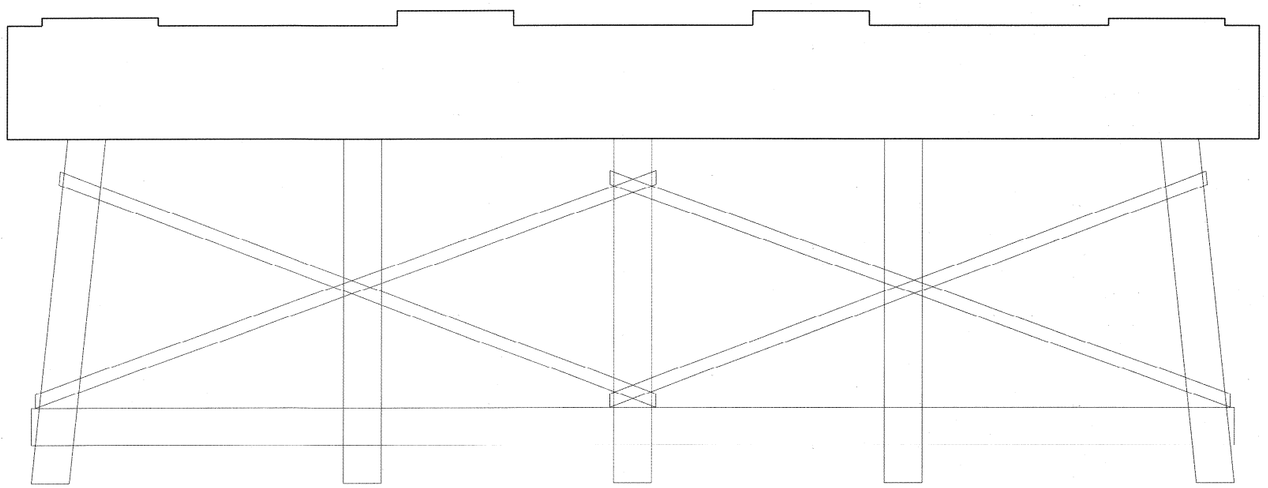
ELEVATION OF PIER CAP

DETAILS OF SPECIAL CONCRETE FINISH AT PIERS

① APPLY SPECIAL CONCRETE FINISH TO TOP OF PIER CAP, TOP AND EDGES OF PEDESTALS AND BOTH SIDES AND BOTH ENDS OF PIER CAP TO THE 6" DIMENSION SHOWN. WITHIN IN EACH PHASE OF BRIDGE CONSTRUCTION, SPECIAL CONCRETE FINISH SHALL NOT BE APPLIED UNDER BEARING ASSEMBLIES.



END VIEW OF PIER CAP



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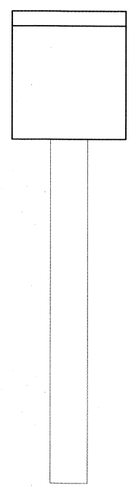

EAST END OF PIER NO. 1

LEGEND

CRACK REPAIR

TYPE C SUBSTRUCTURE REPAIR

SUMMARY OF QUANTITIES - PIER NO. 1		
ITEM	UNIT	TOTAL
SPECIAL CONCRETE FINISH	SY	17
(SP) ANODE	EA	10
PREPARATION OF CRACKS, ABOVE WATER	LF	20
EPOXY RESIN, ABOVE WATER	GAL	1
(SP) TYPE C SUBSTRUCTURE REPAIR	SF	4

BRIDGE 171 - S. DELAWARE AVE - SERVICE RD.
DETAILS OF BRIDGE REPAIR AT PIERS

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

REVISION	BY	DATE

PLAN SCALE: N/A
PROFILE SCALE:
HORIZONTAL: N/A
VERTICAL: N/A

DRAWN	HCM	11/24
DESIGNED	ANB	11/24
SURVEY		
PROJ. MGR.	MLD	6/30/25
LEAD ENGR.		9/11/25
FIELD MGR.		9/25
RECOMMENDED: DESIGN MANAGER	HBS	9.25

APPROVED: CITY ENGINEER

FILE: 171_BRG_PIER_01.dgn
DATE: 10/1/2025
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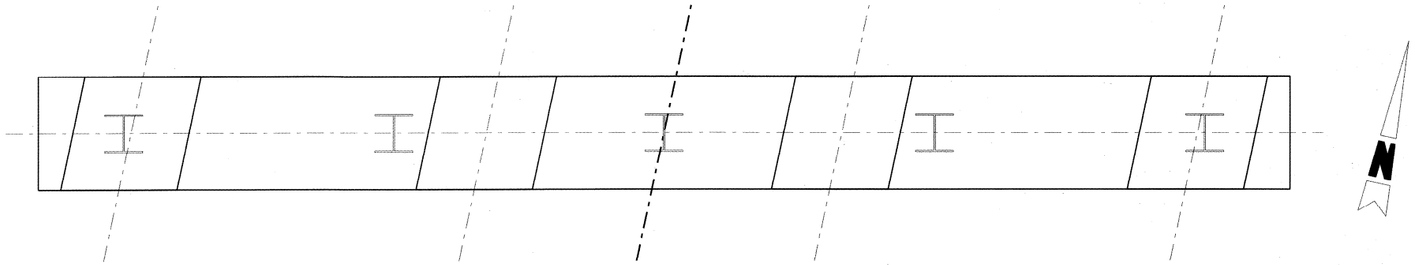
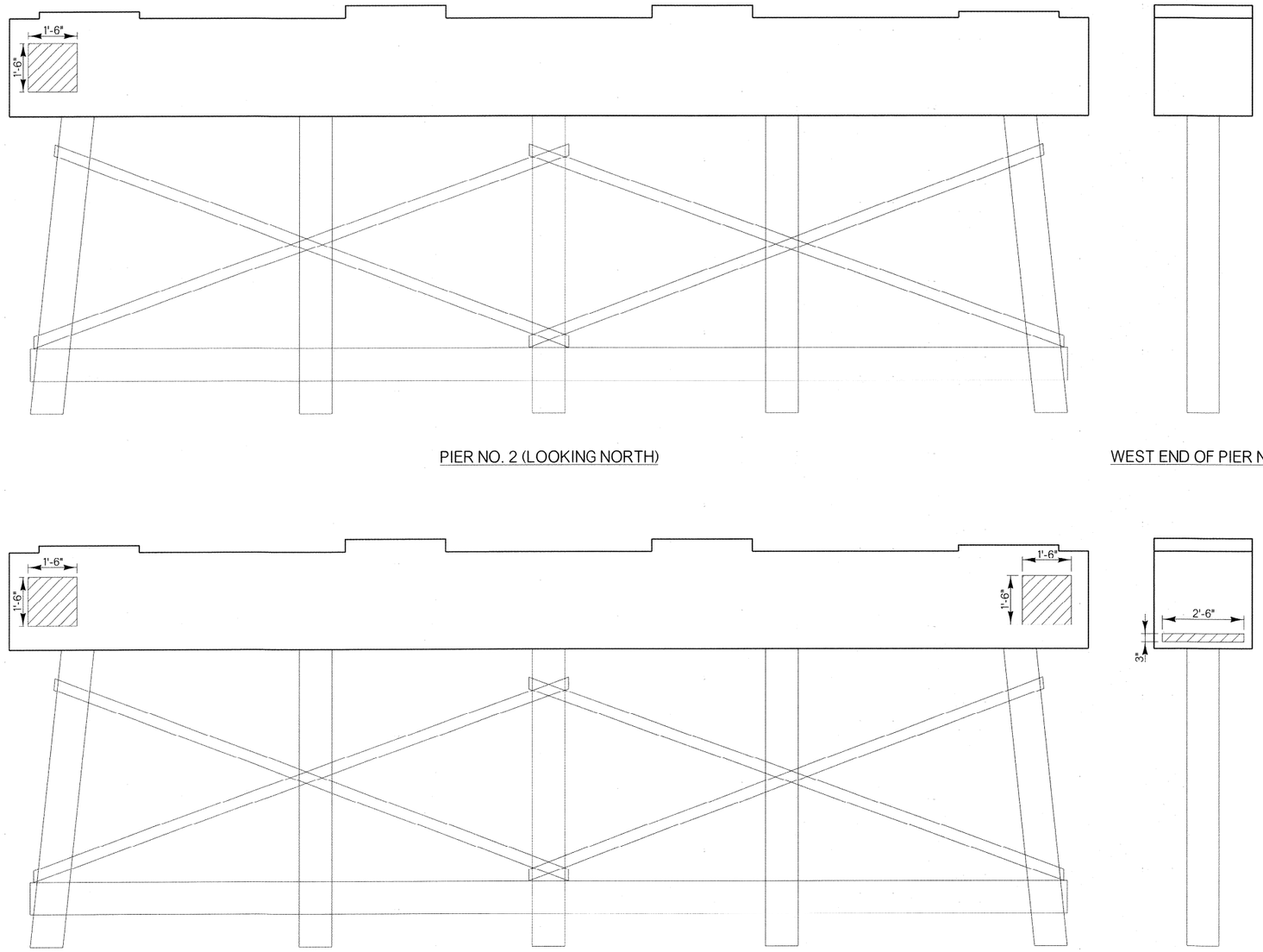
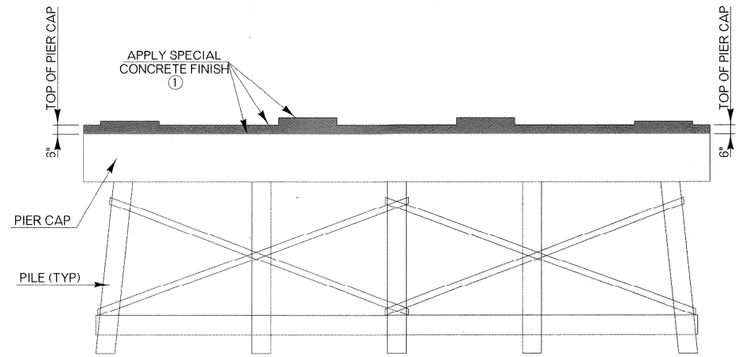


PLAN VIEW OF PIER NO. 2



PIER NO. 2 (LOOKING NORTH)

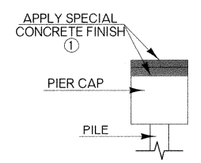
WEST END OF PIER NO. 2



ELEVATION OF PIER CAP

DETAILS OF SPECIAL CONCRETE FINISH AT PIERS

1. APPLY SPECIAL CONCRETE FINISH TO TOP OF PIER CAP, TOP AND EDGES OF PEDESTALS AND BOTH SIDES AND BOTH ENDS OF PIER CAP TO THE 6" DIMENSION SHOWN. WITHIN IN EACH PHASE OF BRIDGE CONSTRUCTION, SPECIAL CONCRETE FINISH SHALL NOT BE APPLIED UNDER BEARING ASSEMBLIES.



END VIEW OF PIER CAP

PIER NO. 2 (LOOKING SOUTH)

EAST END OF PIER NO. 2

LEGEND

CRACK REPAIR

TYPE C SUBSTRUCTURE REPAIR

SUMMARY OF QUANTITIES - PIER NO. 2		
ITEM	UNIT	TOTAL
SPECIAL CONCRETE FINISH	SY	17
(SP) ANODE	EA	12
PREPARATION OF CRACKS, ABOVE WATER	LF	20
EPOXY RESIN, ABOVE WATER	GAL	1
(SP) TYPE C SUBSTRUCTURE REPAIR	SF	8

LICENSED PROFESSIONAL ENGINEER
AMY BACKEL
27708
5/9/25
OKLAHOMA

REVISION	BY	DATE

BRIDGE 171 - S. DELAWARE AVE - SERVICE RD.
DETAILS OF BRIDGE REPAIR AT PIERS

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

PLAN SCALE: N/A	DRAWN	HCM	11/24	APPROVED:
	DESIGNED	ANB	11/24	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	MLD	6/30/25	
	LEAD ENGR.		9/11/25	
HORIZONTAL: N/A	FIELD MGR.		9/26	
VERTICAL N/A	RECOMMENDED DESIGN MANAGER		9.25	CITY ENGINEER
FILE: 171_BRG_PIER_02.dgn				DATE: 10/1/2025
ATLAS PAGE NO: 96,359,438,1277				SHEET 16 OF 40 SHEETS

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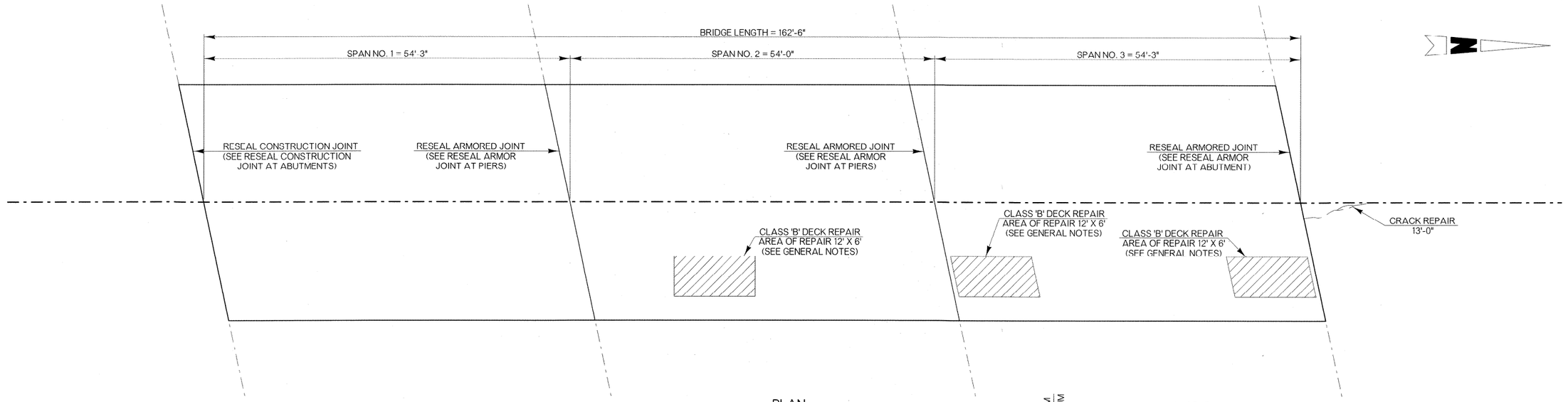
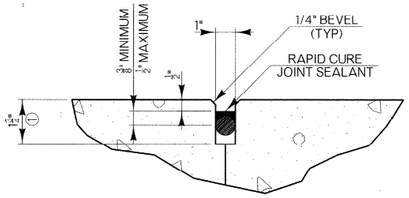
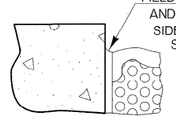


PLAN

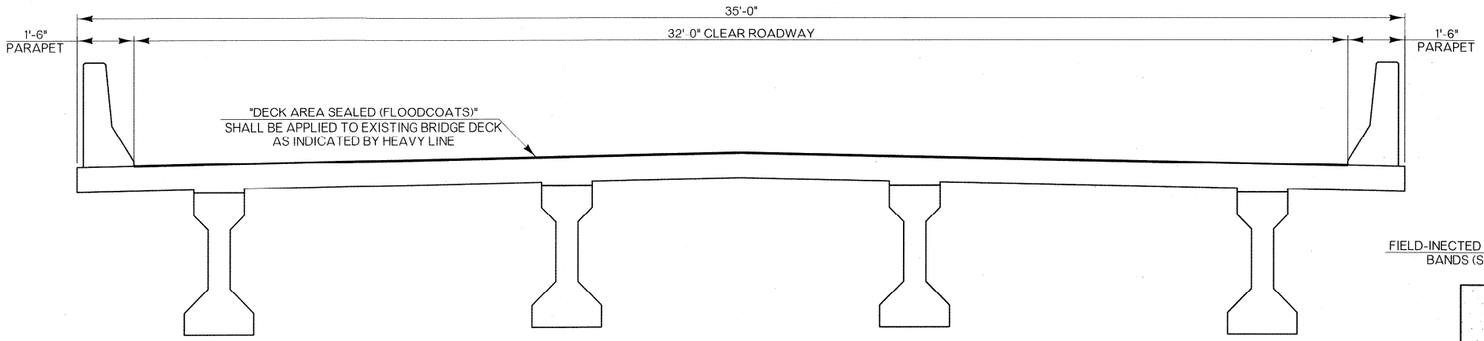


RESEAL CONSTRUCTION JOINT
AT ABUTMENTS

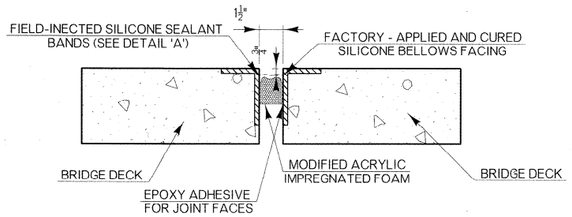
(1) SAW TO THE DEPTH SHOWN TO PROVIDE CLEAN STRAIGHT SURFACES.



DETAIL 'A'



TYPICAL SECTION



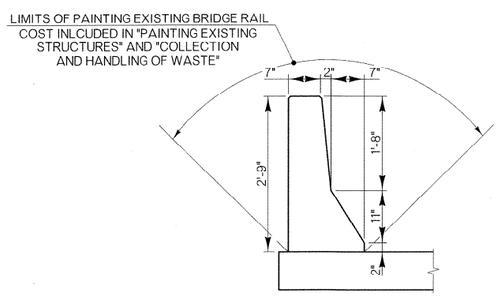
RESEAL ARMOR JOINT
AT ABUTMENT AND PIERS

NOTE: THE JOINT OPENING SIZES MAY VARY AND THE CONTRACTOR SHOULD MEASURE THE OPENINGS AND USE SIZE OF MATERIAL APPROPRIATE.

LEGEND

CRACK REPAIRS

CLASS 'B' DECK REPAIR



EXISTING PARAPET SECTION

TYPICAL EACH SIDE OF DECK. PAINTING LIMITS INCLUDE EXISTING PARAPET ON WINGWALLS. PARAPET LENGTH = 182'-6" EACH SIDE OF BRIDGE (365'-0" TOTAL)

SUMMARY OF QUANTITIES - SUPERSTRUCTURE					
ITEM	UNIT	SUPERSTRUCTURE	APPROACH SLAB NO. 1	APPROACH SLAB NO. 2	TOTAL
PAINTING EXISTING STRUCTURE	LSUM	1	-	-	1
COLLECTION AND HANDLING OF WASTE	LSUM	1	-	-	1
CLASS B BRIDGE DECK REPAIR	SY	34	-	-	34
CLASS C BRIDGE DECK REPAIR	SY	10	-	-	10
(SP) ANODE	EA	46	-	-	46
RAPID CURE JOINT SEALANT	LF	36	-	-	36
PREFORMED SILICONE FOAM JOINTS	LF	108	-	-	108
PREPARATION OF CRACKS, ABOVE WATE	LF	-	-	13	13
EPOXY RESIN, ABOVE WATER	GAL	-	-	1	1
DECK AREA SEALED (FLOODCOATS)	SY	578	38	38	654

REVISION	BY	DATE

PLAN SCALE: N/A
PROFILE SCALE: N/A
HORIZONTAL: N/A
VERTICAL: N/A

DRAWN	HCM	11/24
DESIGNED	ANB	11/24
SURVEY		
PROJ. MGR.	MLD	6/20/25
LEAD ENGR.		9/1/25
FIELD MGR.		9/9/25
RECOMMENDED	HBS	9/25
DESIGN MANAGER		

APPROVED:

CITY ENGINEER

DATE: 10/1/2025

FILE: 171_BRG_DECK_01.dgn

ATLAS PAGE NO: 96,359,438,1277

SHEET 17 OF 40 SHEETS

BRIDGE 171 - S. DELAWARE AVE - SERVICE RD.
DETAILS OF DECK REPAIR

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

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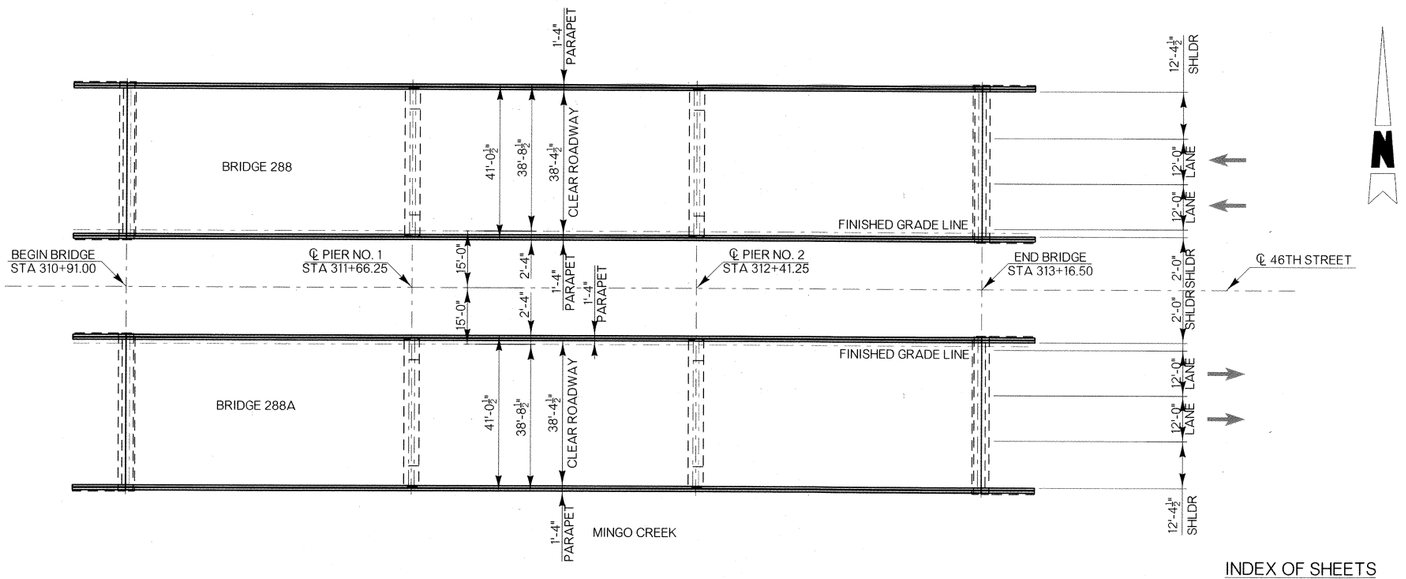


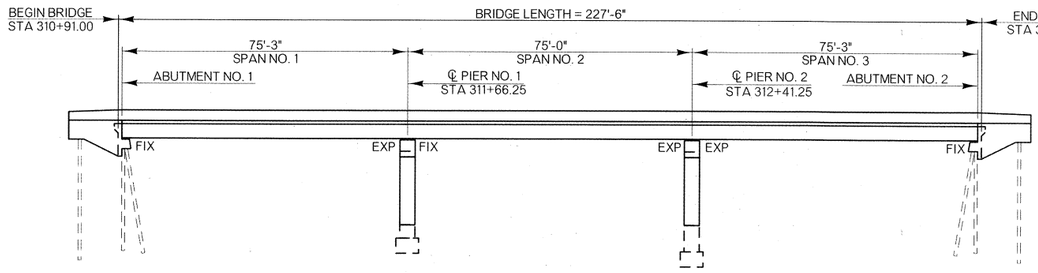
PLAN

NOTE
ALL STATIONS AND ELEVATIONS SHOWN ARE DERIVED FROM THE AS-BUILT PLANS

INDEX OF SHEETS

UTILITIES

UTILITY LINE LOCACTOR (OKIE)	405-840-5032 1-800-522-6543



ELEVATION

SUMMARY OF QUANTITIES - BRIDGE 288

ITEM	UNIT	ABUTMENTS	PIERS	SUPERSTRUCTURE	TOTAL
FALSEWORK AND JACKING	LSUM	-	-	1	1
STAINLESS STEEL FIXED BEARING ASSEMBLY	EA	-	-	18	18
STAINLESS STEEL EXP. BEARING ASSEMBLY	EA	-	-	18	18
SPECIAL CONCRETE FINISH	SY	36	50	-	86
CLASS A CONCRETE	CY	2	-	-	2
REINFORCING STEEL	LB	40	-	-	40
CLASS B BRIDGE DECK REPAIR	SY	-	-	79	79
CLASS C BRIDGE DECK REPAIR	SY	-	-	10	10
(SP) ANODE	EA	39	51	132	222
RAPID CURE JOINT SEALANT	LF	-	-	83	83
PREFORMED SILICONE FOAM JOINTS	LF	-	-	83	83
PREPARATION OF CRACKS, ABOVE WATER	LF	20	54	-	74
EPOXY RESIN, ABOVE WATER	GAL	2	2	-	4
(SP) TYPE C SUBSTRUCTURE REPAIR	SF	17	31	-	48
DECK AREA SEALED (FLOODCOATS)	SY	-	-	1,029	1,029
(SP) CARBON FIBER-REINFORCED POLYMER	SF	-	-	156	156

SUMMARY OF QUANTITIES - BRIDGE 288A

ITEM	UNIT	ABUTMENTS	PIERS	SUPERSTRUCTURE	TOTAL
FALSEWORK AND JACKING	LSUM	-	-	1	1
STAINLESS STEEL FIXED BEARING ASSEMBLY	EA	-	-	18	18
STAINLESS STEEL EXP. BEARING ASSEMBLY	EA	-	-	18	18
SPECIAL CONCRETE FINISH	SY	36	50	-	86
CLASS A CONCRETE	CY	2	-	-	2
REINFORCING STEEL	LB	40	-	-	40
CLASS B BRIDGE DECK REPAIR	SY	-	-	103	103
CLASS C BRIDGE DECK REPAIR	SY	-	-	10	10
(SP) ANODE	EA	18	31	89	138
RAPID CURE JOINT SEALANT	LF	-	-	83	83
PREFORMED SILICONE FOAM JOINTS	LF	-	-	83	83
PREPARATION OF CRACKS, ABOVE WATER	LF	20	87	-	107
EPOXY RESIN, ABOVE WATER	GAL	2	2	-	4
(SP) TYPE C SUBSTRUCTURE REPAIR	SF	6	22	-	28
DECK AREA SEALED (FLOODCOATS)	SY	-	-	1,029	1,029
(SP) CARBON FIBER-REINFORCED POLYMER	SF	-	-	156	156

LICENSED PROFESSIONAL ENGINEER
AMY BACKEL
21708
5/9/25
OKLAHOMA

REVISION	BY	DATE

BRIDGES 288 AND 288A - E. 46TH ST N/MINGO CRK
GENERAL PLAN AND ELEVATION

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

PLAN SCALE: N/A	DRAWN	HCM	11/24	APPROVED:
	DESIGNED	ANB	11/24	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	MLD	6/30/25	
HORIZONTAL: N/A	LEAD ENGR.		9/11/25	
	FIELD MGR.		9/11/25	
VERTICAL N/A	RECOMMENDED	HAS	9.25	CITY ENGINEER
	DESIGN MANAGER			
FILE: 288+288A_BRG_LAY_01.dgn				DATE: 10/1/2025
ATLAS PAGE NO: 96,359,438,1277				SHEET 18 OF 40 SHEETS

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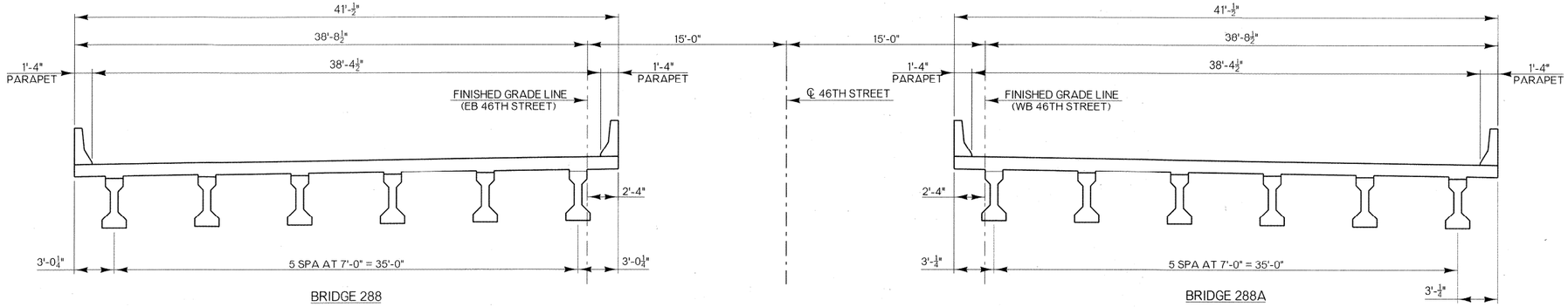
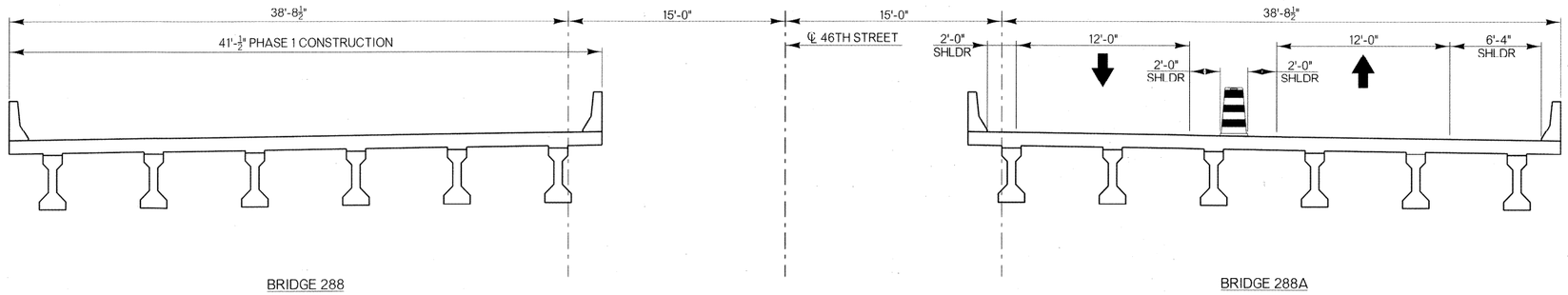


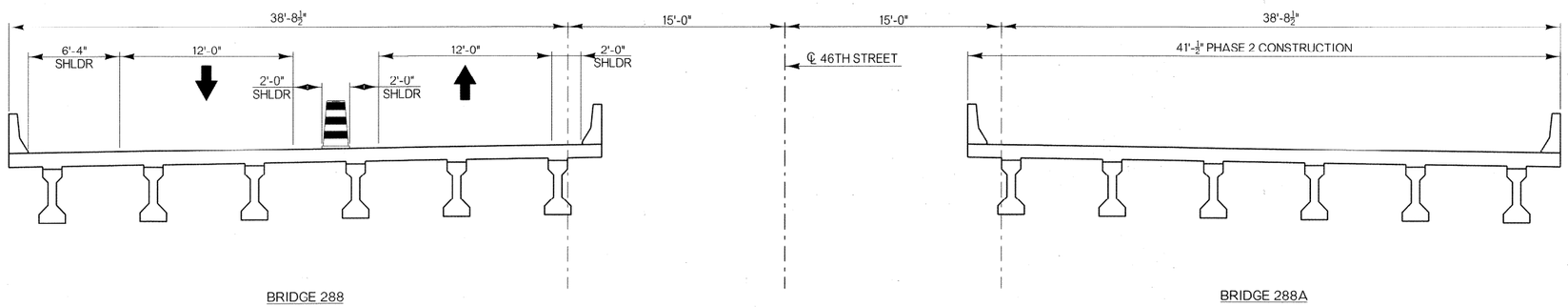
BRIDGE 288 BRIDGE 288A

EXISTING BRIDGES - TYPICAL SECTION



BRIDGE 288 BRIDGE 288A

TYPICAL SECTION - PHASE 1 CONSTRUCTION



BRIDGE 288 BRIDGE 288A

TYPICAL SECTIONS - PHASE 2 CONSTRUCTION

BRIDGE 288 & 288A - E. 46TH ST N/MINGO CRK
BRIDGE CONSTRUCTION SEQUENCING

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER — AMY BACKEL — 21708 — 5/9/25 — OKLAHOMA

PLAN SCALE: N/A	DRAWN	HCM	11/24	APPROVED:
	DESIGNED	ANB	11/24	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	MLD	11/20/25	
	LEAD ENGR.	AB	9/11/25	
HORIZONTAL: N/A	FIELD MGR.	BWM	9/25	
	RECOMMENDED	HAB	9.25	
VERTICAL N/A	DESIGN MANAGER			CITY ENGINEER
FILE: 288+288A_BRG_TYP_01.dgn				DATE: 10/1/2025
ATLAS PAGE NO: 96,359,438,1277				SHEET 19 OF 40 SHEETS

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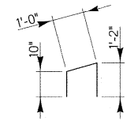
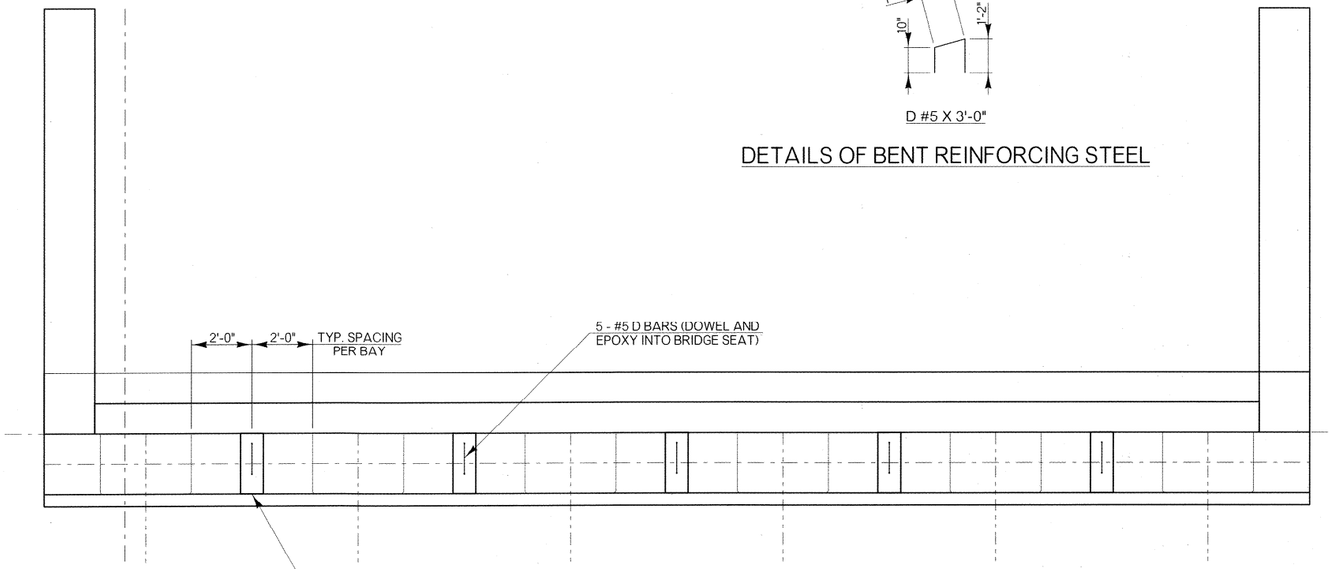


D #5 X 3'-0"

DETAILS OF BENT REINFORCING STEEL

BAR LIST - ABUTMENT NO. 1				
MARK	SIZE	NO.	FORM	LENGTH
D	#5	5	BNT.	3'-0"



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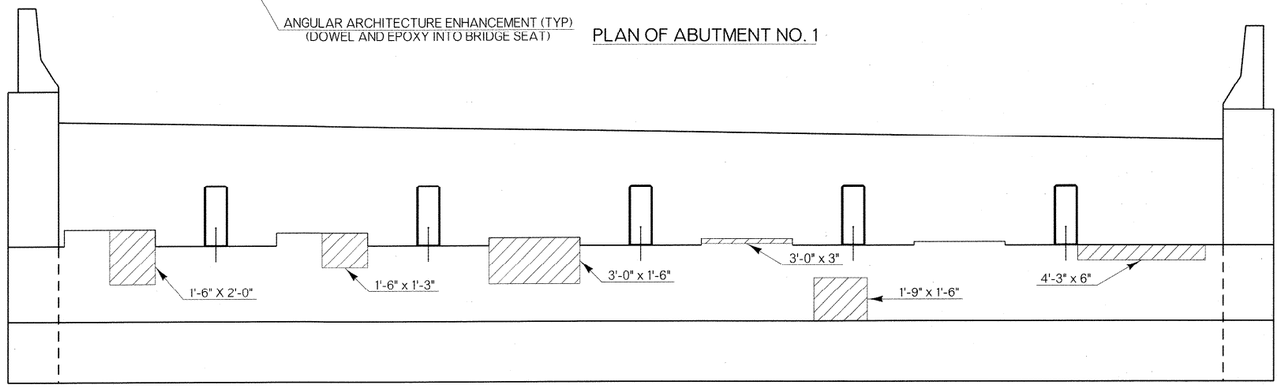
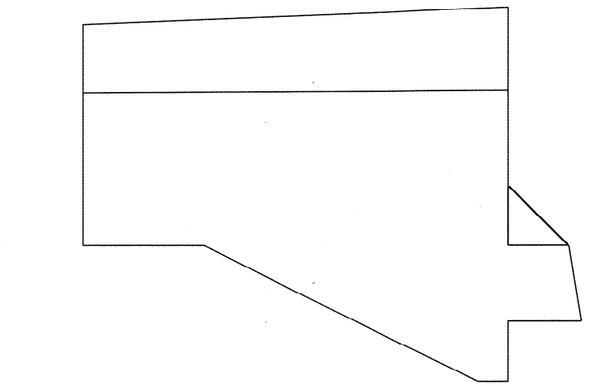
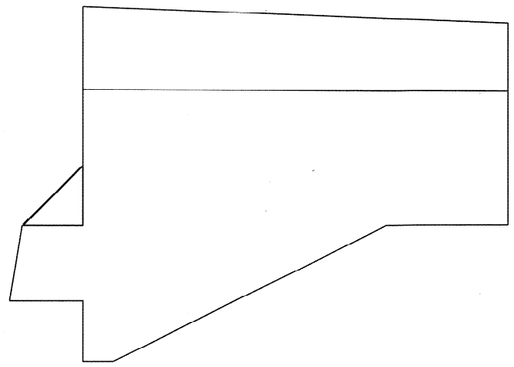


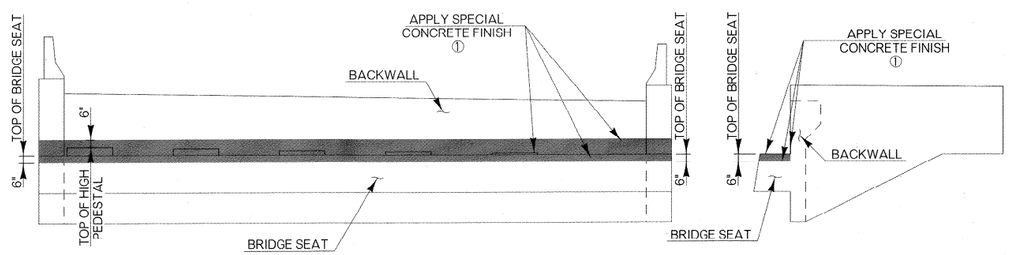
ELEVATION OF ABUTMENT NO. 1



ELEVATION OF SOUTH WING (LOOKING NORTH) AT ABUTMENT NO. 1

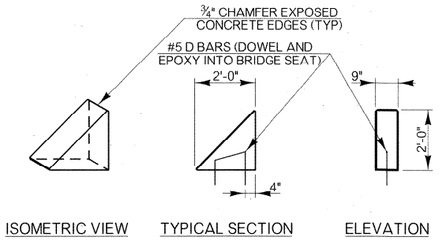


ELEVATION OF NORTH WING (LOOKING SOUTH) AT ABUTMENT NO. 1



ELEVATION OF ABUTMENT

END VIEW OF ABUTMENT



ISOMETRIC VIEW TYPICAL SECTION ELEVATION

ANGULAR ARCHITECTURE ENHANCEMENTS

COSTS INCLUDED IN "CLASS A CONCRETE" AND "REINFORCING STEEL"

SUMMARY OF QUANTITIES - ABUTMENT NO. 1		
ITEM	UNIT	TOTAL
SPECIAL CONCRETE FINISH	SY	18
CLASS A CONCRETE	CY	1
REINFORCING STEEL	LB	20
(SP) ANODE	EA	31
PREPARATION OF CRACKS, ABOVE WATER	LF	10
EPOXY RESIN, ABOVE WATER	GAL	1
(SP) TYPE C SUBSTRUCTURE REPAIR	SF	15

DETAILS OF SPECIAL CONCRETE FINISH AT ABUTMENTS

① APPLY SPECIAL CONCRETE FINISH TO THE FOLLOWING ABUTMENT SURFACES:
1. TOP OF BRIDGE SEAT AND TOP OF ALL PEDESTALS
2. SIDE EDGES AND FRONT EDGES OF ALL PEDESTALS
3. FRONT FACE OF BACKWALL AND EXPOSED ENDS OF WINGS AT BACKWALL TO A LEVEL OF 6" ABOVE HIGH PEDESTAL.
4. FRONT FACE AND SIDESOF BRIDGE SEAT TO A LEVEL OF 6" BELOW BRIDGE SEAT. WITHIN EACH PHASE OF BRIDGE CONSTRUCTION, SPECIAL CONCRETE FINISH SHALL NOT BE APPLIED UNTIL THE NEW ANCHOR BARS ARE FULLY INSTALLED IN THE BRIDGE SEATS.

LEGEND

CRACK REPAIRS

TYPE C SUBSTRUCTURE REPAIR (TO BE COMPLETED WHILE BEAMS AND BEARINGS ARE JACKED)

LICENSED PROFESSIONAL ENGINEER — AMY BACKEL — 21708 — 5/9/25 — OKLAHOMA

BRIDGE 288 - E. 46TH ST N/MINGO CRK
DETAILS OF ABUTMENT REPAIR

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

REVISION	BY	DATE

PLAN SCALE: N/A	DRAWN	HCM	11/24	APPROVED:
	DESIGNED	ANB	11/24	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	MLD	6/30/25	
	LEAD ENGR.	AB	7/1/25	
HORIZONTAL: N/A	FIELD MGR.		9/25	
VERTICAL N/A	RECOMMENDED: DESIGN MANAGER	HAS	9.25	CITY ENGINEER
FILE: 288_BRG_ABUT_01.dgn				DATE: 10/1/2025
ATLAS PAGE NO: 96,359,438,1277				SHEET 20 OF 40 SHEETS

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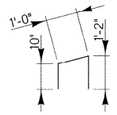
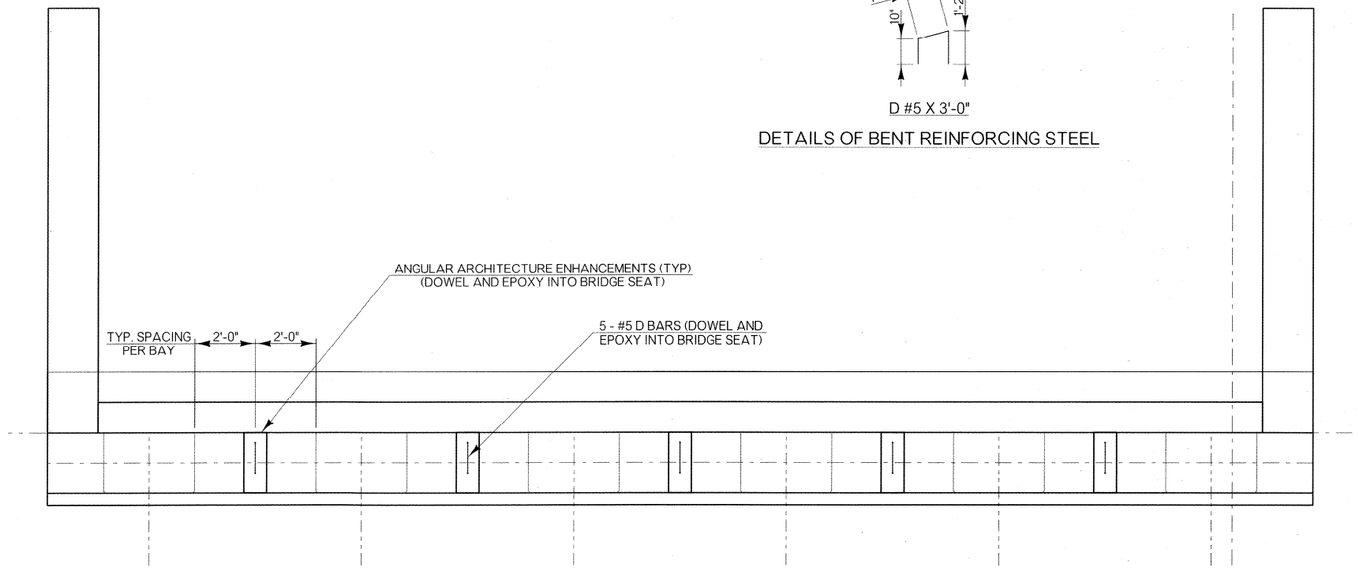


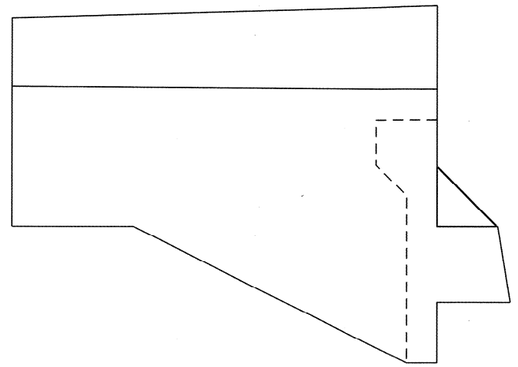
D #5 X 3'-0"

DETAILS OF BENT REINFORCING STEEL

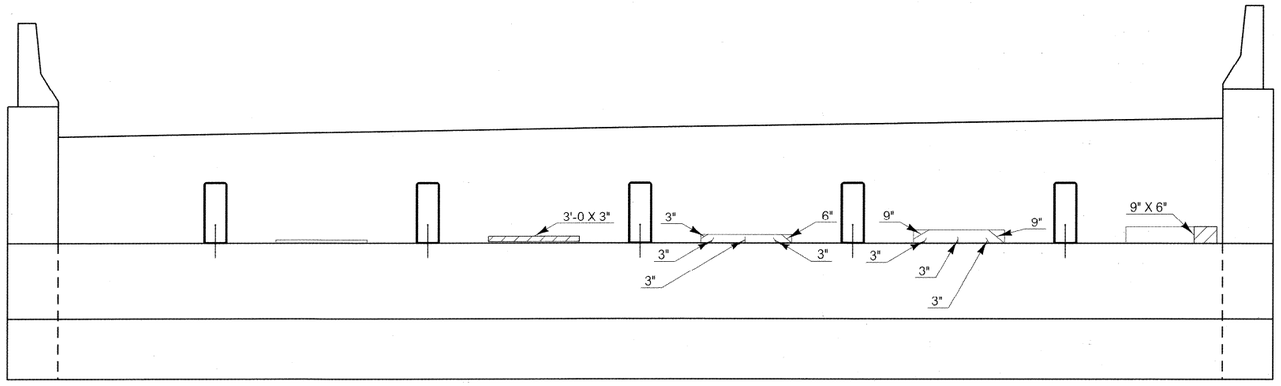
BAR LIST - ABUTMENT NO. 2				
MARK	SIZE	NO.	FORM	LENGTH
D	#5	5	BNT.	3'-0"



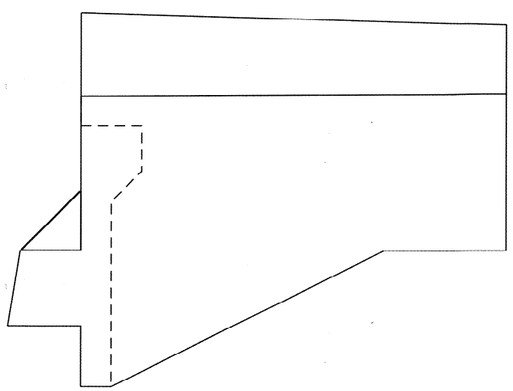
PLAN OF ABUTMENT NO. 2



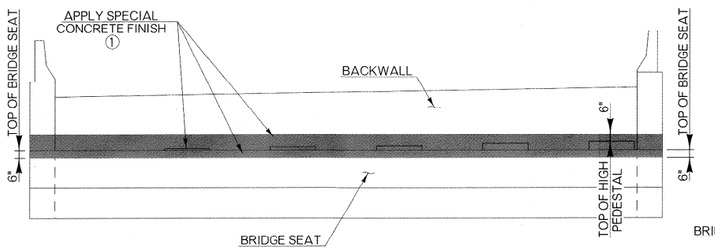
ELEVATION OF NORTH WING (LOOKING SOUTH) AT ABUTMENT NO. 2



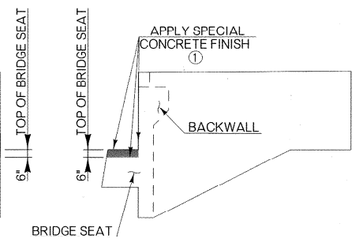
ELEVATION OF ABUTMENT NO. 2



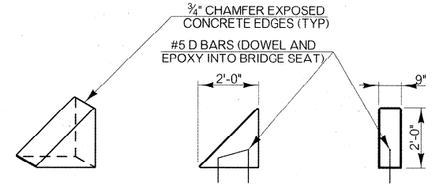
ELEVATION OF SOUTH WING (LOOKING NORTH) AT ABUTMENT NO. 2



ELEVATION OF ABUTMENT



END VIEW OF ABUTMENT



ISOMETRIC VIEW TYPICAL SECTION ELEVATION

ANGULAR ARCHITECTURE ENHANCEMENTS (TYP)

COSTS INCLUDED IN "CLASS A CONCRETE" AND "REINFORCING STEEL"

SUMMARY OF QUANTITIES - ABUTMENT NO. 2		
ITEM	UNIT	TOTAL
SPECIAL CONCRETE FINISH	SY	18
CLASS A CONCRETE	CY	1
REINFORCING STEEL	LB	20
(SP) ANODE	EA	8
PREPARATION OF CRACKS, ABOVE WATER	LF	10
EPOXY RESIN, ABOVE WATER	GAL	1
(SP) TYPE C SUBSTRUCTURE REPAIR	SF	2

DETAILS OF SPECIAL CONCRETE FINISH AT ABUTMENTS

① APPLY SPECIAL CONCRETE FINISH TO THE FOLLOWING ABUTMENT SURFACES:
1. TOP OF BRIDGE SEAT AND TOP OF ALL PEDESTALS
2. SIDE EDGES AND FRONT EDGES OF ALL PEDESTALS
3. FRONT FACE OF BACKWALL AND EXPOSED ENDS OF WINGS AT BACKWALL TO A LEVEL OF 6" ABOVE HIGH PEDESTAL.
4. FRONT FACE AND SIDESOF BRIDGE SEAT TO A LEVEL OF 6" BELOW BRIDGE SEAT. WITHIN EACH PHASE OF BRIDGE CONSTRUCTION, SPECIAL CONCRETE FINISH SHALL NOT BE APPLIED UNTIL THE NEW ANCHOR BARS ARE FULLY INSTALLED IN THE BRIDGE SEATS.

LEGEND

CRACK REPAIRS

TYPE C SUBSTRUCTURE REPAIR (TO BE COMPLETED WHILE BEAMS AND BEARINGS ARE JACKED)

LICENSED PROFESSIONAL ENGINEER
AMY BACKEL
21708
5/9/25
OKLAHOMA

REVISION	BY	DATE

BRIDGE 288 - E. 46TH ST N/MINGO CRK
DETAILS OF ABUTMENT REPAIR

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

PLAN SCALE: N/A	DRAWN	HCM	11/24	APPROVED:
	DESIGNED	ANB	11/24	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	MLD	6/20/25	
HORIZONTAL:	LEAD ENGR.	ES	7/11/25	
N/A	FIELD MGR.		9/25	
VERTICAL	RECOMMENDED	HAL	9-25	
N/A	DESIGN MANAGER			CITY ENGINEER

FILE: 288_BRG_ABUT_02.dgn DATE: 10/1/2025

ATLAS PAGE NO: 96,359,438,1277 SHEET 21 OF 40 SHEETS

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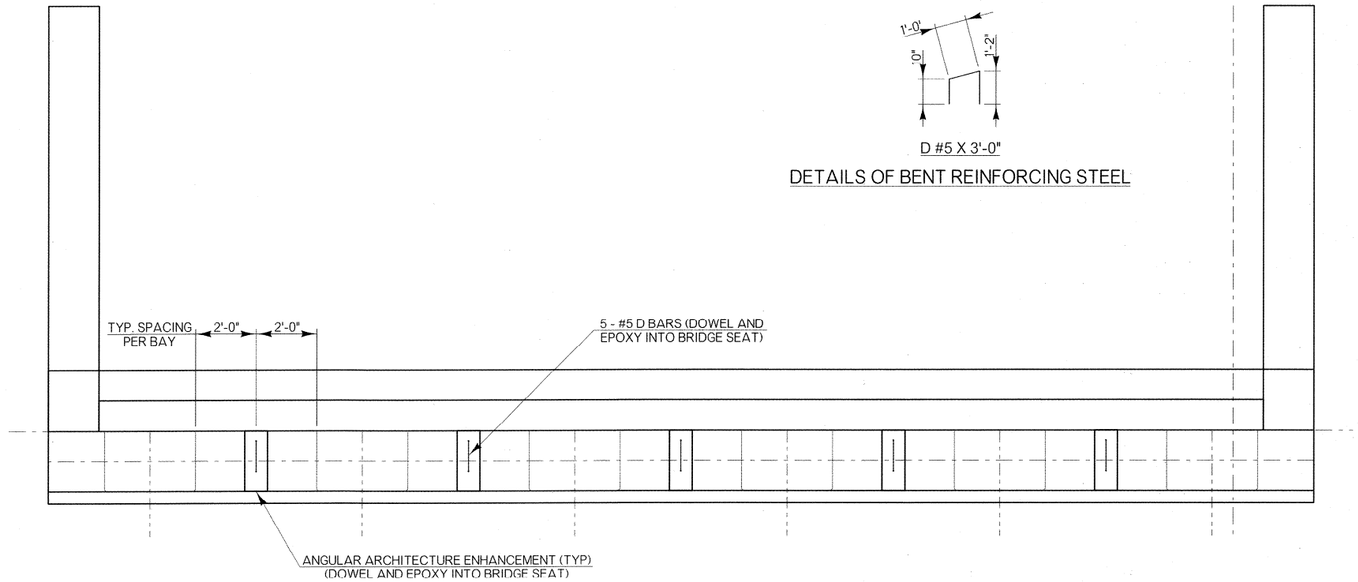
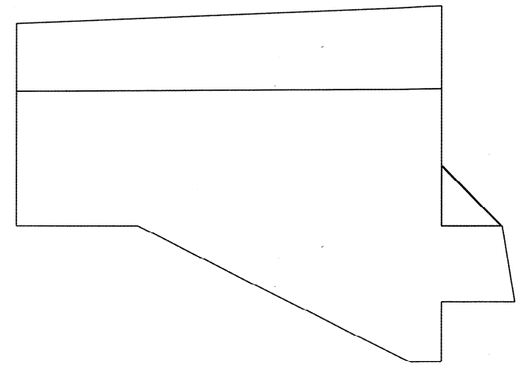
D #5 X 3'-0"

DETAILS OF BENT REINFORCING STEEL

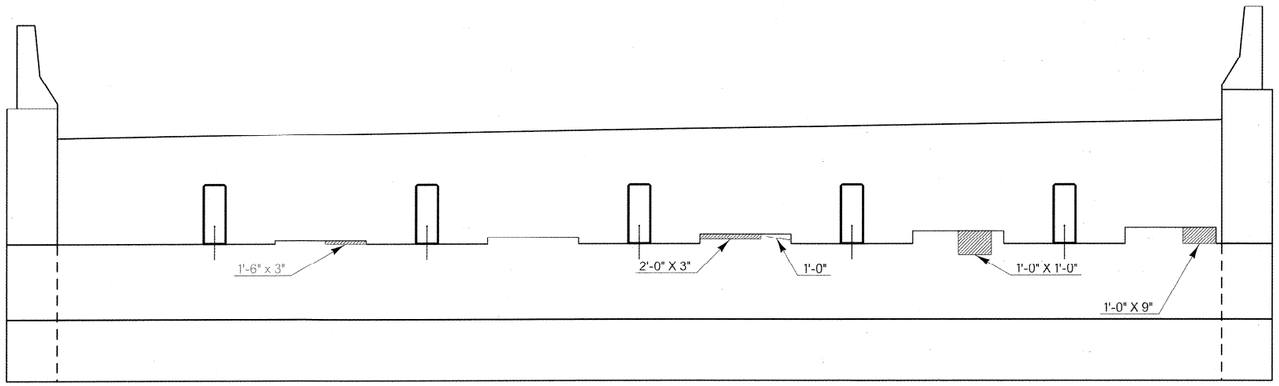
BAR LIST - ABUTMENT NO. 1				
MARK	SIZE	NO.	FORM	LENGTH
D	#5	5	BNT.	3'-0"



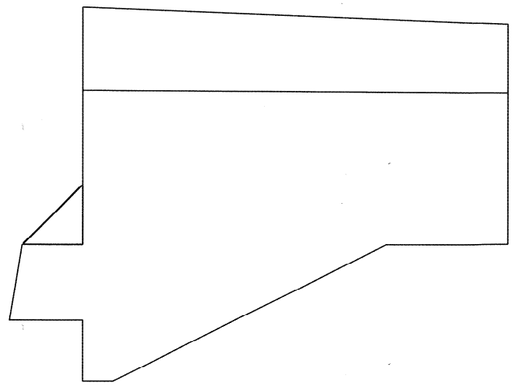
PLAN OF ABUTMENT NO. 1



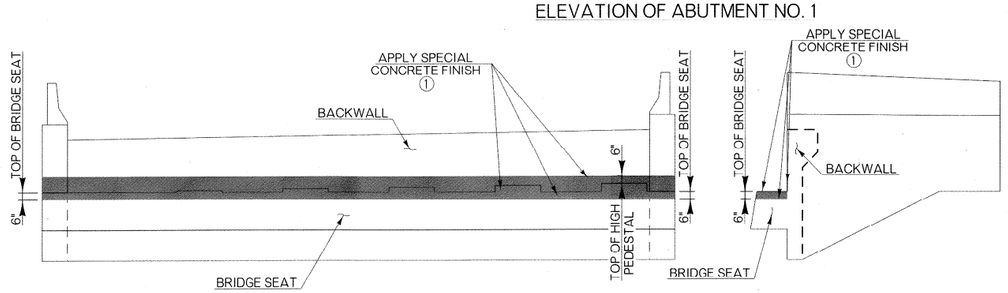
ELEVATION OF SOUTH WING (LOOKING NORTH) AT ABUTMENT NO. 1



ELEVATION OF ABUTMENT NO. 1



ELEVATION OF NORTH WING (LOOKING SOUTH) AT ABUTMENT NO. 1

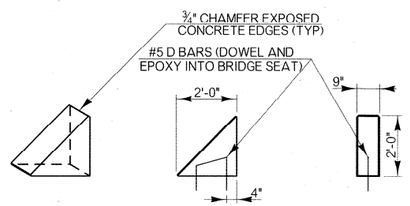


ELEVATION OF ABUTMENT

END VIEW OF ABUTMENT

DETAILS OF SPECIAL CONCRETE FINISH AT ABUTMENTS

① APPLY SPECIAL CONCRETE FINISH TO THE FOLLOWING ABUTMENT SURFACES:
1. TOP OF BRIDGE SEAT AND TOP OF ALL PEDESTALS
2. SIDE EDGES AND FRONT EDGES OF ALL PEDESTALS
3. FRONT FACE OF BACKWALL AND EXPOSED ENDS OF WINGS AT BACKWALL TO A LEVEL OF 6" ABOVE HIGH PEDESTAL.
4. FRONT FACE AND SIDESOF BRIDGE SEAT TO A LEVEL OF 6" BELOW BRIDGE SEAT. WITHIN EACH PHASE OF BRIDGE CONSTRUCTION, SPECIAL CONCRETE FINISH SHALL NOT BE APPLIED UNTIL THE NEW ANCHOR BARS ARE FULLY INSTALLED IN THE BRIDGE SEATS.



ISOMETRIC VIEW TYPICAL SECTION ELEVATION

ANGULAR ARCHITECTURE ENHANCEMENT

COST INCLUDED IN "CLASS A CONCRETE" AND "REINFORCING STEEL"

SUMMARY OF QUANTITIES - ABUTMENT NO. 1		
ITEM	UNIT	TOTAL
SPECIAL CONCRETE FINISH	SY	18
CLASS A CONCRETE	CY	1
REINFORCING STEEL	LB	20
(SP) ANODE	EA	13
PREPARATION OF CRACKS, ABOVE WATER	LF	10
EPOXY RESIN, ABOVE WATER	GAL	1
(SP) TYPE C SUBSTRUCTURE REPAIR	SF	3

LEGEND

CRACK REPAIRS

TYPE C SUBSTRUCTURE REPAIR (TO BE COMPLETED WHILE BEAMS AND BEARINGS ARE JACKED)

BRIDGE 288A - E. 46TH ST N/MINGO CRK
DETAILS OF ABUTMENT REPAIR

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

REVISION	BY	DATE

PLAN SCALE: N/A	DRAWN	HCM	11/24	APPROVED:
	DESIGNED	ANB	11/24	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	MLD	6/30/25	
	LEAD ENGR.	AB	9/4/25	
HORIZONTAL: N/A	FIELD MGR.		9/9/25	
VERTICAL N/A	RECOMMENDED: DESIGN MANAGER	HAS	9.25	CITY ENGINEER
FILE: 288A_BRG_ABUT_01.dgn				DATE: 10/1/2025
ATLAS PAGE NO: 96,359,438,1277				SHEET 22 OF 40 SHEETS

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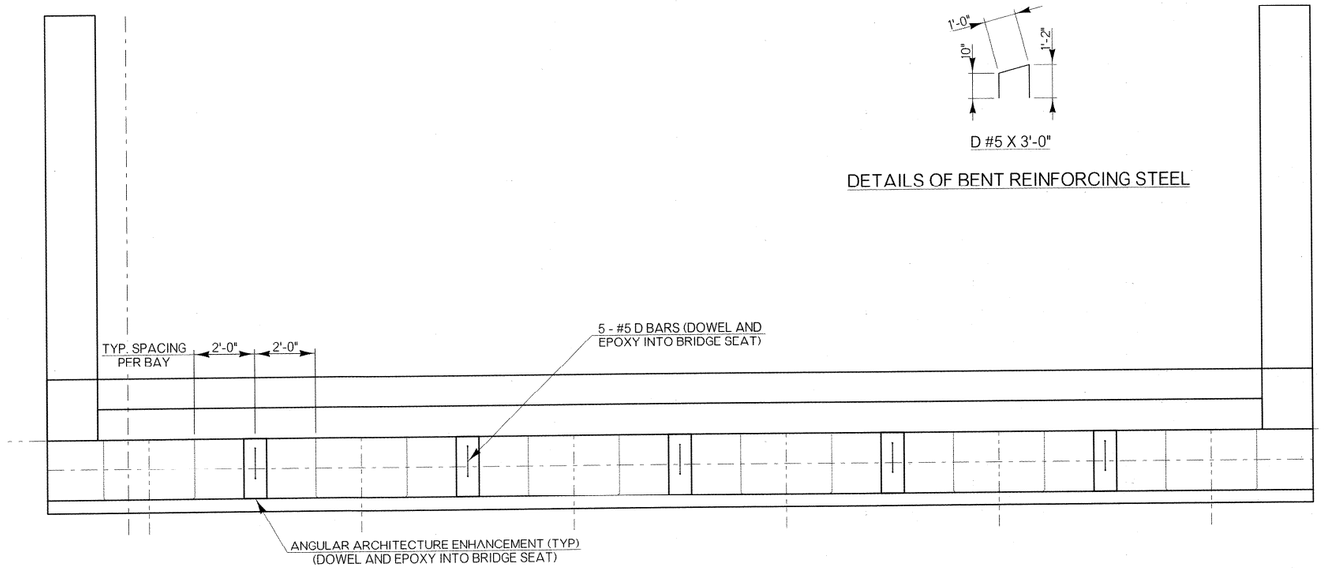
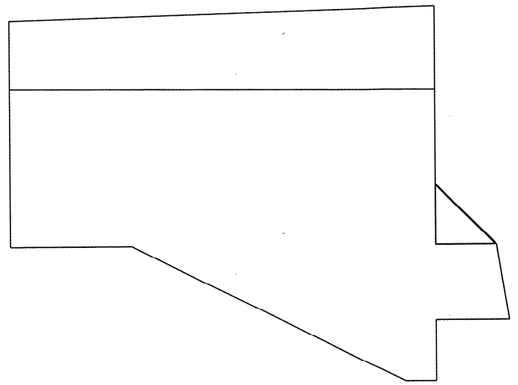


PLAN OF ABUTMENT NO. 2

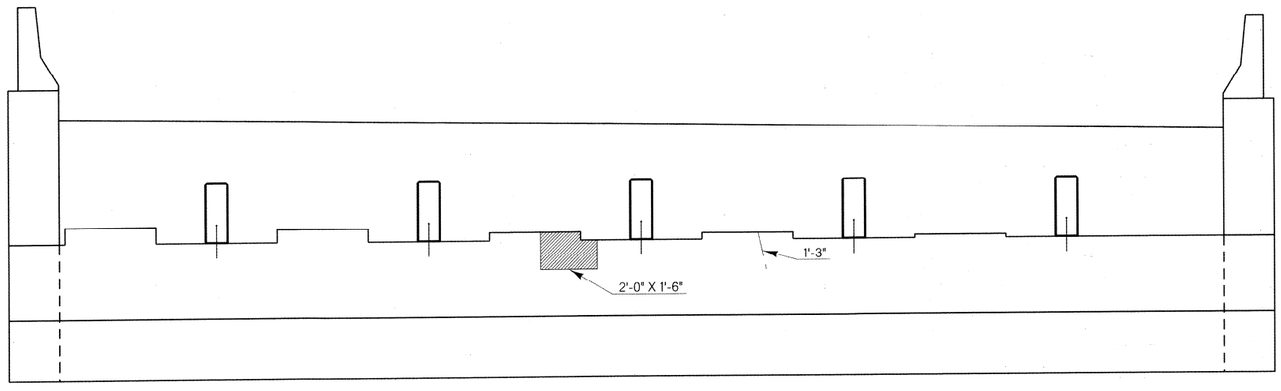
D #5 X 3'-0"

DETAILS OF BENT REINFORCING STEEL

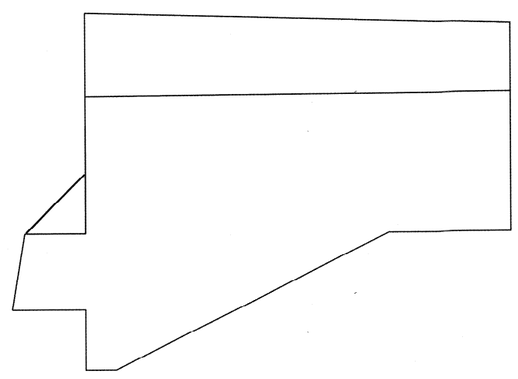
BAR LIST - ABUTMENT NO. 2				
MARK	SIZE	NO.	FORM	LENGTH
D	#5	5	BNT.	3'-0"



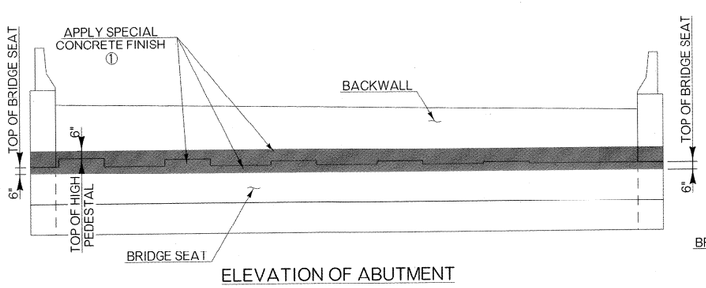
ELEVATION OF NORTH WING (LOOKING SOUTH) AT ABUTMENT NO. 2



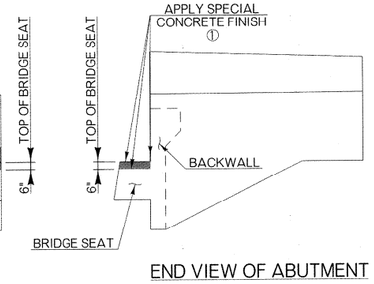
ELEVATION OF ABUTMENT NO. 2



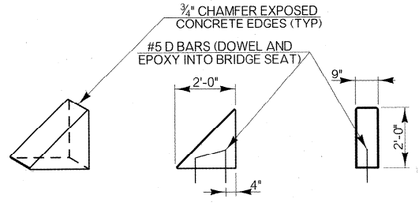
ELEVATION OF SOUTH WING (LOOKING NORTH) AT ABUTMENT NO. 2



ELEVATION OF ABUTMENT



END VIEW OF ABUTMENT



ISOMETRIC VIEW TYPICAL SECTION ELEVATION

SUMMARY OF QUANTITIES - ABUTMENT NO. 2		
ITEM	UNIT	TOTAL
SPECIAL CONCRETE FINISH	SY	18
CLASS A CONCRETE	CY	1
REINFORCING STEEL	LB	20
(SP) ANODE	EA	5
PREPARATION OF CRACKS, ABOVE WATER	LF	10
EPOXY RESIN, ABOVE WATER	GAL	1
(SP) TYPE C SUBSTRUCTURE REPAIR	SF	3

DETAILS OF SPECIAL CONCRETE FINISH AT ABUTMENTS

① APPLY SPECIAL CONCRETE FINISH TO THE FOLLOWING ABUTMENT SURFACES:
1. TOP OF BRIDGE SEAT AND TOP OF ALL PEDESTALS
2. SIDE EDGES AND FRONT EDGES OF ALL PEDESTALS
3. FRONT FACE OF BACKWALL AND EXPOSED ENDS OF WINGS AT BACKWALL TO A LEVEL OF 6" ABOVE HIGH PEDESTAL.
4. FRONT FACE AND SIDES OF BRIDGE SEAT TO A LEVEL OF 6" BELOW BRIDGE SEAT.

WITHIN EACH PHASE OF BRIDGE CONSTRUCTION, SPECIAL CONCRETE FINISH SHALL NOT BE APPLIED UNTIL THE NEW ANCHOR BARS ARE FULLY INSTALLED IN THE BRIDGE SEATS.

ANGULAR ARCHITECTURE ENHANCEMENTS

COSTS INCLUDED IN "CLASS A CONCRETE" AND "REINFORCING STEEL"

LEGEND

CRACK REPAIRS

TYPE C SUBSTRUCTURE REPAIR (TO BE COMPLETED WHILE BEAMS AND BEARINGS ARE JACKED)

AMY RACKEL 27708 5/9/25 OKLAHOMA REGISTERED PROFESSIONAL ENGINEER

REVISION	BY	DATE

BRIDGE 288A - E. 46TH ST N/MINGO CRK
DETAILS OF ABUTMENT REPAIR

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

PLAN SCALE: N/A	DRAWN	HCM	11/24	APPROVED:
	DESIGNED	ANB	11/24	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	MLD	6/20/25	
	LEAD ENGR.		9/11/25	
HORIZONTAL: N/A	FIELD MGR.		9/25	
VERTICAL N/A	RECOMMENDED DESIGN MANAGER	HAS	9.25	CITY ENGINEER
FILE: 288A_BRG_ABUT_02.dgn				DATE:
ATLAS PAGE NO: 96,359,438,1277				SHEET 23 OF 40 SHEETS

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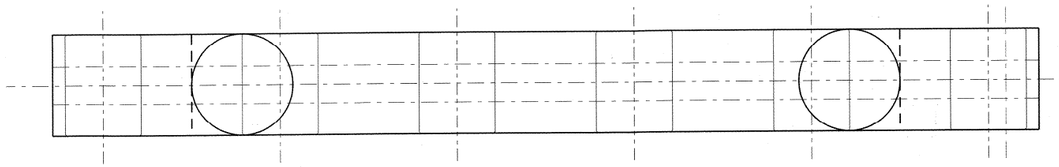
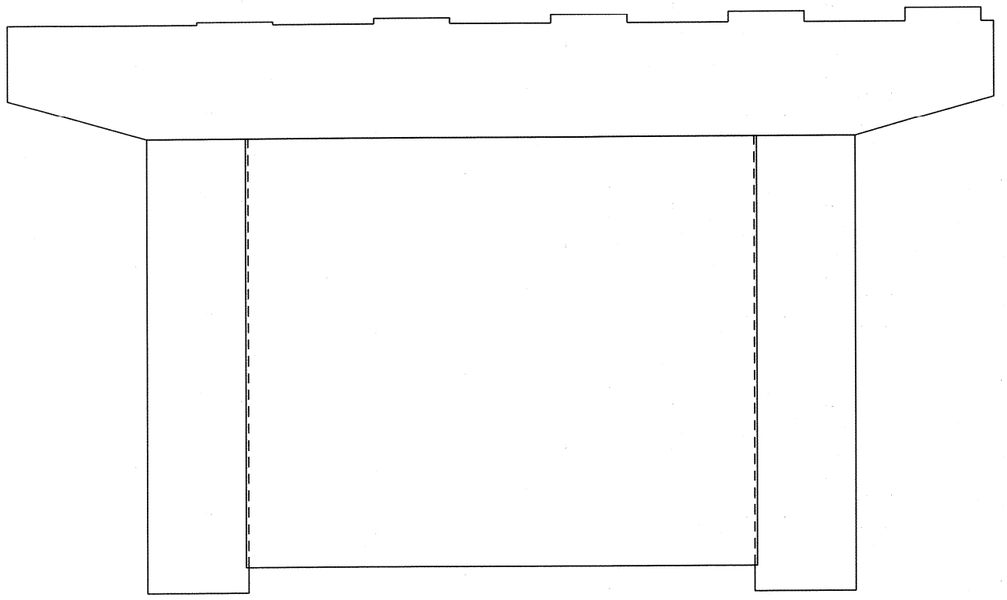
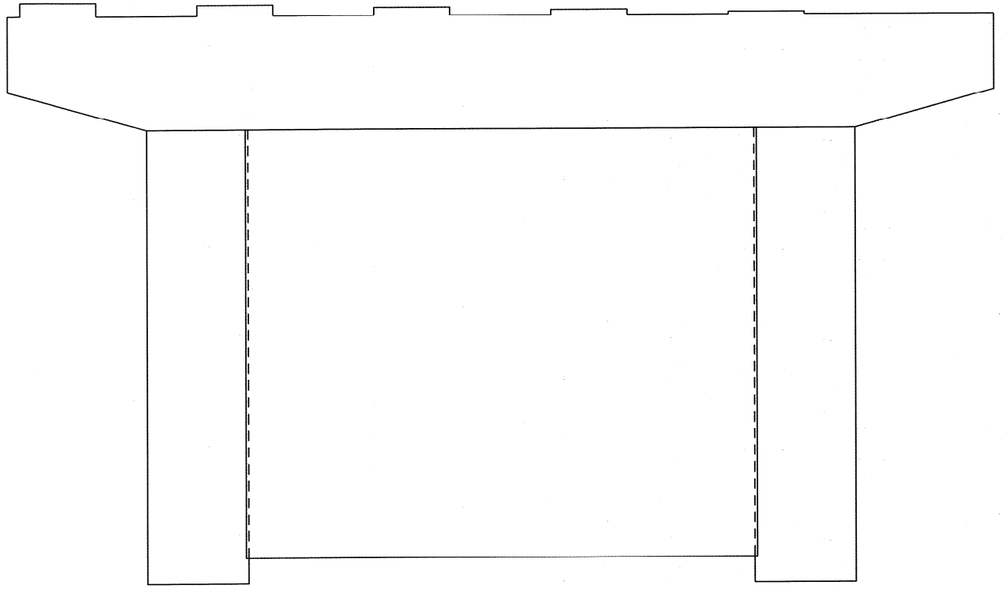


PLAN VIEW OF PIER NO. 1



PIER NO. 1 (LOOKING EAST)



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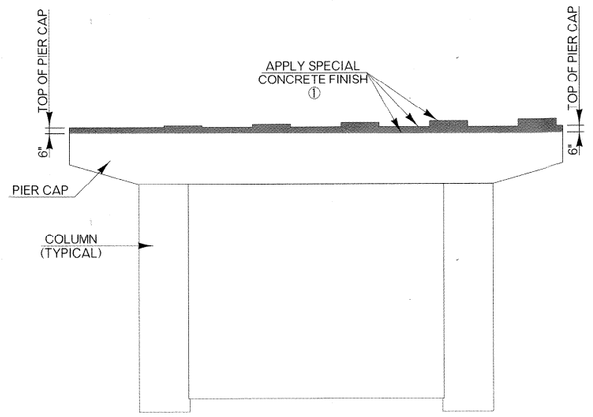
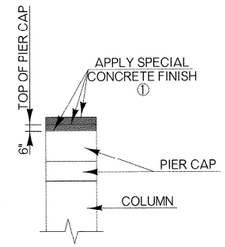


ELEVATION OF PIER CAP



END VIEW OF PIER CAP

DETAILS OF SPECIAL CONCRETE FINISH AT PIERS

① APPLY SPECIAL CONCRETE FINISH TO TOP OF PIER CAP, TOP AND EDGES OF PEDESTALS AND BOTH SIDES AND BOTH ENDS OF PIER CAP TO THE 6" DIMENSION SHOWN. WITHIN IN EACH PHASE OF BRIDGE CONSTRUCTION, SPECIAL CONCRETE FINISH SHALL NOT BE APPLIED UNTIL THE NEW ANCHOR BARS ARE FULLY INSTALLED IN THE PIER CAPS.

LEGEND

CRACK REPAIR

TYPE C SUBSTRUCTURE REPAIR (TO BE COMPLETED WHILE BEAMS AND BEARINGS ARE JACKED)

SUMMARY OF QUANTITIES - PIER NO. 1		
ITEM	UNIT	TOTAL
SPECIAL CONCRETE FINISH	SY	25
PREPARATION OF CRACKS, ABOVE WATER	LF	10
EPOXY RESIN, ABOVE WATER	GAL	1

NOTE

NO CRACK REPAIR OR SUBSTRUCTURE REPAIR NEEDS WERE IDENTIFIED AT PIER NO. 1. QUANTITIES OF "PREPARATION OF CRACKS, ABOVE WATER" AND "EPOXY RESIN, ABOVVE WATER" ARE INCLUDED TO BE USED AT LOCATIONS AS DIRECTED BY THE ENGINEER. PAYMENT WILL ONLY BE MADE FOR THE ACTUAL CRACK REPAIR QUANTITIES COMPLETED.

LICENSED PROFESSIONAL ENGINEER
AMY BACKEL
27108
5/9/25
OKLAHOMA

REVISION	BY	DATE

BRIDGE 288 - E. 46TH ST N/MINGO CRK
DETAILS OF BRIDGE REPAIR AT PIERS

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

PLAN SCALE: N/A	DRAWN	HCM	11/24	APPROVED:
	DESIGNED	ANB	11/24	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	MLD	6/30/25	
	LEAD ENGR.	BS	9/11/25	
HORIZONTAL: N/A	FIELD MGR.		9/25	
VERTICAL N/A	RECOMMENDED DESIGN MANAGER		9-25	CITY ENGINEER
FILE: 288_BRG_PIER_01.dgn				DATE: 10/1/2025
ATLAS PAGE NO: 96,359,438,1277				SHEET 24 OF 40 SHEETS

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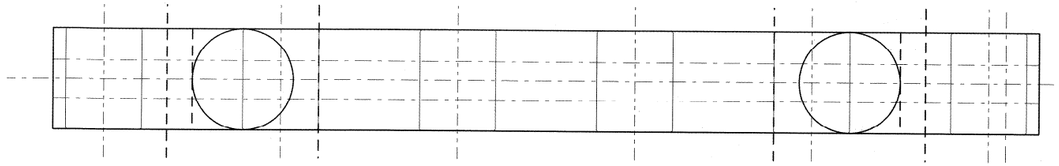
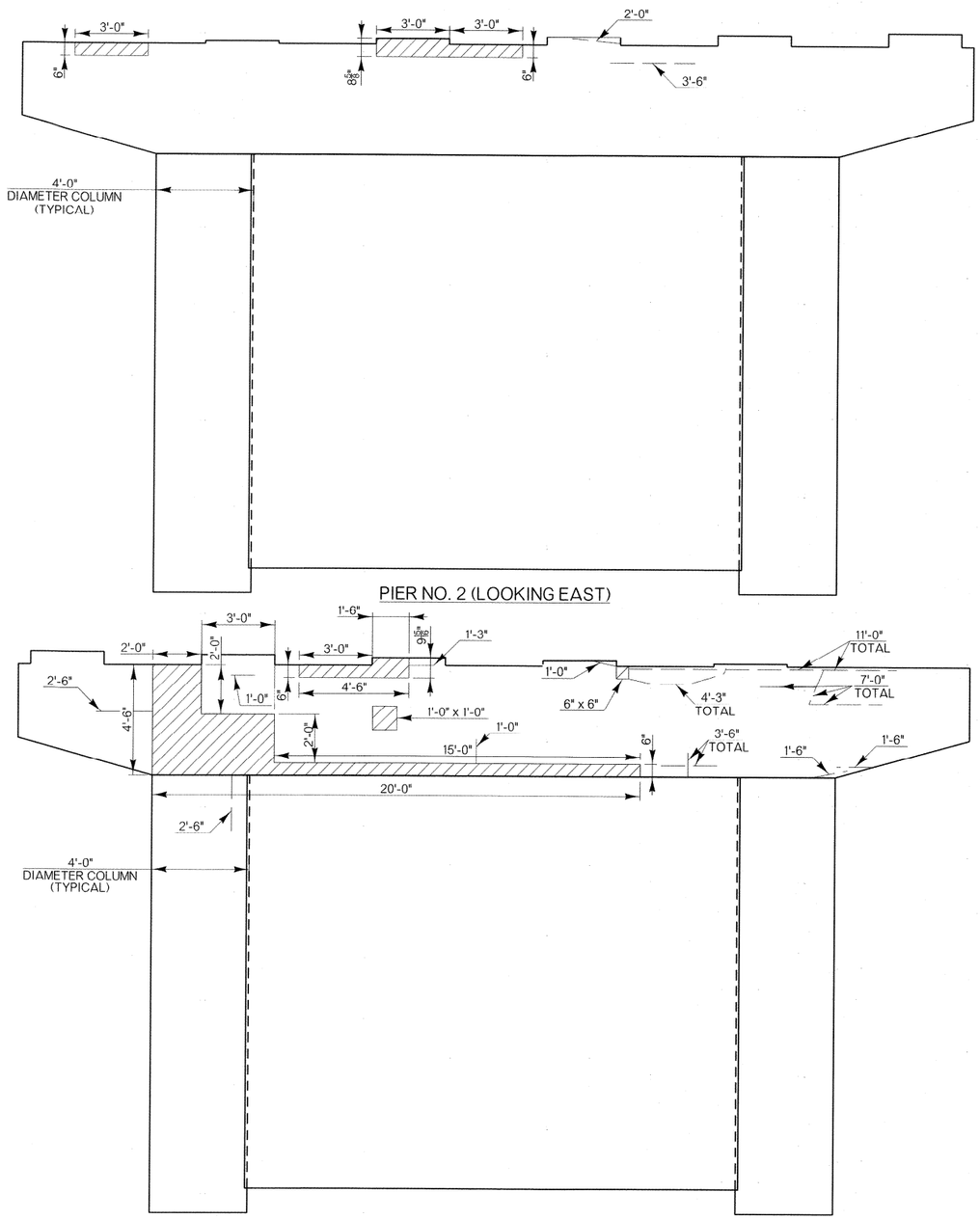
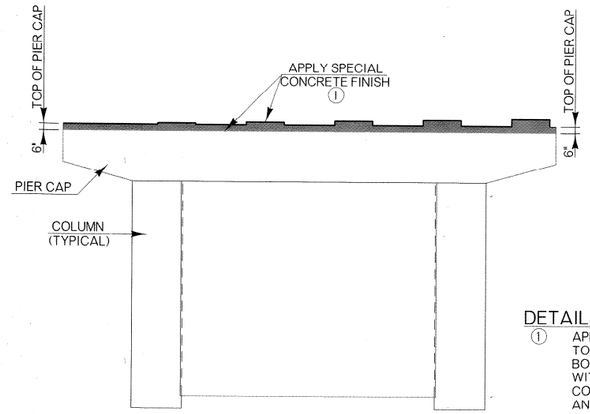


PLAN VIEW OF PIER NO. 2

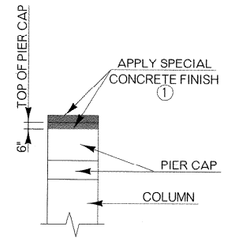


PIER NO. 2 (LOOKING EAST)

PIER NO. 2 (LOOKING WEST)



ELEVATION OF PIER CAP



END VIEW OF PIER CAP

DETAILS OF SPECIAL CONCRETE FINISH AT PIERS

(1) APPLY SPECIAL CONCRETE FINISH TO TOP OF PIER CAP, TOP AND EDGES OF PEDESTALS AND BOTH SIDES AND BOTH ENDS OF PIER CAP TO THE 6" DIMENSION SHOWN. WITHIN IN EACH PHASE OF BRIDGE CONSTRUCTION, SPECIAL CONCRETE FINISH SHALL NOT BE APPLIED UNTIL THE NEW ANCHOR BARS ARE FULLY INSTALLED IN THE PIER CAPS.

SUMMARY OF QUANTITIES - PIER NO. 2		
ITEM	UNIT	TOTAL
SPECIAL CONCRETE FINISH	SY	25
(SP) ANODE	EA	51
PREPARATION OF CRACKS, ABOVE WATER	LF	44
EPOXY RESIN, ABOVE WATER	GAL	1
(SP) TYPE C SUBSTRUCTURE REPAIR	SF	31

LEGEND

CRACK REPAIR

TYPE C SUBSTRUCTURE REPAIR (TO BE COMPLETED WHILE BEAMS AND BEARINGS ARE JACKED)

BRIDGE 288 - E. 46TH ST N/MINGO CRK
DETAILS OF BRIDGE REPAIR AT PIERS

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

REVISION	BY	DATE

PROFESSIONAL ENGINEER — AMY BARKEL — 27108 — 5/9/25 — OKLAHOMA

PLAN SCALE: N/A	DRAWN	HCM	11/24	APPROVED:
	DESIGNED	ANB	11/24	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	MLD	6/20/25	
HORIZONTAL: N/A	LEAD ENGR.	ES	7/1/25	
	FIELD MGR.		9/25	
VERTICAL N/A	RECOMMENDED DESIGN MANAGER	HAS	9.25	CITY ENGINEER
FILE: 288_BRG_PIER_02.dgn				DATE: 10/1/2025
ATLAS PAGE NO: 96,359,438,1277				SHEET 25 OF 40 SHEETS

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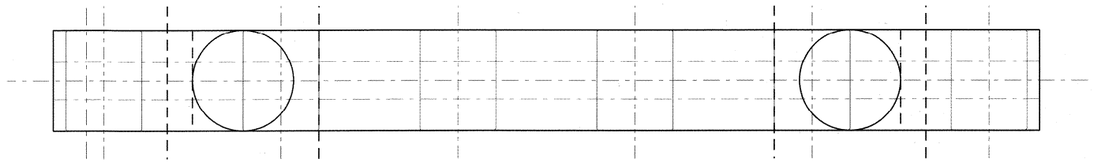
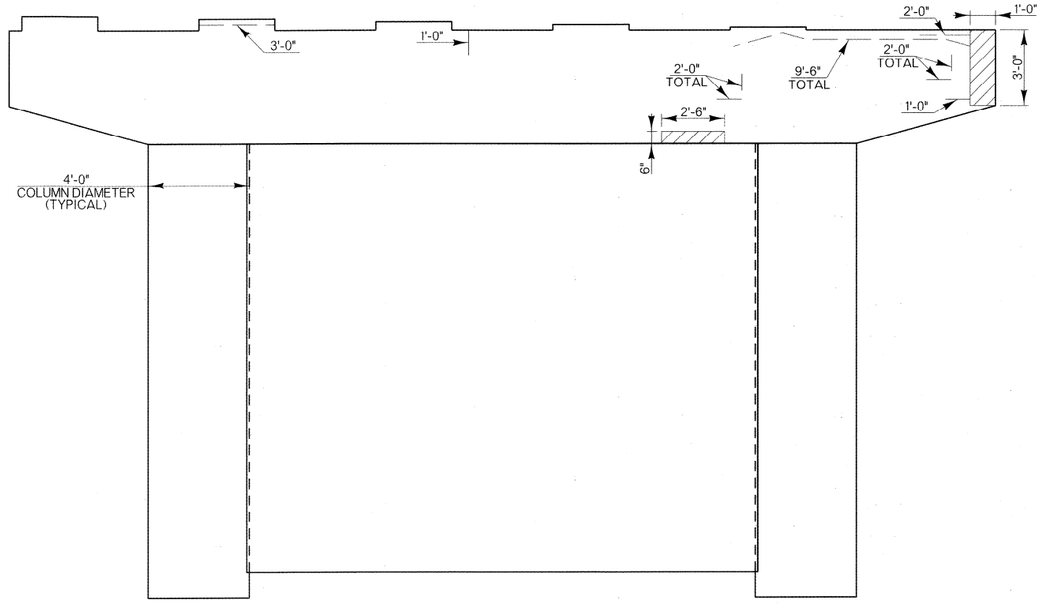
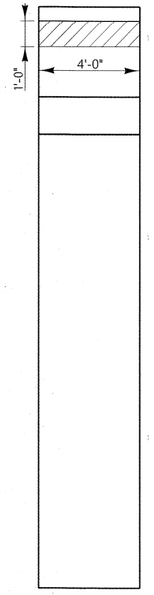


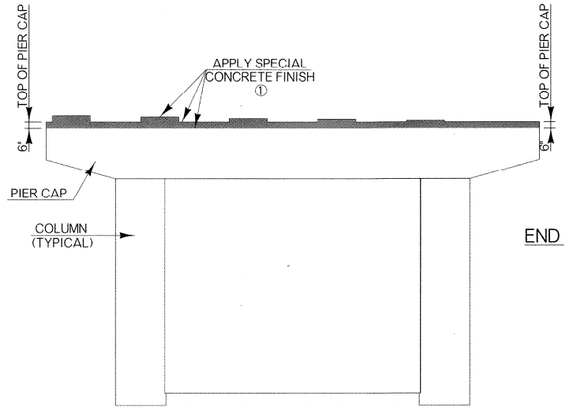
PLAN VIEW OF PIER NO. 1



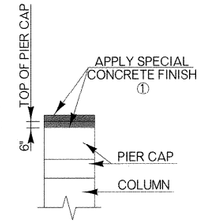
PIER NO. 1 (LOOKING EAST)



SOUTH END OF PIER NO. 1



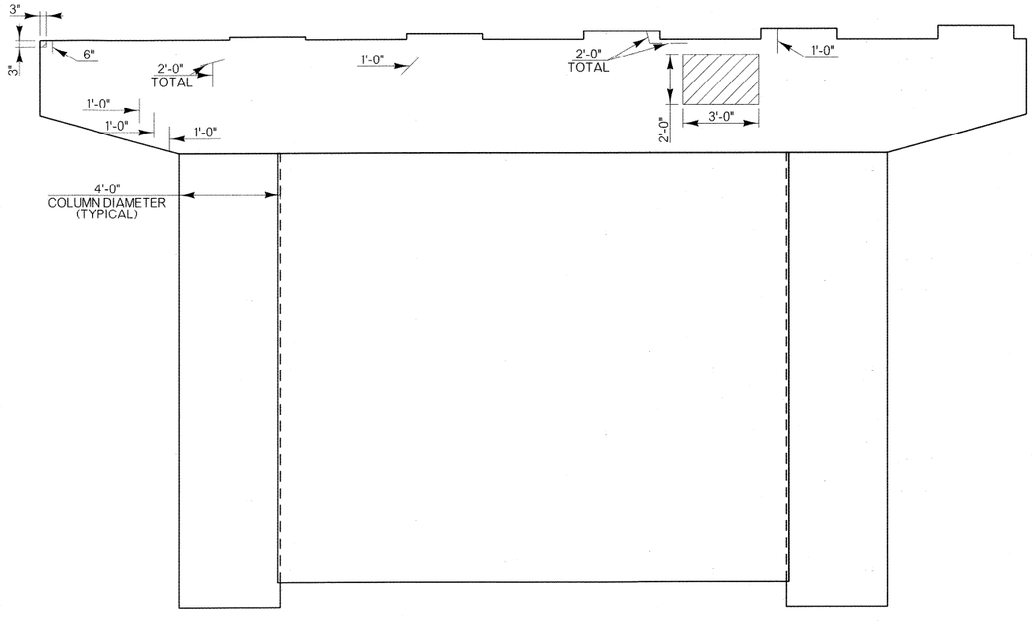
ELEVATION OF PIER CAP



END VIEW OF PIER CAP

DETAILS OF SPECIAL CONCRETE FINISH AT PIERS

① APPLY SPECIAL CONCRETE FINISH TO TOP OF PIER CAP, TOP AND EDGES OF PEDESTALS AND BOTH SIDES AND BOTH ENDS OF PIER CAP TO THE 6" DIMENSION SHOWN. WITHIN IN EACH PHASE OF BRIDGE CONSTRUCTION, SPECIAL CONCRETE FINISH SHALL NOT BE APPLIED UNTIL THE NEW ANCHOR BARS ARE FULLY INSTALLED IN THE PIER CAPS.



PIER NO. 1 (LOOKING WEST)

SUMMARY OF QUANTITIES - PIER NO. 1		
ITEM	UNIT	TOTAL
SPECIAL CONCRETE FINISH	SY	25
(SP) ANODE	EA	21
PREPARATION OF CRACKS, ABOVE WATER	LF	30
EPOXY RESIN, ABOVE WATER	GAL	1
(SP) TYPE C SUBSTRUCTURE REPAIR	SF	15

LEGEND

CRACK REPAIR

TYPE C SUBSTRUCTURE REPAIR (TO BE COMPLETED WHILE BEAMS AND BEARINGS ARE JACKED)

LICENSED PROFESSIONAL ENGINEER
AMY BACKEL
27708
5/9/25
OKLAHOMA

REVISION	BY	DATE

BRIDGE 288A - E. 46TH ST N/MINGO CRK
DETAILS OF BRIDGE REPAIR AT PIERS

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

PLAN SCALE: N/A	DRAWN	HCM	11/24	APPROVED:
	DESIGNED	ANB	11/24	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	MLD	6/30/25	
HORIZONTAL:	LEAD ENGR.		9/1/25	
N/A	FIELD MGR.		9/14	
VERTICAL	RECOMMENDED:			
N/A	DESIGN MANAGER			CITY ENGINEER
FILE: 288A_BRG_PIER_01.dgn				DATE: 10/1/2025
ATLAS PAGE NO: 96,359,438,1277				SHEET 26 OF 40 SHEETS

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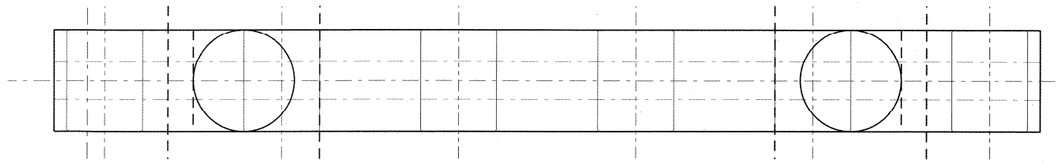
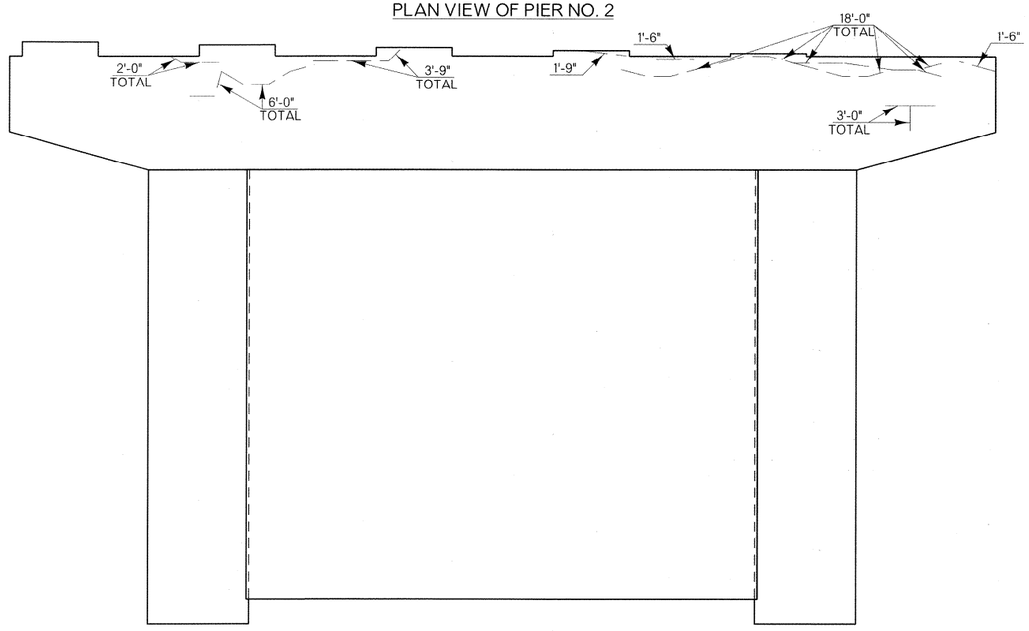
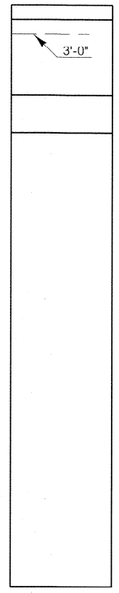


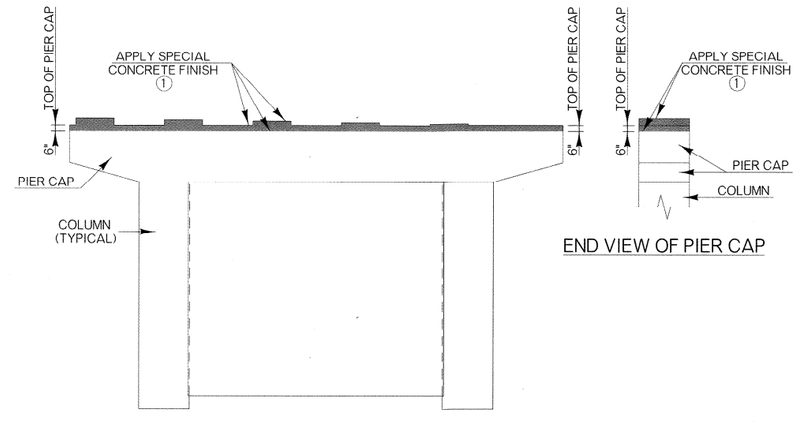
PLAN VIEW OF PIER NO. 2



PIER NO. 2 (LOOKING EAST)

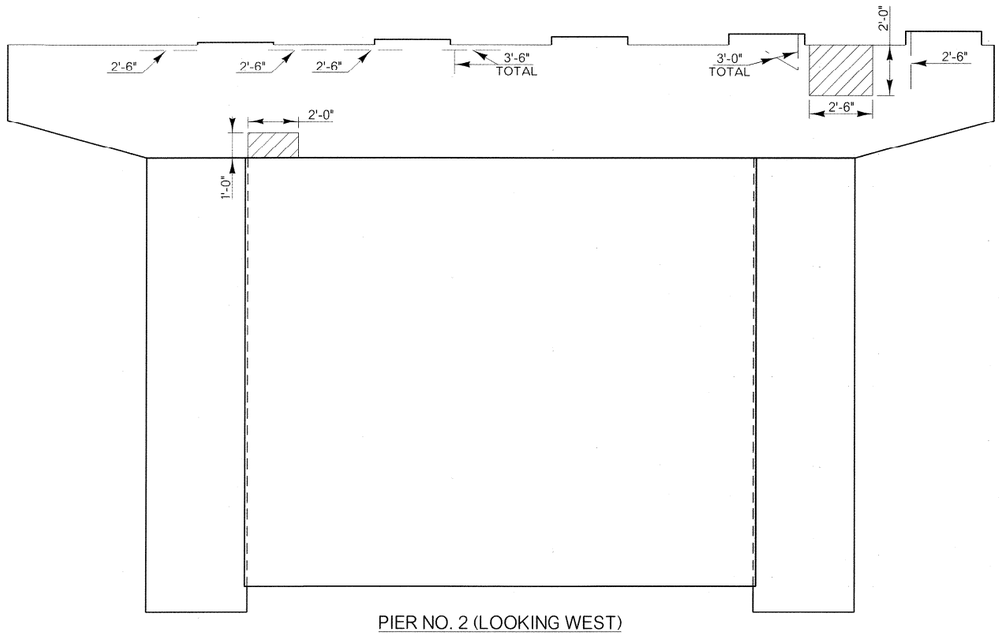


SOUTH END OF PIER NO. 2



END VIEW OF PIER CAP

ELEVATION OF PIER CAP



PIER NO. 2 (LOOKING WEST)

DETAILS OF SPECIAL CONCRTE FINISH AT PIERS

① APPLY SPECIAL CONCRETE FINISH TO TOP OF PIER CAP, TOP AND EDGES OF PEDESTALS AND BOTH SIDES AND BOTH ENDS OF PIER CAP TO THE 6" DIMENSION SHOWN. WITHIN IN EACH PHASE OF BRIDGE CONSTRUCTION, SPECIAL CONCRETE FINISH SHALL NOT BE APPLIED UNTIL THE NEW ANCHOR BARS ARE FULLY INSTALLED IN THE PIER CAPS.

SUMMARY OF QUANTITIES - PIER NO. 2		
ITEM	UNIT	TOTAL
SPECIAL CONCRETE FINISH	SY	25
(SP) ANODE	EA	10
PREPARATION OF CRACKS, ABOVE WATER	LF	57
EPOXY RESIN, ABOVE WATER	GAL	1
(SP) TYPE C SUBSTRUCTURE REPAIR	SF	7

LEGEND

CRACK REPAIR

TYPE C SUBSTRUCTURE REPAIR (TO BE COMPLETED WHILE BEAMS AND BEARINGS ARE JACKED)

BRIDGE 288A - E. 46TH ST N/MINGO CRK
DETAILS OF BRIDGE REPAIR AT PIERS

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

REVISION	BY	DATE

LICENSED PROFESSIONAL ENGINEER
AMY BACKEL
27708
5/9/25
OKLAHOMA

PLAN SCALE: N/A	DRAWN	HCM	11/24	APPROVED:
	DESIGNED	ANB	11/24	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	MLD	6/30/25	
HORIZONTAL: N/A	LEAD ENGR.	BS	9/11/25	
	FIELD MGR.		9/25	
VERTICAL N/A	RECOMMENDED:		9-25	CITY ENGINEER
	DESIGN MANAGER			
FILE: 288A_BRG_PIER_02.dgn				DATE 10/1/2025
ATLAS PAGE NO: 96,359,438,1277				SHEET 27 OF 40 SHEETS

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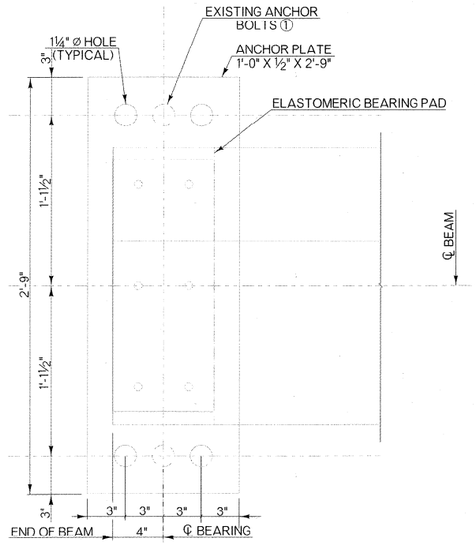
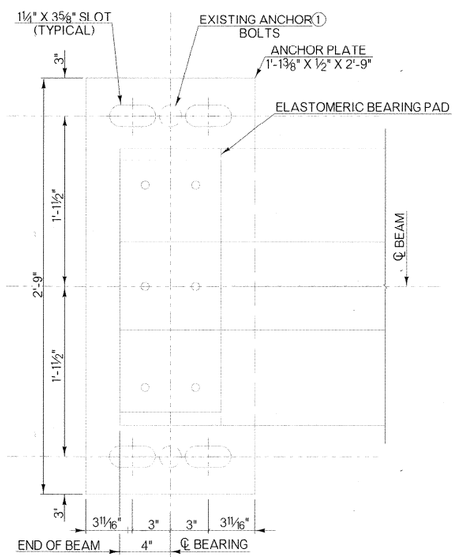
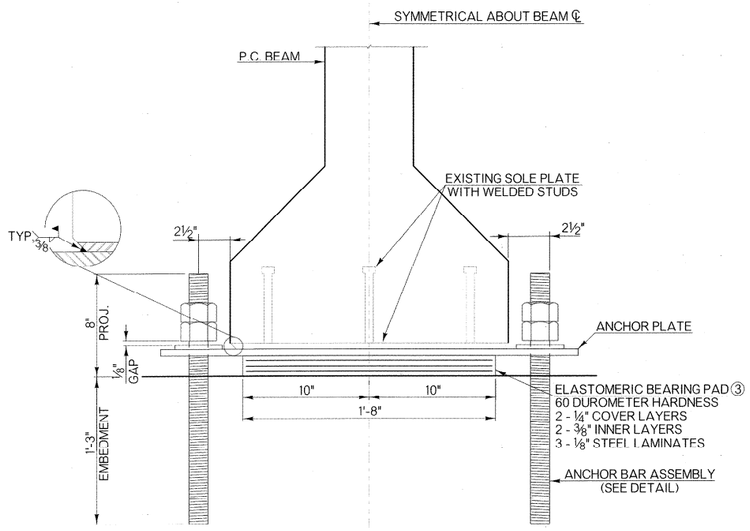


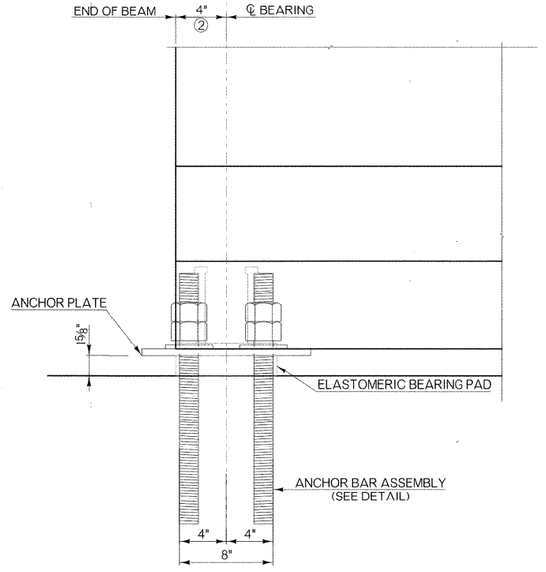
PLAN OF FIXED BEARING
ANCHOR BAR ASSEMBLIES NOT SHOWN



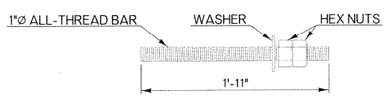
PLAN OF EXPANSION BEARING
ANCHOR BAR ASSEMBLIES NOT SHOWN



END VIEW



SIDE VIEW



DETAIL OF ANCHOR BAR ASSEMBLY

NOTES:

PROVIDE STRUCTURAL STEEL FOR ANCHOR PLATES 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, REPSECTIVELY. PERFORM ALL WELDING CONSISTENT WITH PROCEDURES FOR STAINLESS STEEL.

DETAILS OF STAINLESS STEEL BEARING ASSEMBLY

① CUT EXISTING ANCHOR BOLTS FLUSH WITH TOP OF CONCRETE AND PAINT EXPOSED ENDS OF ANCHOR BOLTS WITH TWO (2) COATS OF ZINC RICH PAINT. COST OF PAINTING ENDS OF EXISTING ANCHOR BOLTS SHALL BE INCLUDED IN OTHER ITEMS OF WORK.

② CENTER ANCHOR BAR ASSEMBLIES IN SLOTS DURING SETTING. DIMENSION MAY VARY DEPENDING ON TEMPERATURE AT THE TIME OF SETTING.

③ EXISTING ELASTOMERIC BEARING PADS ARE 1½" IN TOTAL HEIGHT. PROPOSED ELASTOMERIC BEARING PADS ARE 15⁄16" IN TOTAL HEIGHT. GRINDING OF THE EXISTING PEDESTALS UNDER THE PROPOSED PAD DIMENSIONS FOR ⅛" DEPTH WILL BE REQUIRED PRIOR TO INSTALLATION OF THE NEW ELASTOMERIC PADS. COSTS OF GRINDING TO BE INCLUDED IN OTHER ITEMS OF WORK.

REVISION	BY	DATE

BRIDGES 288 & 288A - E. 46TH ST N/MINGO CRK
DETAILS OF BEARING ASSEMBLIES

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

PLAN SCALE: N/A	DRAWN	HCM	11/24	APPROVED:
	DESIGNED	ANB	11/24	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	MLD	6/30/25	
HORIZONTAL: N/A	LEAD ENGR.	ES	9/11/23	
	FIELD MGR.	DWL	9/25	
VERTICAL N/A	RECOMMENDED: DESIGN MANAGER	MLS	9·25	CITY ENGINEER

FILE: 288+288A_BRG_BEARING.dgn
ATLAS PAGE NO: 96,359,438,1277
DATE: 10/1/2025
SHEET 28 OF 40 SHEETS

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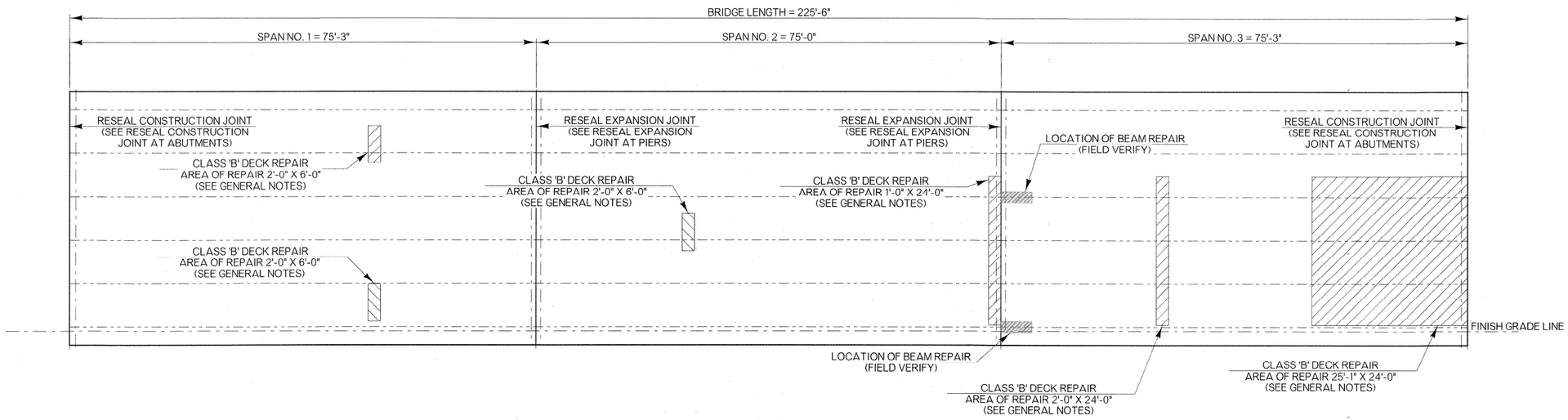
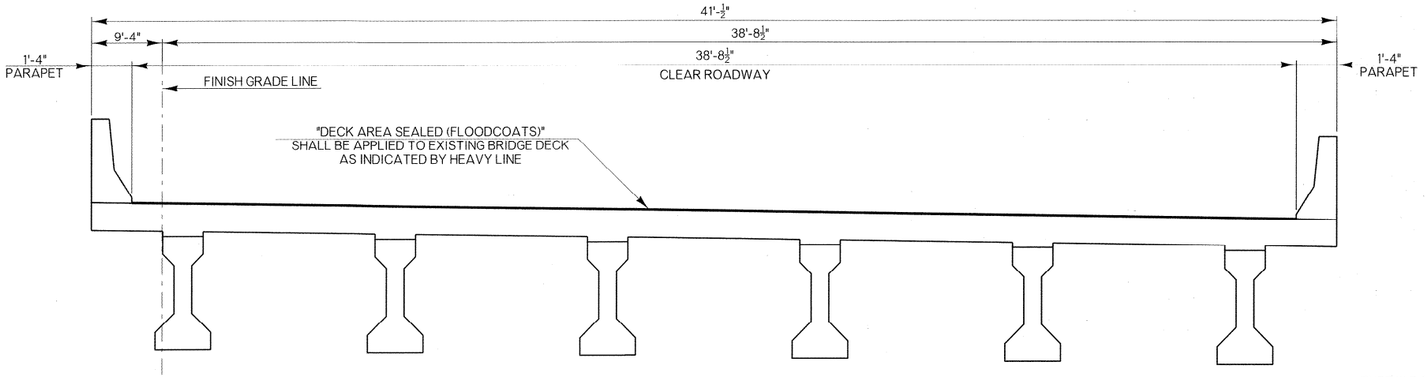


PLAN



TYPICAL SECTION

SUMMARY OF QUANTITIES - SUPERSTRUCTURE			
ITEM	UNIT	SUPERSTRUCTURE	TOTAL
FALSEWORK AND JACKING	LSUM	1	1
STAINLESS STEEL FIXED BEARING ASSEMBLY	EA	18	18
STAINLESS STEEL EXP. BEARING ASSEMBLY	EA	18	18
CLASS B BRIDGE DECK REPAIR	SY	79	79
CLASS C BRIDGE DECK REPAIR	SY	10	10
(SP) ANODE	EA	132	132
RAPID CURE JOINT SEALANT	LF	83	83
PREFORMED SILICONE FOAM JOINTS	LF	83	83
DECK AREA SEALED (FLOODCOATS)	SY	1,029	1,029
(SP) CARBON FIBER-REINFORCED POLYMER	SF	156	156

BEAM REPAIR NOTES

SEQUENCE OF P.C. BEAM REPAIRS

1. REMOVE UNSOUNDS CONCRETE WITH HAND TOOLS. NO POWER-DRIVEN HAND TOOLS WILL BE ALLOWED. CARE SHALL BE TAKEN TO NOT DAMAGE EXISTING STEEL TO REMAIN IN PLACE.
2. APPLY CORROSION INHIBITOR TO AREAS TO BE ENCASED WITH CARBON FIBER-REINFORCED POLYMER COMPOSITE WRAP IN ACCORDANCE WITH SECTION 535 OF THE STANDARD SPECIFICATIONS, UNLESS OTHERWISE RECOMMENDED BY THE MANUFACTURER. APPLY CORROSION INHIBTOR DIRECTLY TO AREAS OF SPALLED CONCRETE AND WHERE UNSOUND CONCRETE WAS REMOVED.
3. PATCH AREAS OF SPALLED CONCRETE AND WHERE UNSOUND CONCRETE WAS REMOVED WITH PNEUMATICALLY PLACED MORTAR IN ACCORDANCE WITH SECTION 521 OF THE STANDARD SPECIFICATIONS. PATCHED AREAS SHALL BE RESTORED TO MATCH EXISTING DIMENSIONS.
4. EPOXY INJECT ALL CRACKS IN THE CONCRETE SURFACE, WITHIN AREAS TO BE WRAPPED, WIDER THAN 0.01 INCHES IN ACCORDANCE WITH SECTION 520 OF THE STANDARD SPECIFICATIONS.
5. APPLY TWO (2) OVERLAPPING LAYERS OF CARBON FIBER-REINFORCED POLYMER COMPOSITE WRAP IN ACCORDANCE WITH SPECIAL PROVISION 524-3 "FIBER-REINFORCED POLYMER MATERIAL". THE INTERIOR FIBER TO BE ORIENTED HORIZONTALLY. THE EXTERIOR FIBER LAYER TO BE ORIENTED VERTICALLY.

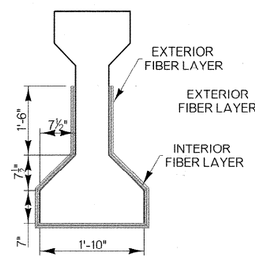
CARBON FIBER-REINFORCED POLYMER COMPOSITE SHALL BE OMITTED AT BEAM SOLE PLATE.

LOCATIONS AND FINAL EXTENTS OF THE BEAM REPAIRS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.

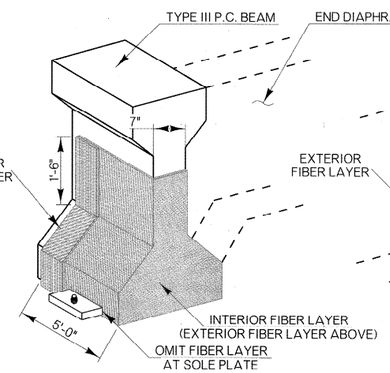
ALL COSTS FOR REMOVING CONCRETE AND APPLICATION OF PNEUMATICALLY PLACED MORTAR INCLUDING MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE YARD OF "PNEUMATICALLY PLACED MORTAR."

ALL COSTS FOR APPLYING CORROSION INHIBTOR INCLUDING MATERAILS, LABOR, EQUIPMENT AND INCIDENTALS SHALL BE INCLUDED IN THE UNIT PRICE PER SQUARE YARD OF "CORROSION INHIBITOR (SURFACE APPLIED)."

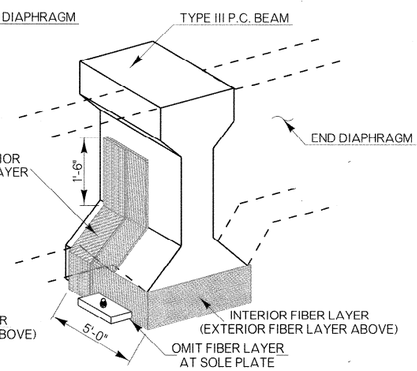
ALL COST ASSOCIATED WITH APPLYING CARBON FIBER-REINFORCED POLYMER, INCLUDING MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE OF "(SP) CARBON FIBER-REINFORCED POLYMER".



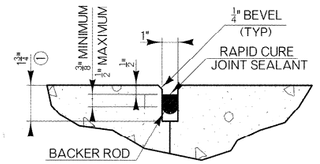
SECTION THRU BEAM REPAIR
(TYPE III BEAMS)



VIEW OF BEAM END WRAPPING
(EXTERIOR BEAM)

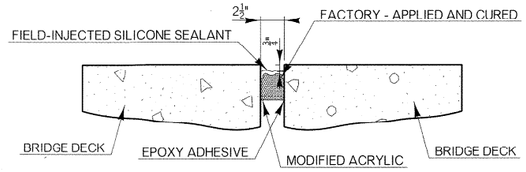


VIEW OF BEAM END WRAPPING
(INTERIOR BEAM)



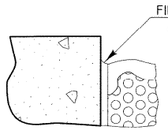
RESEAL CONSTRUCTION JOINT AT ABUTMENTS

① SAW TO THE DEPTH SHOWN TO PROVIDE CLEAN, STRAIGHT SURFACES.



RESEAL EXPANSION JOINT AT PIERS

NOTE: THE JOINT OPENING SIZES MAY VARY AND THE CONTRACTOR SHOULD MEASURE THE OPENINGS AND USE THE SIZE OF MATERIAL APPROPRIATE.



DETAIL 'A'

LEGEND

CLASS B DECK REPAIR

CFRP WRAP

BRIDGE 288 - E. 46TH ST N/MINGO CRK
DETAILS OF SUPERSTRUCTURE REPAIR

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

REVISION	BY	DATE

AMY BACKEL 21708 5/9/25 LICENSED PROFESSIONAL ENGINEER OKLAHOMA

PLAN SCALE: N/A
PROFILE SCALE: N/A
HORIZONTAL: N/A
VERTICAL N/A

DRAWN	HCM	11/24
DESIGNED	ANB	11/24
SURVEY		
PROJ. MGR.	MLD	6/30/25
LEAD ENGR.	BS	9/11/25
FIELD MGR.		9/24
RECOMMENDED DESIGN MANAGER	MLD	9-25

APPROVED:
CITY ENGINEER
DATE 10/1/2025

FILE: 288_BRG_DECK_01.dgn
ATLAS PAGE NO: 96,359,438,1277
SHEET 29 OF 40 SHEETS

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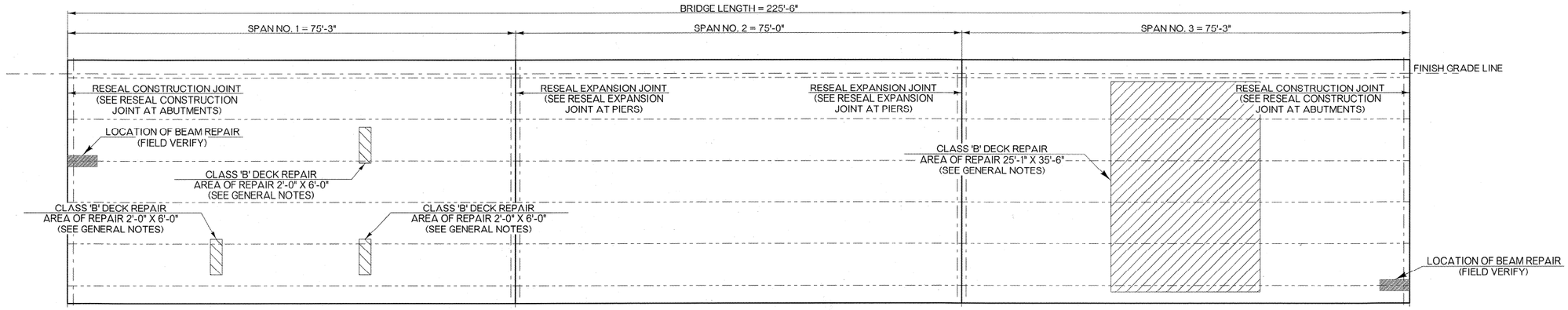
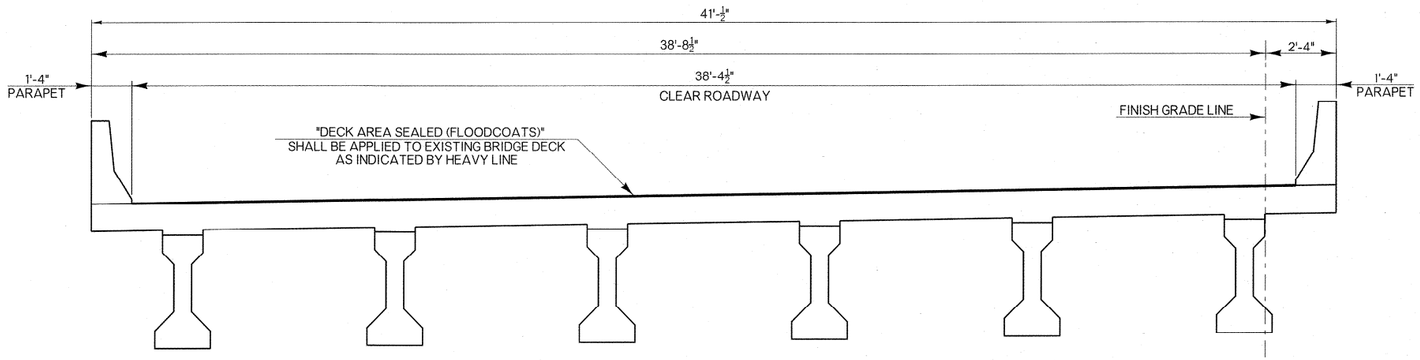


PLAN



TYPICAL SECTION

SUMMARY OF QUANTITIES - SUPERSTRUCTURE			
ITEM	UNIT	SUPERSTRUCTURE	TOTAL
FALSEWORK AND JACKING	LSUM	1	1
STAINLESS STEEL FIXED BEARING ASSEMBLY	EA	18	18
STAINLESS STEEL EXP. BEARING ASSEMBLY	EA	18	18
CLASS B BRIDGE DECK REPAIR	SY	103	103
CLASS C BRIDGE DECK REPAIR	SY	10	10
(SP) ANODE	EA	89	89
RAPID CURE JOINT SEALANT	LF	83	83
PREFORMED SILICONE FOAM JOINTS	LF	83	83
DECK AREA SEALED (FLOODCOATS)	SY	1,029	1,029
(SP) CARBON FIBER-REINFORCED POLYMER	SF	156	156

BEAM REPAIR NOTES

SEQUENCE OF P.C. BEAM REPAIRS

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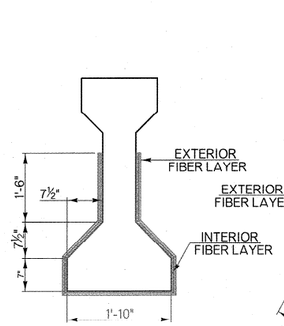
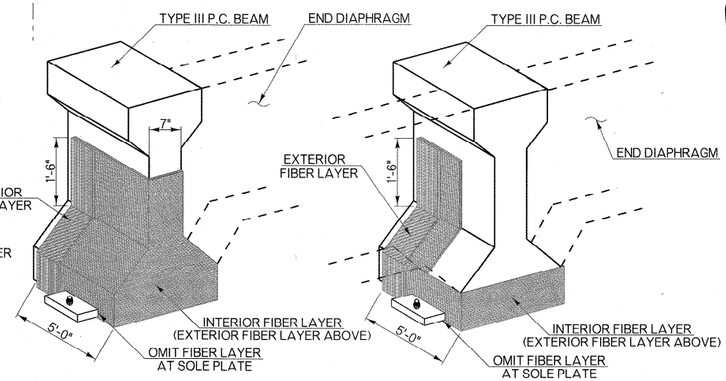


SECTION THRU BEAM REPAIR
(TYPE III BEAMS)



VIEW OF BEAM END WRAPPING
(EXTERIOR BEAM)

VIEW OF BEAM END WRAPPING
(INTERIOR BEAM)

ALL COSTS FOR REMOVING CONCRETE AND APPLICATION OF PNEUMATICALLY PLACED MORTAR INCLUDING MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE YARD OF "PNEUMATICALLY PLACED MORTAR."

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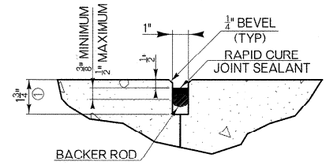
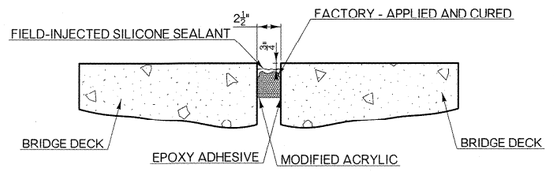


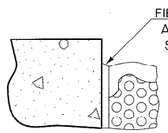
RESEAL CONSTRUCTION JOINT
AT ABUTMENTS

① SAW TO THE DEPTH SHOWN TO PROVIDE CLEAN, STRAIGHT SURFACES.



RESEAL EXPANSION JOINT
AT PIERS

NOTE: THE JOINT OPENING SIZES MAY VARY AND THE CONTRACTOR SHOULD MEASURE THE OPENINGS AND USE THE SIZE OF MATERIAL APPROPRIATE.



DETAIL 'A'

LEGEND

CLASS B DECK REPAIR

CFRP WRAP

BRIDGE 288A - E. 46TH ST N/MINGO CRK
DETAILS OF SUPERSTRUCTURE REPAIR

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

REVISION	BY	DATE

PLAN SCALE: N/A	DRAWN	HCM	11/24	APPROVED.
	DESIGNED	ANB	11/24	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	MLD	9/11/25	
HORIZONTAL: N/A	LEAD ENGR.	AMB	9/16/25	
	FIELD MGR.	Dan	9/25	
VERTICAL N/A	RECOMMENDED	HAS	9.25	CITY ENGINEER
	DESIGN MANAGER			

FILE: 288A_BRG_DECK_01.dgn — DATE: 10/1/2025

ATLAS PAGE NO: 96,359,438,1277 — SHEET 30 OF 40 SHEETS

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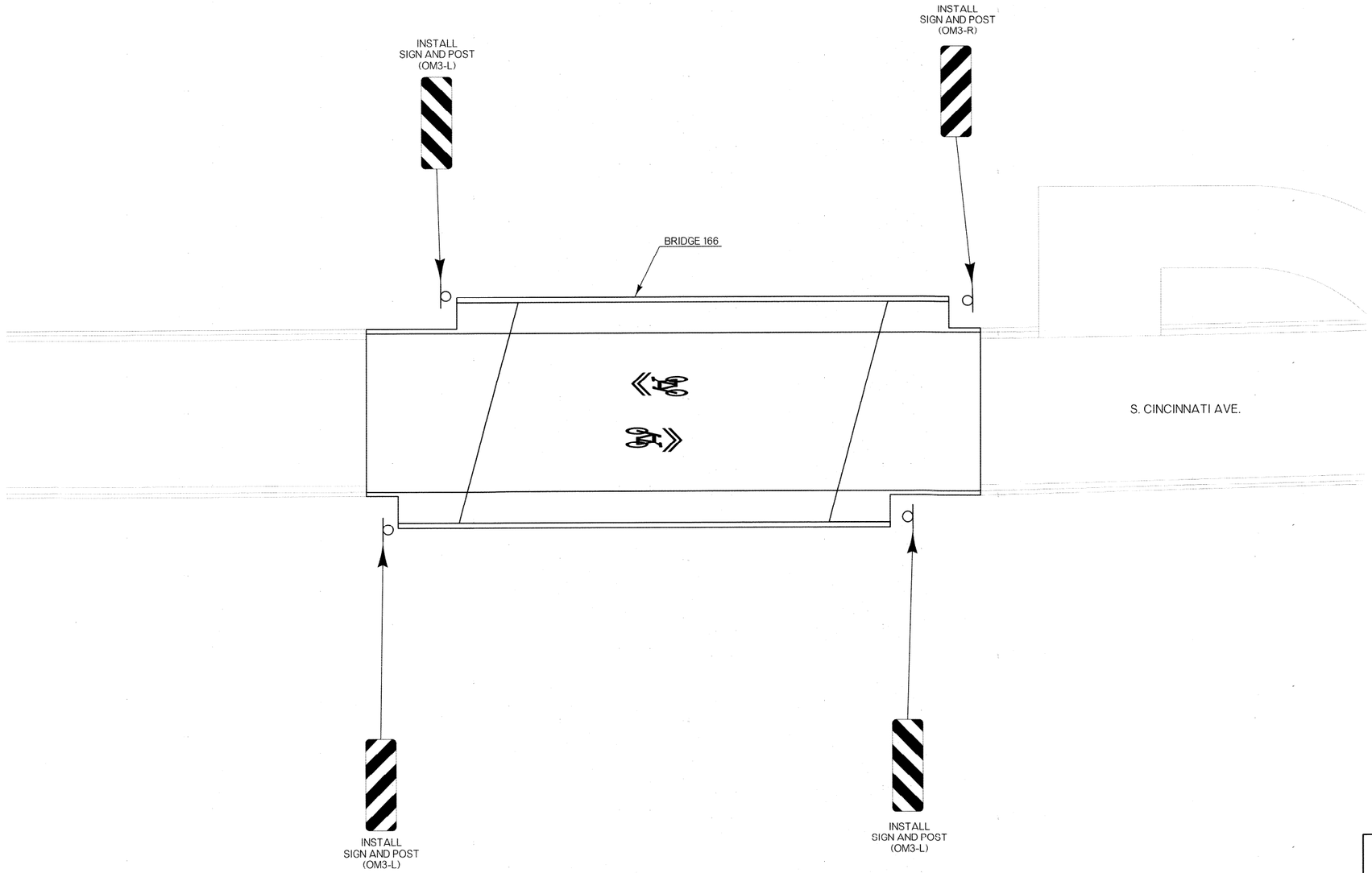

LEGEND

- 4" DASHED WHITE LINE (12-28) — 12' 28' 12' — 40' CYCLE
- 4" DASHED WHITE LINE (3-9) — 3' 9' 3' — 12' CYCLE
- 24" STOP BAR
- SOLID STRIPE
- SHARED LANE SYMBOL
- BIKE LANE SYMBOL

BEFORE YOU DIG 811 1-800-522-OKIE CALL OKIE

REGISTERED PROFESSIONAL ENGINEER
JEREMY P. STAHLE
21725
OKLAHOMA
5/9/25

REVISION	BY	DATE

STRIPING PLAN - BRIDGE 166
S. CINCINNATI AVE.

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

PLAN SCALE: N/A	DRAWN	RJM	11/24	APPROVED:
	DESIGNED	JPS	11/24	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	MLD	6/30/25	
HORIZONTAL: N/A	LEAD ENGR.	ES	7/1/25	
	FIELD MGR.		9-25	
VERTICAL N/A	RECOMMENDED: DESIGN MANAGER			CITY ENGINEER
FILE: 061274716-TRF_MRK_166.dgn				DATE: 10/1/2025
ATLAS PAGE NO: 96,359,438,1277				SHEET 31 OF 40 SHEETS

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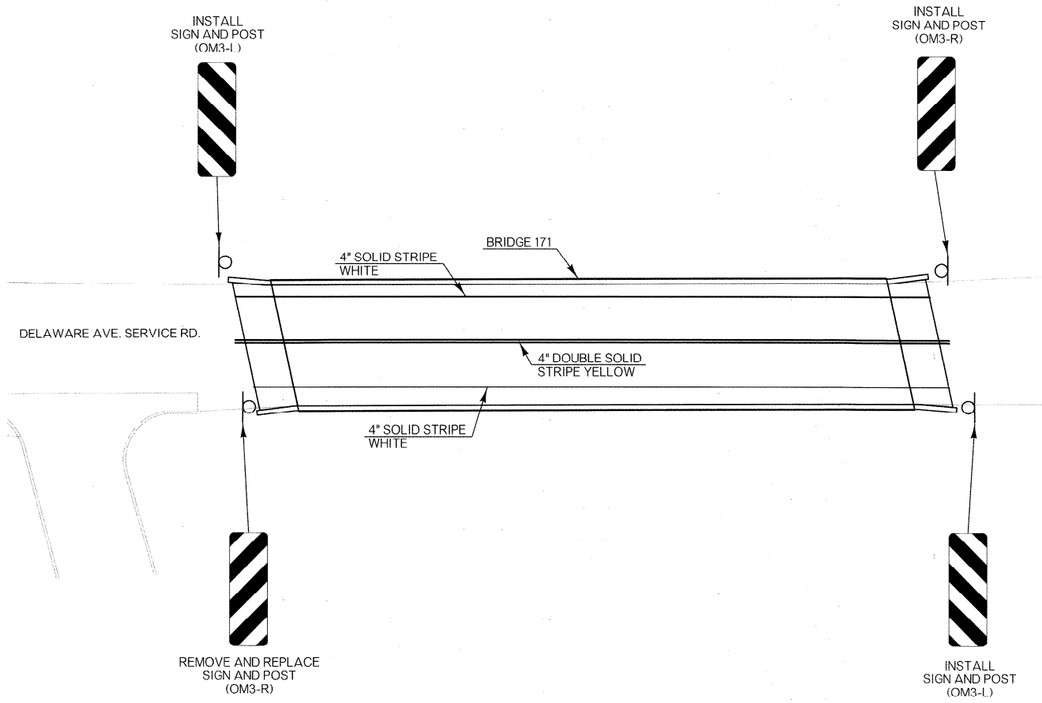

LEGEND

- 4" DASHED WHITE LINE (12-28) — 12' / 28' / 12' — 40' CYCLE
- 4" DASHED WHITE LINE (3-9) — 3' / 9' / 3' — 12' CYCLE
- 24" STOP BAR
- SOLID STRIPE
- SHARED LANE SYMBOL
- BIKE LANE SYMBOL

BEFORE YOU DIG 811 1-800-522-OKIE CALL OKIE

REGISTERED PROFESSIONAL ENGINEER — JEREMY P. STAHLE — 21725 — OKLAHOMA — 6/11/25

REVISION	BY	DATE

STRIPING PLAN - BRIDGE 171
DELAWARE AVE. SERVICE RD.

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

PLAN SCALE: N/A	DRAWN	RJM	11/24	APPROVED:
	DESIGNED	JPS	11/24	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	MLD	6/30/25	
	LEAD ENGR.	ES	7/1/25	
HORIZONTAL: N/A	FIELD MGR.		9/25	
	RECOMMENDED	HAS	9.25	
VERTICAL: N/A	DESIGN MANAGER			CITY ENGINEER
FILE: 061274716-TRF_MRK_171.dgn				DATE: 10/1/2025
ATLAS PAGE NO: 98,359,438,1277				SHEET 32 OF 40 SHEETS

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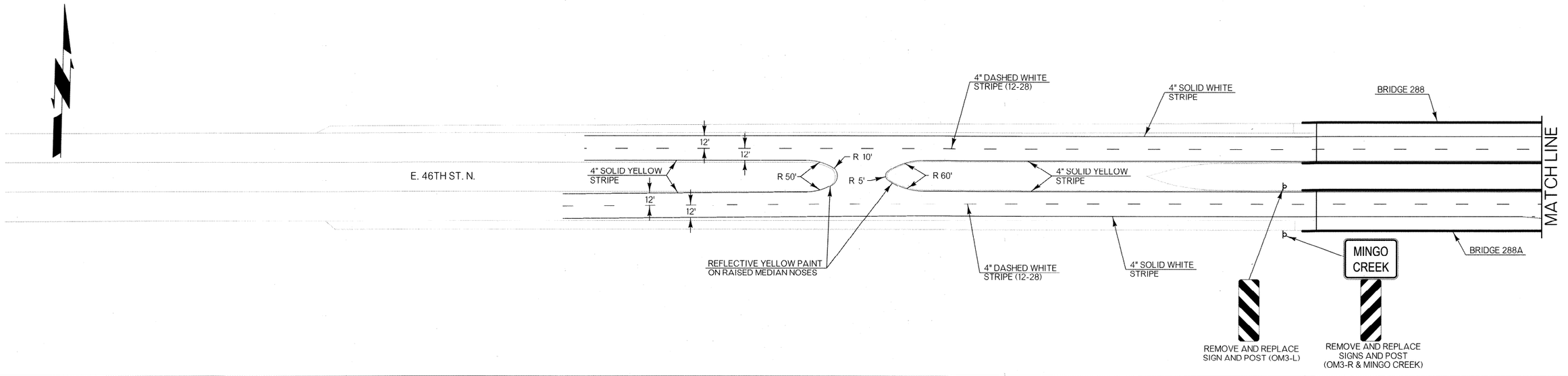

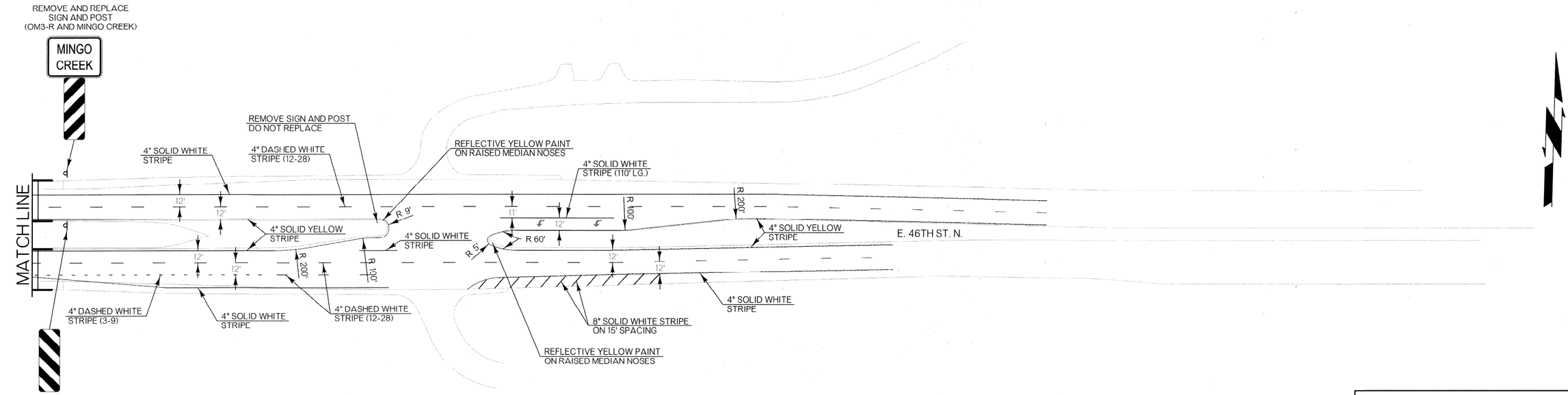

LEGEND

- 4" DASHED WHITE LINE (12-28) — 12' 28' 12' / 40' CYCLE
- 4" DASHED WHITE LINE (3-9) — 3' 9' 3' / 12' CYCLE
- 24" STOP BAR
- SOLID STRIPE
- TURN ARROW
- SIGN

BEFORE YOU DIG 811 1-800-522-OKIE CALL OKIE

REGISTERED PROFESSIONAL ENGINEER — JEREMY P. STAHLE — 21725 — OKLAHOMA — 5/9/25

STRIPING PLAN - BRIDGES 288 & 288A 46TH ST. N.

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

REVISION	BY	DATE

PLAN SCALE: N/A	DRAWN	RJM	11/24	APPROVED:
	DESIGNED	JPS	11/24	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	MLD	6/30/25	
	LEAD ENGR.	ES	9/11/25	
HORIZONTAL: N/A	FIELD MGR.		9/25	
VERTICAL N/A	RECOMMENDED DESIGN MANAGER	HAS	9.25	CITY ENGINEER
FILE: 06127416-TRF_MRK_288.dgn				DATE: 10/1/2025
ATLAS PAGE NO: 96,359,438,1277				SHEET 33 OF 40 SHEETS

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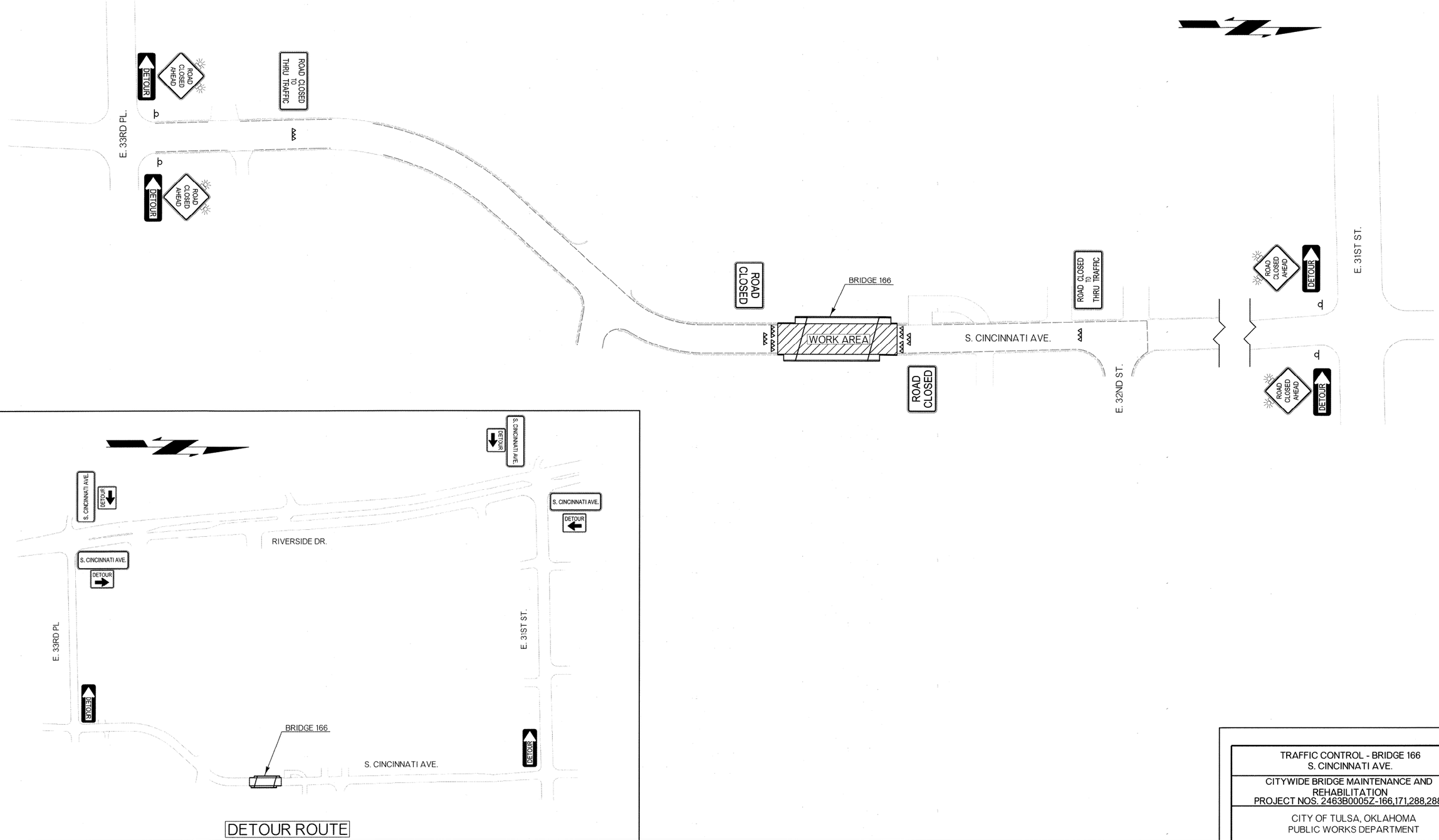

DETOUR ROUTE

LEGEND

- WORK AREA
- PREV. CONST.
- SIGN
- CHANNELIZER CONE
- TYPE III BARRICADE
- IMPACT ATTENUATOR
- PORTABLE LONGITUDINAL BARRIER
- TRAFFIC DIRECTION
- ARROW DISPLAY

BEFORE YOU DIG 811 1-800-522-OKIE CALL OKIE

REGISTERED PROFESSIONAL ENGINEER JEREMY P. STAHLE 21725 OKLAHOMA 5/9/25

REVISION	BY	DATE

TRAFFIC CONTROL - BRIDGE 166 S. CINCINNATI AVE.

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

PLAN SCALE: N/A	DRAWN	RJM	11/24	APPROVED:
	DESIGNED	JPS	11/24	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	MLD	6/30/25	
HORIZONTAL: N/A	LEAD ENGR.	BS	7/11/25	
	FIELD MGR.		9/25	
VERTICAL N/A	RECOMMENDED: DESIGN MANAGER		9-25	CITY ENGINEER
FILE: 06127416-TRF_CTL_166.dgn				DATE: 10/1/2025
ATLAS PAGE NO: 96,359,438,1277				SHEET 34 OF 40 SHEETS

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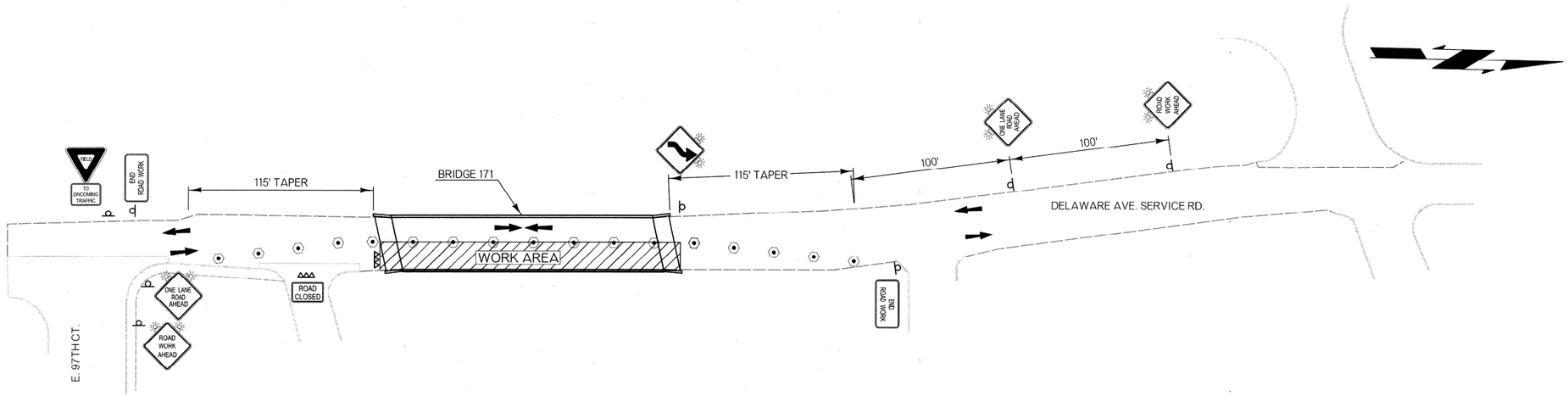
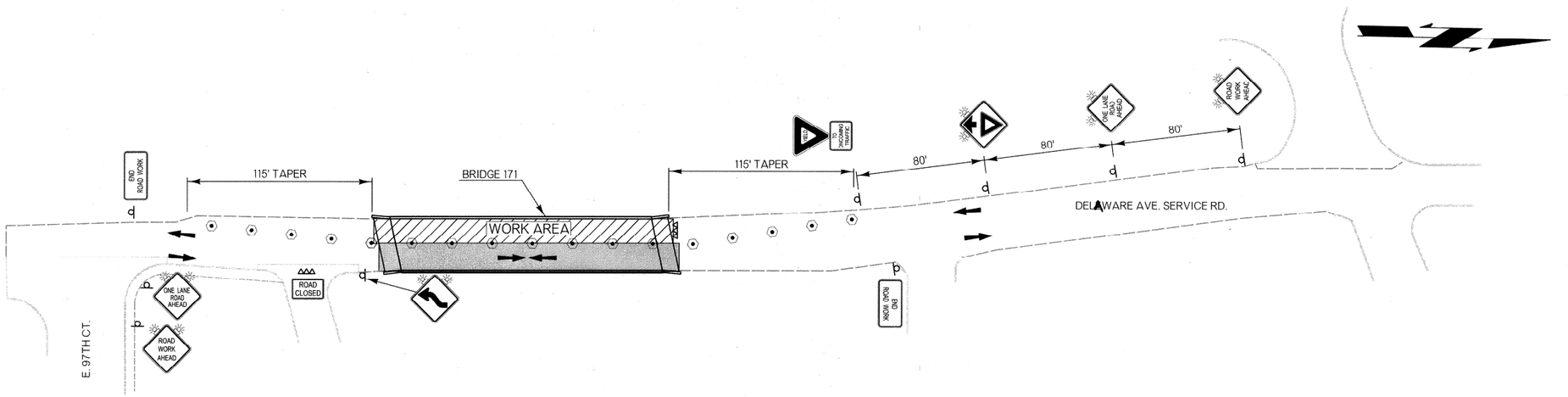


PHASE 1



PHASE 2

LEGEND

- WORK AREA
- PREV. CONST.
- SIGN
- CHANNELIZER CONE
- TYPE III BARRICADE
- IMPACT ATTENUATOR
- PORTABLE LONGITUDINAL BARRIER
- TRAFFIC DIRECTION
- ARROW DISPLAY

BEFORE YOU DIG 811 1-800-522-OKIE CALL OKIE

REGISTERED PROFESSIONAL ENGINEER JEREMY P. STAHLE 21725 OKLAHOMA 5/9/25

REVISION	BY	DATE

TRAFFIC CONTROL - BRIDGE 171
DELAWARE AVE. - SERVICE RD.

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

PLAN SCALE: N/A	DRAWN	RJM	11/24	APPROVED:
	DESIGNED	JPS	11/24	
	SURVEY			
PROFILE SCALE: N/A	PROJ. MGR.	MLD	6/30/25	
	LEAD ENGR.	ES	9/1/25	
HORIZONTAL: N/A	FIELD MGR.		9/25	
VERTICAL N/A	RECOMMENDED DESIGN MANAGER	HAS	9.25	CITY ENGINEER
FILE: 061274716-TRF_CTL_171.dgn				DATE 10/1/2025
ATLAS PAGE NO: 96,359,438,1277				SHEET 35 OF 40 SHEETS

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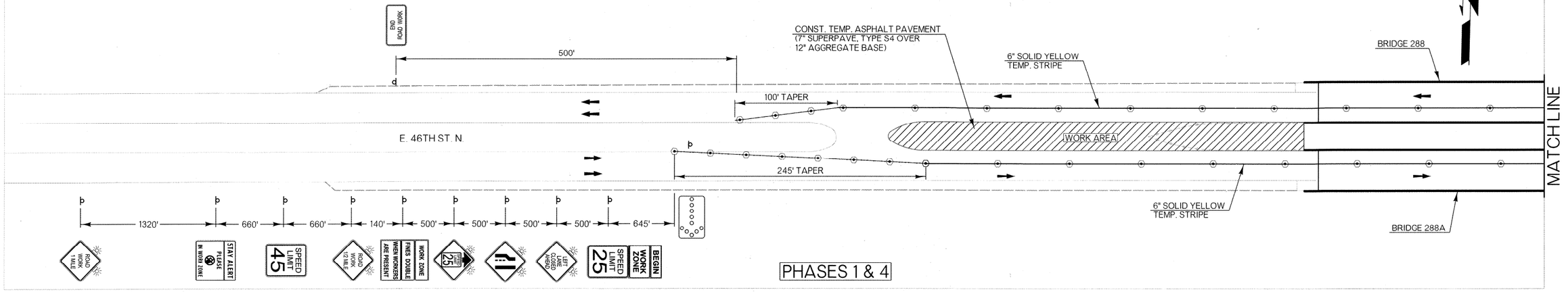
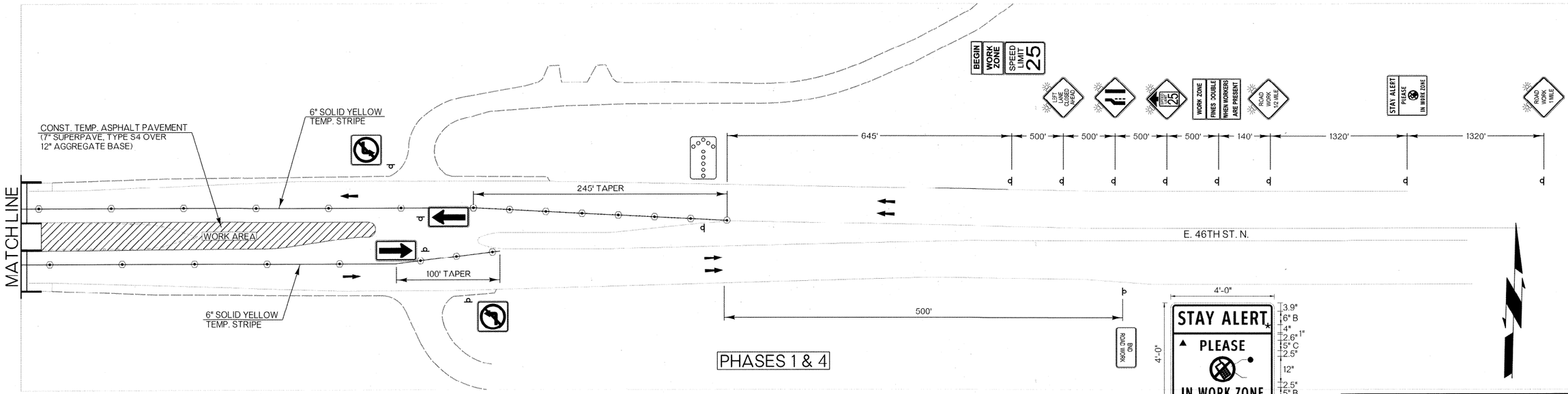


PHASES 1 & 4



PHASES 1 & 4

NOTE:

PHASE 4: REMOVE TEMPORARY ASPHALT AND RESTORE MOUNTABLE CURB AND EARTHEN MEDIAN.

EXISTING CONFLICTING STRIPING TO BE REMOVED

BORDER
R=1.5"
TH=0.75"
IN=0.75"

COLOR
LEGEND, SYMBOL AND BORDER:
BLACK (NON-REFLECTORIZED)
BACKGROUND:
▲ FLUORESCENT ORANGE (REFLECTORIZED)
✶ FLUORESCENT YELLOW (REFLECTORIZED)
● WHITE (REFLECTORIZED)
RED (TRANSPARENT)

LEGEND

- WORK AREA
- PREV. CONST.
- SIGN
- CHANNELIZER CONE
- TYPE III BARRICADE
- IMPACT ATTENUATOR
- PORTABLE LONGITUDINAL BARRIER
- TRAFFIC DIRECTION
- ARROW DISPLAY

BEFORE YOU DIG OKIE 811 1-800-522-OKIE CALL OKIE

REGISTERED PROFESSIONAL ENGINEER JEREMY P. STAHLE 21725 OKLAHOMA 5/9/25

REVISION	BY	DATE

TRAFFIC CONTROL - BRIDGES 288 & 288A
E. 46TH ST. N.

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

PLAN SCALE: N/A	DRAWN	RJM	11/24	APPROVED:
	DESIGNED	JPS	11/24	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	MLD	6/30/25	
HORIZONTAL: N/A	LEAD ENGR.	BS	7/11/25	
	FIELD MGR.	DM	9/25	
VERTICAL N/A	RECOMMENDED:	HLS	9.25	
	DESIGN MANAGER			CITY ENGINEER
FILE: 061274716-TRF_CTL_288.dgn				DATE: 10/1/2025
ATLAS PAGE NO: 96,359,436,1277				SHEET 36 OF 40 SHEETS

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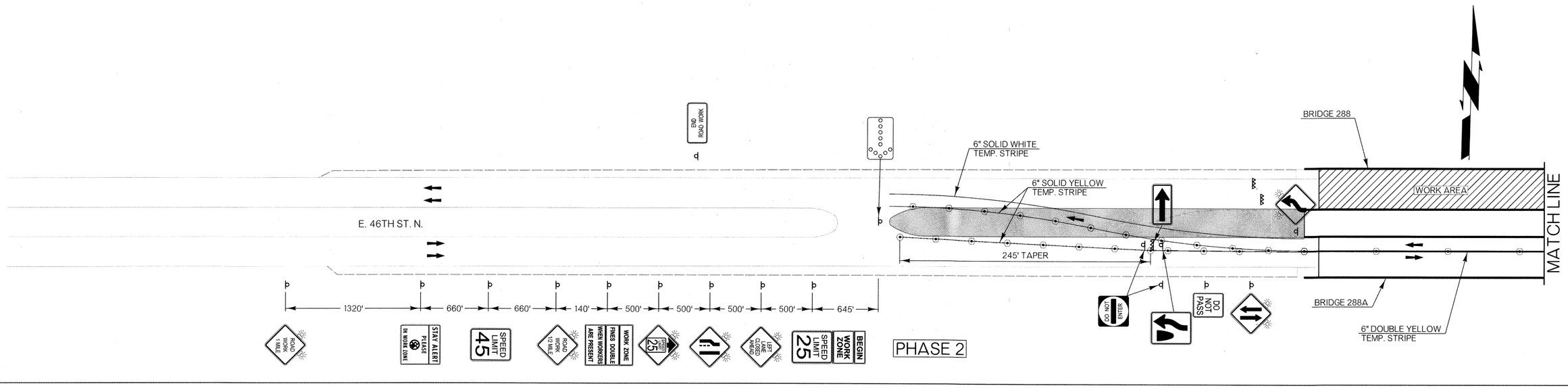

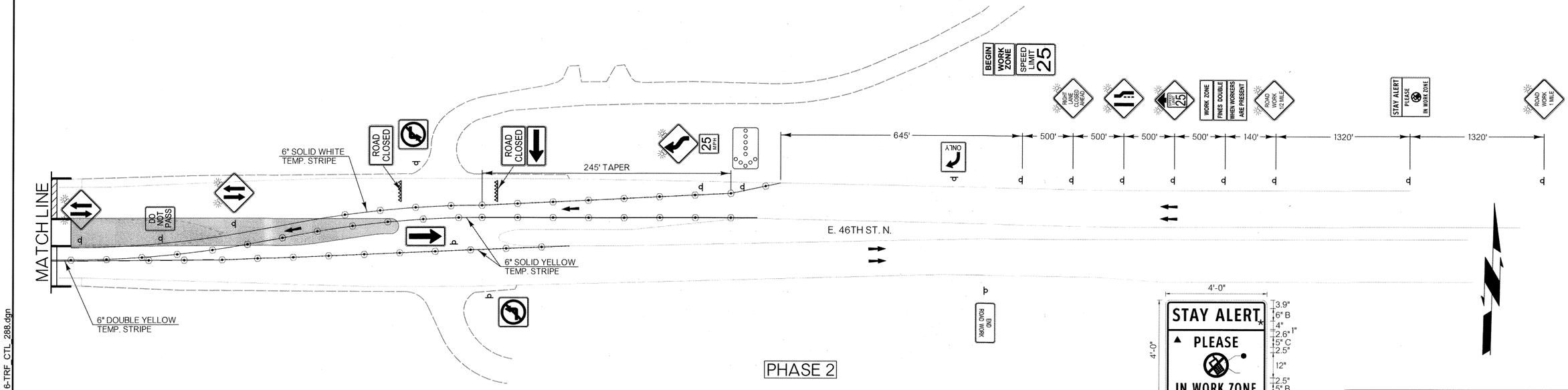

COLOR
LEGEND, SYMBOL AND BORDER:
BLACK (NON-REFLECTORIZED)
BACKGROUND:
▲ FLUORESCENT ORANGE (REFLECTORIZED)
★ FLUORESCENT YELLOW (REFLECTORIZED)
● WHITE (REFLECTORIZED)
RED (TRANSPARENT)

NOTE:

EXISTING CONFLICTING STRIPING TO BE REMOVED

LEGEND

- WORK AREA
- PREV. CONST.
- SIGN
- CHANNELIZER CONE
- TYPE III BARRICADE
- IMPACT ATTENUATOR
- PORTABLE LONGITUDINAL BARRIER
- TRAFFIC DIRECTION
- ARROW DISPLAY

BEFORE YOU DIG 811 1-800-522-OKIE CALL OKIE

REGISTERED PROFESSIONAL ENGINEER JEREMY P. STAHLE 21725 OKLAHOMA
5/9/25

REVISION	BY	DATE

TRAFFIC CONTROL - BRIDGES 288 & 288A E. 46TH ST. N.

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

PLAN SCALE: N/A	DRAWN	RJM	11/24	APPROVED:
	DESIGNED	JPS	11/24	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	MLD	10/30/25	
	LEAD ENGR.	BB	9/11/25	
HORIZONTAL: N/A	FIELD MGR.		9/25	
	RECOMMENDED:			
VERTICAL N/A	DESIGN MANAGER	HAS	9-25	CITY ENGINEER
FILE: 061274716-TRF_CTL_288.dgn				DATE: 10/1/2025
ATLAS PAGE NO: 96,359,438,1277				SHEET 37 OF 40 SHEETS

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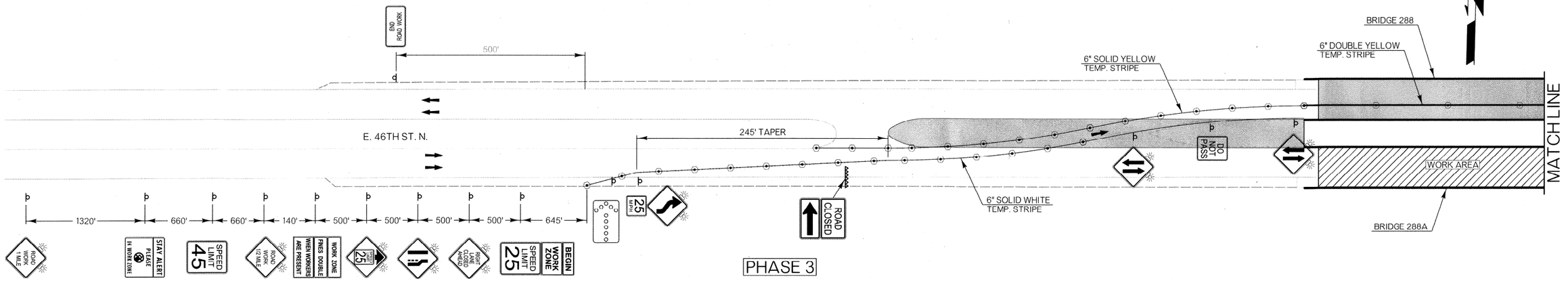

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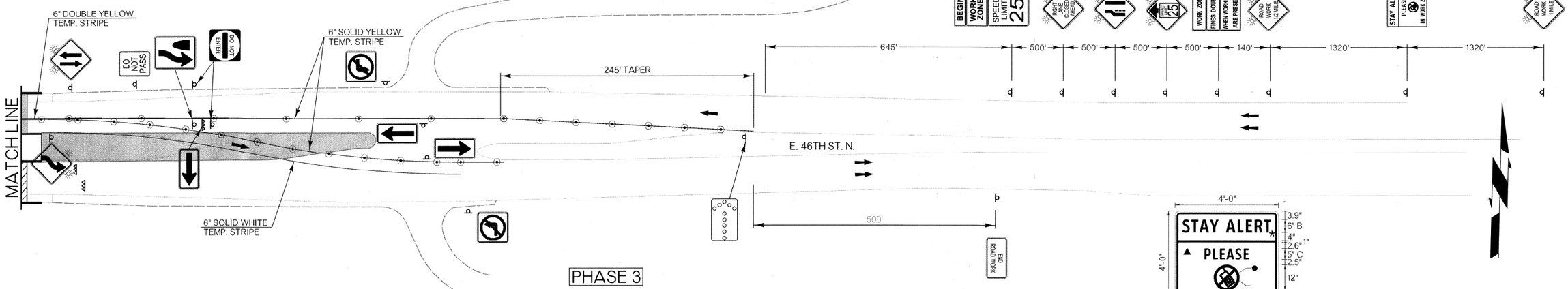

PHASE 3

NOTE:

EXISTING CONFLICTING STRIPING TO BE REMOVED

COLOR
LEGEND, SYMBOL AND BORDER:
BLACK (NON-REFLECTORIZED)
BACKGROUND:
▲ FLUORESCENT ORANGE (REFLECTORIZED)
★ FLUORESCENT YELLOW (REFLECTORIZED)
● WHITE (REFLECTORIZED)
RED (TRANSPARENT)

LEGEND

- WORK AREA
- PREV. CONST.
- SIGN
- CHANNELIZER CONE
- TYPE III BARRICADE
- IMPACT ATTENUATOR
- PORTABLE LONGITUDINAL BARRIER
- TRAFFIC DIRECTION
- ARROW DISPLAY

BEFORE YOU DIG 811 1-800-522-OKIE CALL OKIE

REGISTERED PROFESSIONAL ENGINEER JEREMY P. STAHLE 21725 OKLAHOMA 5/9/25

REVISION	BY	DATE

TRAFFIC CONTROL - BRIDGES 288 & 288A E. 46TH ST. N.

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

PLAN SCALE: N/A	DRAWN	RJM	11/24	APPROVED:
	DESIGNED	JPS	11/24	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	MLD	6/30/25	
	LEAD ENGR.	EJB	7/11/25	
HORIZONTAL: N/A	FIELD MGR.		9/25	
	RECOMMENDED:			
VERTICAL N/A	DESIGN MANAGER	HBS	9.25	CITY ENGINEER
FILE 061274716-TRF_CTL_288.dgn				DATE 10/1/2025
ATLAS PAGE NO: 96,359,438,1277				SHEET 38 OF 40 SHEETS

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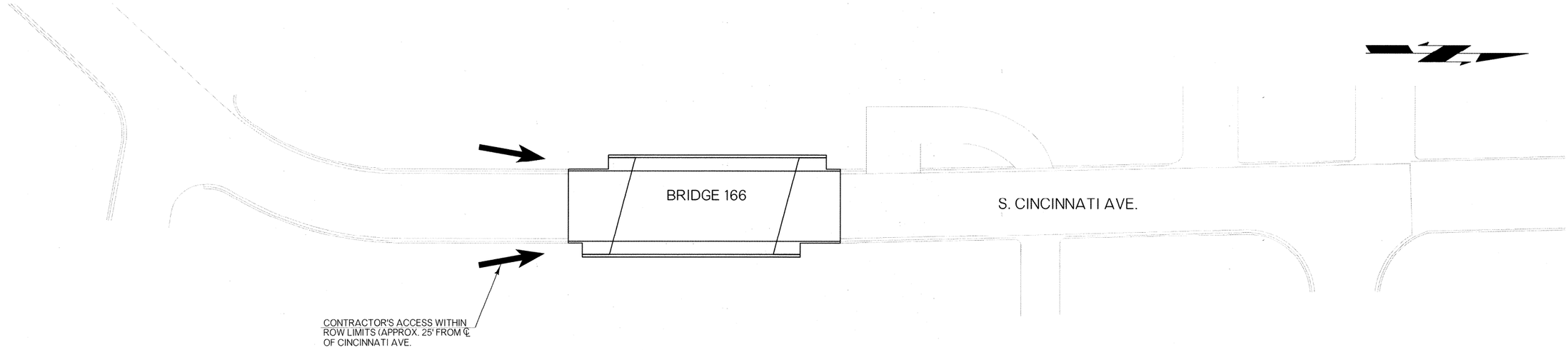

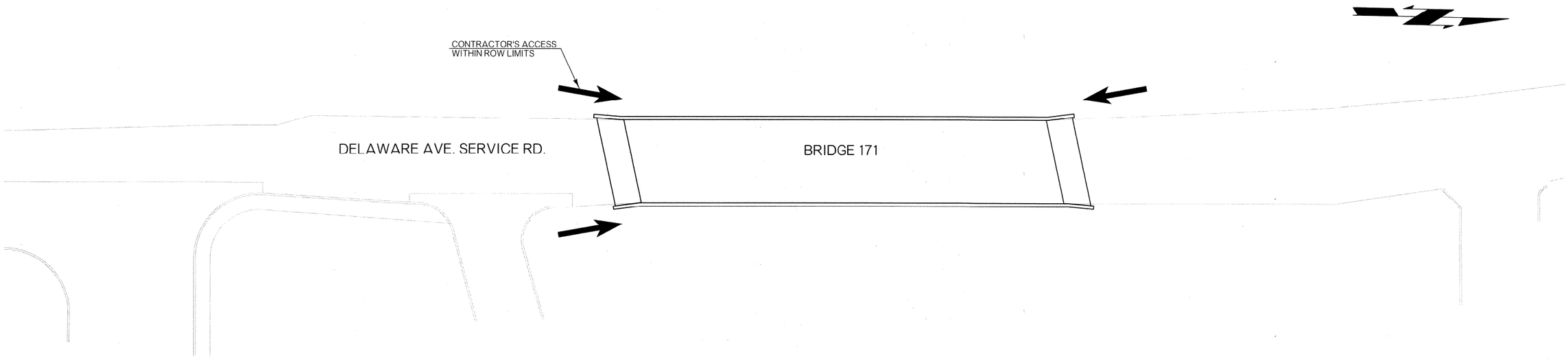

NOTES:

1. ANY DAMAGE TO DRIVE, PARKING LOT OR OTHER FACILITIES WITHIN OR ADJACENT TO THE CONTRACTOR'S OPERATION SHALL BE REPAIRED TO THE ENGINEER'S SATISFACTION AND SHALL BE ACCOMPLISHED AT THE CONTRACTOR'S EXPENSE. ALL DISTURBED ITEMS SHALL BE REPAIRED TO MATCH EXISTING MATERIALS AND PATTERNING.
2. CONTRACTOR SHALL NOT IMPEDE PARKING OPERATIONS ADJACENT TO THE CONTRACTOR'S ACCESS ROUTE.
3. CONTRACTOR SHALL NOT STAGE OR STORE EQUIPMENT OR MATERIAL ON BRIDGE DECK.

BEFORE YOU DIG 811 OKIE 1-800-522-OKIE CALL OKIE

REGISTERED PROFESSIONAL ENGINEER JEREMY P. STAHLE 21725 OKLAHOMA 5/9/25

REVISION	BY	DATE

CONTRACTOR ACCESS ROUTES (BRIDGES 166 & 171)

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

PLAN SCALE: N/A	DRAWN	RJM	11/24	APPROVED:
	DESIGNED	JPS	11/24	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	MLD	6/30/25	
	LEAD ENGR.	BS	9/11/25	
HORIZONTAL: N/A	FIELD MGR.		9/26	
	RECOMMENDED		9.25	
VERTICAL N/A	DESIGN MANAGER			CITY ENGINEER
FILE: 061274716-ACCESS_166-171.dgn				DATE 10/1/2025
ATLAS PAGE NO: 96,359,438,1277				SHEET 39 OF 40 SHEETS

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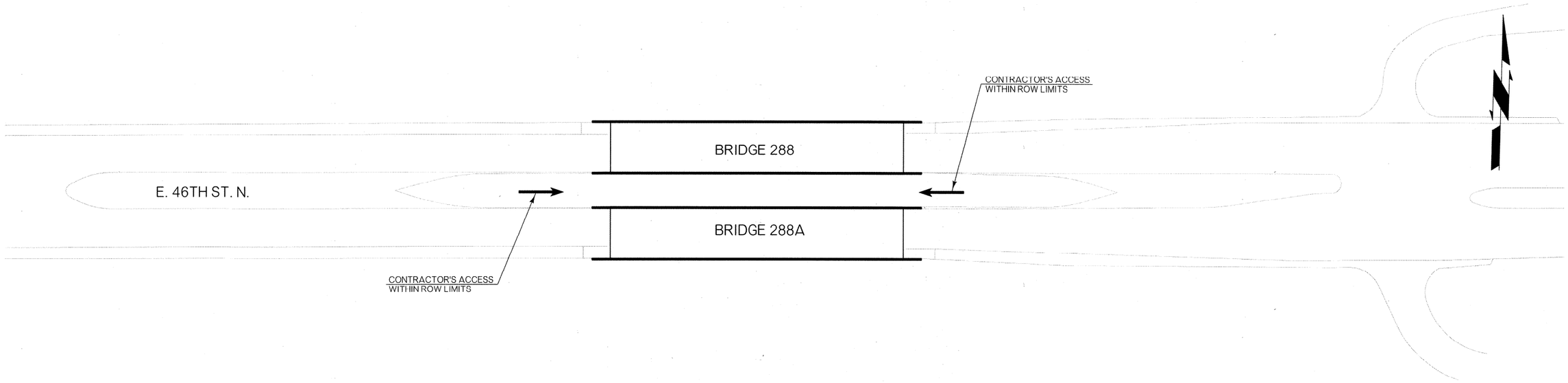

NOTES:

1. ANY DAMAGE TO DRIVE, PARKING LOT OR OTHER FACILITIES WITHIN OR ADJACENT TO THE CONTRACTOR'S OPERATION SHALL BE REPAIRED TO THE ENGINEER'S SATISFACTION AND SHALL BE ACCOMPLISHED AT THE CONTRACTOR'S EXPENSE. ALL DISTURBED ITEMS SHALL BE REPAIRED TO MATCH EXISTING MATERIALS AND PATTERNING.
2. CONTRACTOR SHALL NOT IMPEDE PARKING OPERATIONS ADJACENT TO THE CONTRACTOR'S ACCESS ROUTE.
3. CONTRACTOR SHALL NOT STAGE OR STORE EQUIPMENT OR MATERIAL ON BRIDGE DECK.

BEFORE YOU DIG 811 1-800-522-OKIE CALL OKIE

REGISTERED PROFESSIONAL ENGINEER JEREMY P. STAHLE 21725 OKLAHOMA
5/9/25

REVISION	BY	DATE

CONTRACTOR ACCESS ROUTES (BRIDGES 288 & 288A)

CITYWIDE BRIDGE MAINTENANCE AND REHABILITATION
PROJECT NOS. 2463B0005Z-166,171,288,288A

CITY OF TULSA, OKLAHOMA
PUBLIC WORKS DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: Kimley»Horn

PLAN SCALE: N/A	DRAWN	RJM	11/24	APPROVED:
	DESIGNED	JPS	11/24	
	SURVEY			
PROFILE SCALE:	PROJ. MGR.	MLD	6/30/25	
HORIZONTAL: N/A	LEAD ENGR.	ES	7/1/25	
	FIELD MGR.		9/25	
VERTICAL N/A	RECOMMENDED:	HMS	9-25	CITY ENGINEER
	DESIGN MANAGER			

FILE: 061274716-ACCESS_288-301.dgn
DATE: 10/1/2025
ATLAS PAGE NO: 96,359,438,1277
SHEET 40 OF 40 SHEETS

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