

DESIGN DESIGNATION

A.A.D.T. - 2026 = 602
A.A.D.T. - 2046 = 692
D.H.V. = 10.79%
T = 6.71%
V = 55 M.P.H.
D = 49.4%/50.6%

FUNCTIONAL CLASSIFICATION- RURAL MAJOR COLLECTOR

NO NEW R/W

CONVENTIONAL SYMBOLS
(USED IN PLANS)

	EXISTING	NEW
BUILDINGS AND STRUCTURES		
GUARD RAIL		
GUARD CABLE		
CONCRETE RIGHT-OF-WAY MARKER		
STEEL RIGHT-OF-WAY MARKER		
LOCATION SURVEY MARKER		
UTILITIES		
FIBER OPTICS	-FO-	-FO-
OVERHEAD CABLE TV	-OTV-	-OTV-
UNDERGROUND CABLE TV	-UTV-	-UTV-
OVERHEAD TELEPHONE	-OT-	-OT-
UNDERGROUND TELEPHONE	-UT-	-UT-
OVERHEAD POWER	-OE-	-OE-
UNDERGROUND POWER	-UE-	-UE-
SANITARY SEWER	-S-	-S-
STORM SEWER	-SS-	-SS-
GAS	-G-	-G-
WATER	-W-	-W-
MANHOLE		
FIRE HYDRANT		
WATER VALVE		
WATER METER		
DROP INLET		
DITCH BLOCK		
GROUND MOUNTED SIGN		
LIGHT POLE		
H-FRAME POWER POLE		
TELEPHONE PEDESTAL		
FENCE		
CHAIN LINK		
WOVEN WIRE		
GATE POST		
BENCHMARK		

NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES

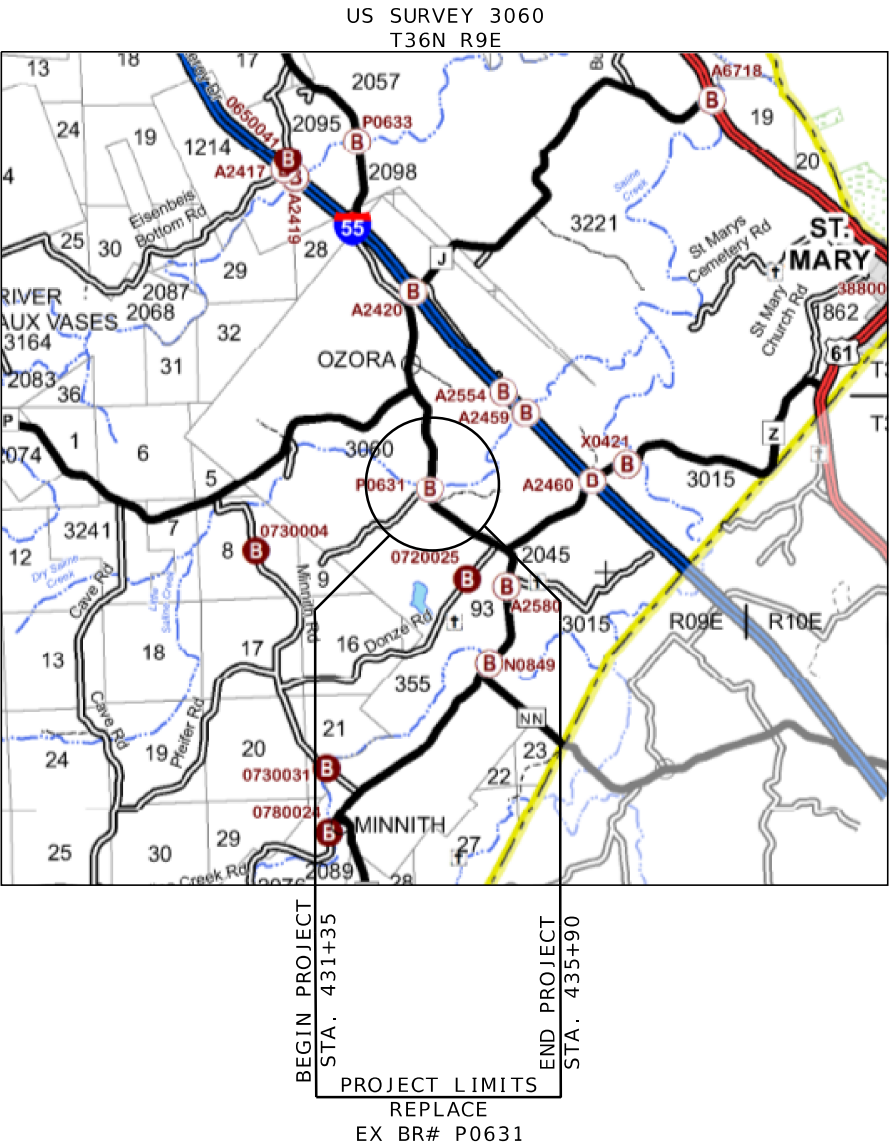
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
FINAL PLANS FOR PROPOSED
STATE HIGHWAY N
STE. GENEVIEVE COUNTY



KEY MAP
SHOWING LOCATION OF COUNTY



NOT TO SCALE



INDEX OF SHEETS

DESCRIPTION	SHEET NUMBER
TITLE SHEET -----	1
TYPICAL SECTIONS (TS) (1 SHEET) ---	2
QUANTITIES (QU) (3 SHEETS) -----	3
PLAN-PROFILE (PP)-----	4
REF/COORD POINTS (RC/CP)-----	5-6
SPECIAL SHEETS (SS)-----	7
TRAFFIC CONTROL SHEETS (TC)-----	8-9
EROSION CONTROL SHEETS (EC)-----	10
BRIDGE DRAWINGS (B)	
A9409-----	1-31
CROSS-SECTIONS (XS)-----	1-4

LENGTH OF PROJECT

BEGINNING OF PROJECT	STA. 431+35
END OF PROJECT	STA. 435+90
APPARENT LENGTH	455 FEET
EQUATIONS AND EXCEPTIONS:	

TOTAL CORRECTIONS	0 FEET
NET LENGTH OF PROJECT	455 FEET
STATE LENGTH	0.086 MILES
FOR INFORMATION ONLY ESTIMATED DISTURBED ACRES	1.09 ACRES

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

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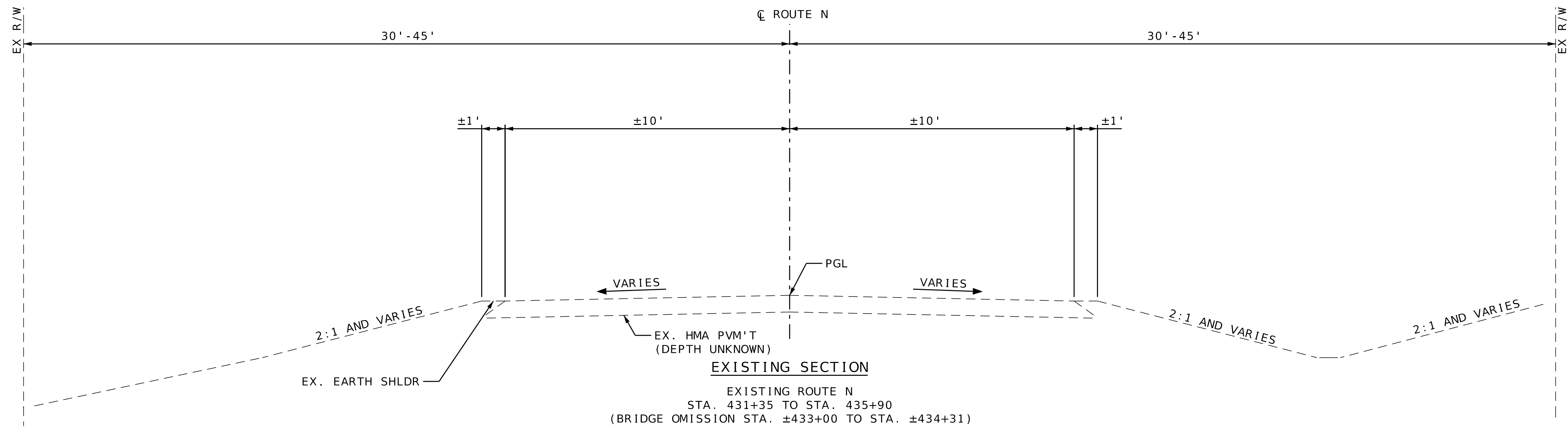
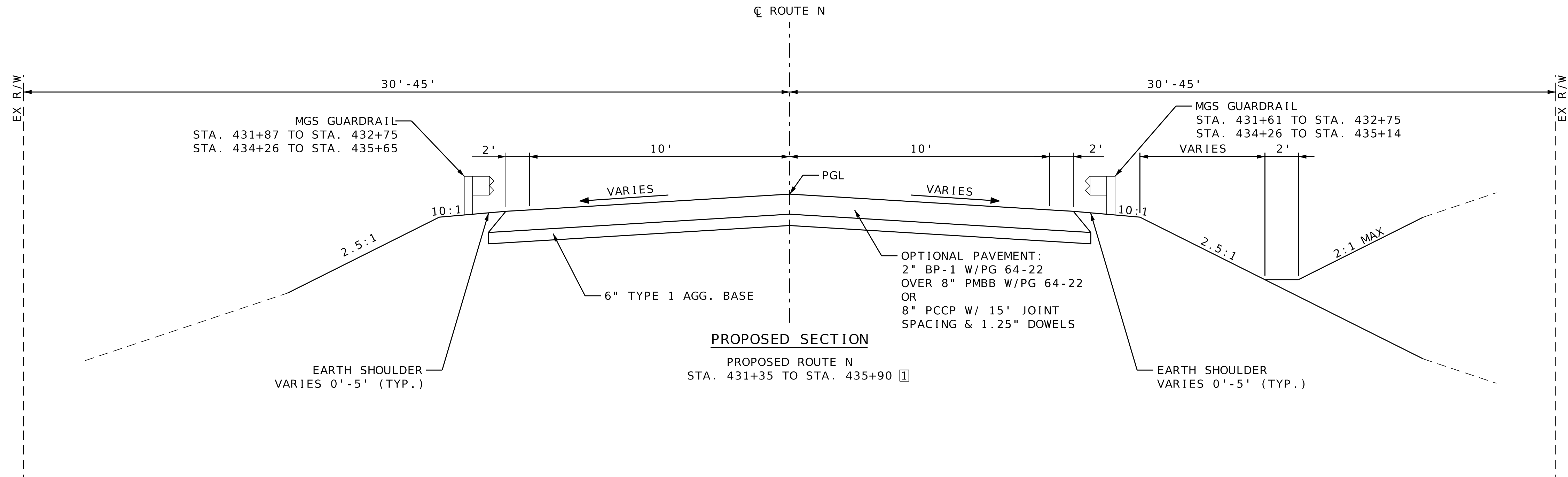
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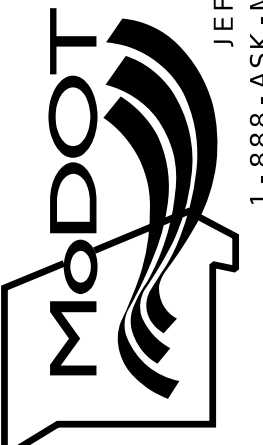
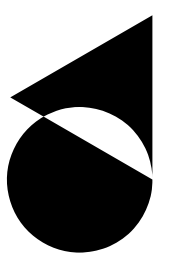
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MISSOURI DESIGN FIRM PE-001166



1 BRIDGE SLABS
STA. 432+64 TO STA. 432+84
STA. 434+18 TO STA. 434+38

BRIDGE OMISSION
STA. 432+84 TO STA. 434+18

DATE PREPARED 8/28/2025	
ROUTE N	STATE MO
DISTRICT SE	SHEET NO. 2
COUNTY STE. GENEVIEVE	
JOB NO. JSE0026	
CONTRACT ID. .	
PROJECT NO. .	
BRIDGE NO. .	
DESCRIPTION	
DATE	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION	
	
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MISSOURI DESIGN FIRM PE-001166	
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TYPICAL SECTIONS
SHEET 1 OF 1

REMOVAL OF IMPROVEMENTS							
SHEET	STATION	STATION	OFFSET	LENGTH	AREA	EACH	REMARKS
				(LF)	(SQYD)	(EA)	
4	431+60		LT/RT	72			SAWCUT
4	431+60	433+00	LT/RT		313		PAVEMENT
4	430+55		RT			1	SIGN (YIELD)
4	432+60		LT			1	SIGN (OBJECT MARKER)
4	432+60		RT			1	SIGN (OBJECT MARKER)
4	432+80		LT			1	SIGN (OBJECT MARKER)
4	432+80		RT			1	SIGN (OBJECT MARKER)
4	432+99		LT			1	SIGN (OBJECT MARKER)
4	433+00		RT			1	SIGN (OBJECT MARKER)
4	434+21	435+65	LT/RT		283		PAVEMENT
4	434+31		RT			1	SIGN (OBJECT MARKER)
4	434+32		LT			1	SIGN (OBJECT MARKER)
4	434+51		RT			1	SIGN (OBJECT MARKER)
4	434+51		LT			1	SIGN (OBJECT MARKER)
4	434+71		RT			1	SIGN (OBJECT MARKER)
4	434+71		LT			1	SIGN (OBJECT MARKER)
4	435+65		LT/RT	20			SAWCUT
SUBTOTAL				92	596	13	
PAY TOTAL				1 LUMP SUM			

MOBILIZATION
PAY TOTAL = 1 LUMP SUM

CONTRACTOR FURNISHED SURVEYING AND STAKING
PAY TOTAL = 1 LUMP SUM

PAVEMENT AND BASE									
SHEET	STATION	STATION	OFFSET	TYPE 1 AGGREGATE FOR BASE (6 IN. THICK)	BITUMINOUS PAVEMENT MIXTURE PG64-22, (BP-1)	OPTIONAL PAVEMENT	TACK COAT	MODIFIED COLDMILLING (DEPTH TRANSITIONS)	REMARKS
				(SQYD)	(TONS)	(SQYD)	(GAL)	(SQYD)	
4	431+35	431+77	LT/RT		11.8		11	109	
4	431+60	432+63	LT/RT	299		276.0			
4	434+38	435+65	LT/RT	367		338.7			
4	435+65	435+90	LT/RT		5.7		5	52	
SUBTOTAL				666	17.5	614.7	16	161	
PAY TOTAL				666	17.5	614.7	16	161	

PAVEMENT NOTES:
1. SEE TYPICAL SECTIONS FOR OPTIONAL PAVEMENT DESIGN.
2. APPLICATION RATES: BP-1 = 1.948 TON/CUYD
TACK COAT = 0.10 GAL/SQYD

EARTHWORK							
SHEET	STATION	STATION	ESTIMATED CUT	ESTIMATED FILL	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)	MODIFIED LINEAR GRADING CLASS 2	REMARKS
			(NOTE 1) (CUYD)	(NOTE 1) (CUYD)	(NOTE 1) (CUYD)	(STA)	
XS 1 - XS 2	431+35	432+63.5	115	143	-28	1.5	SOUTH SIDE OF BR#A9409
XS 2 - XS 4	434+38	435+90	161	400	-239	1.7	NORTH SIDE OF BR#A9409
SUBTOTAL			276	543	-267	3.2	
PAY TOTAL			0	0	0	3.2	

ROCK BLANKET								
SHEET	STATION	STATION	OFFSET	FURNISHING TYPE 2 ROCK BLANKET	PLACING TYPE 2 ROCK BLANKET	ROCK BLANKET EXCAVATION (NOTES 2 & 3)	PERMANENT EROSION CONTROL GEOTEXTILE	REMARKS
				(CUYD)	(CUYD)	(CUYD)	(SQYD)	
9	432+64	433+23	LT/RT	307.9	307.9	307.9	461.9	SOUTH BRIDGE CONE
9	433+99	434+38	LT/RT	209.6	209.6	209.6	314.4	NORTH BRIDGE CONE
SUBTOTAL				517.5	517.5	517.5	776.3	
PAY TOTAL				518	518	0	776	

ROCK BLANKET NOTES:
1. ROCK QUANTITY MAY BE OBTAINED FROM REMOVED BRIDGE DECK IF BROKEN OR CRUSHED TO MEET SPECIFICATION WITH NO EXPOSED REBAR OR ASPHALT MATERIAL.
2. THE EXCAVATION QUANTITY SHOWN IS FOR INFORMATION ONLY. THE COST TO EXCAVATE THE SOIL FOR THE PLACEMENT OF THE ROCK BLANKET IS INCLUDED IN THE COST FOR PLACING TYPE 2 ROCK BLANKET.
3. THE EXCAVATION QUANTITY FOR ROCK BLANKET IS NOT INCLUDED IN THE EARTHWORK QUANTITIES. THE SUITABILITY OF THE MATERIAL FOR USE AS FILL MUST BE APPROVED BY THE ENGINEER.

DESCRIPTION						
DATE						

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PERMANENT PAVEMENT MARKING						
SHEET	STATION	STATION	OFFSET	4 IN. WHITE CLASS 1 PAVEMENT MARKING PAINT (18-MIL, TYPE P BEADS)	4 IN. YELLOW CLASS 1 PAVEMENT MARKING PAINT (18-MIL, TYPE P BEADS)	REMARKS
				(LF)	(LF)	
N/A	431+35	435+90	CL		910	DOUBLE SOLID CENTERLINE
N/A	431+35	435+90	LT	455		SOLID EDGE LINE
N/A	431+35	435+90	RT	455		SOLID EDGE LINE
SUBTOTAL				910	910	
PAY TOTAL				910	910	

SEEDING AND MULCHING							
SHEET	STATION	STATION	OFFSET	MULCHING	SEEDING - COOL SEASON GRASSES	TEMPORARY SEEDING	REMARKS
				(ACRE)	(ACRE)	(ACRE)	
4	431+35	432+64	RT	0.12	0.06	0.06	
4	431+72	432+64	LT	0.08	0.04	0.04	
4	434+38	435+90	RT	0.20	0.10	0.10	
4	434+38	435+90	LT	0.14	0.07	0.07	
SUBTOTAL				0.54	0.27	0.27	
PAY TOTAL				2	1	1	

EROSION CONTROL									
SHEET	STATION	STATION	OFFSET	ROCK DITCH CHECK	SEDIMENT REMOVAL	SILT FENCE	TYPE C BERM	TYPE 2D EROSION CONTROL BLANKET	REMARKS
				(LF)	(CUYD)	(LF)	(LF)	(SQYD)	
9	431+35	432+64	RT					319.2	
9	431+35	432+65	RT	35	5.0				
9	431+35	433+23	RT		1.9	190.0			
9	431+72	432+64	LT					185.1	
9	431+72	433+23	LT		1.5	152.8			
9	432+64	433+23	LT/RT				193.6		SOUTH BRIDGE SLOPE
9	433+99	434+38	LT/RT				158.6		NORTH BRIDGE SLOPE
9	433+99	435+78	LT		1.8	183.3			
9	433+99	435+90	RT		2.0	195.2			
9	434+30	435+90	RT	14	2.0				
9	434+38	435+90	RT					543.4	
9	434+38	435+90	LT					381.6	
SUBTOTAL				49	14.2	721.3	352.2	1429.3	
PAY TOTAL				49	14	721	352	1429	

EROSION CONTROL NOTES:
1. SEDIMENT REMOVAL QUANTITY ASSUMES 1 CY PER 100 LF OF SILT FENCE AND 1 CY PER DITCH CHECK.

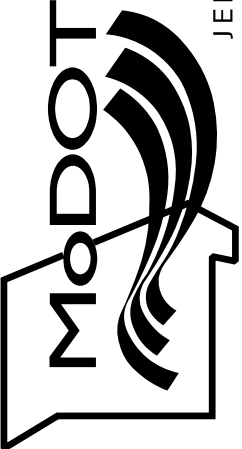
GUARDRAIL							
SHEET	STATION	STATION	OFFSET	MGS BRIDGE APPROACH TRANSITION SECTION (REGULAR/NO CURB)	TYPE A CRASHWORTHY END TERMINAL (MASH)	MGS GUARDRAIL	REMARKS
				(EA)	(EA)	(LF)	
4	431+61	432+75	RT	1	1	25	SE CORNER BR#A9409
4	431+87	432+75	LT	1	1		SW CORNER BR#A9409
4	434+26	435+65	LT	1	1	50	NW CORNER BR#A9409
4	434+26	435+14	RT	1	1		NE CORNER BR#A9409
SUBTOTAL				4	4	75	
PAY TOTAL				4	4	75	

POROUS BACKFILL					
SHEET	STATION	STATION	OFFSET	POROUS BACKFILL	REMARKS
				(CUYD)	
6	432+78	432+83	LT/RT	26.7	ASSUMED 5'x6'x24'
6	434+18	434+23	LT/RT	26.7	ASSUMED 5'x6'x24'
SUBTOTAL				53.4	
PAY TOTAL				53	

DESCRIPTION						

DATE						
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MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION



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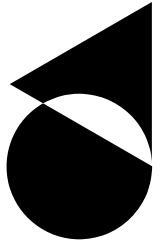
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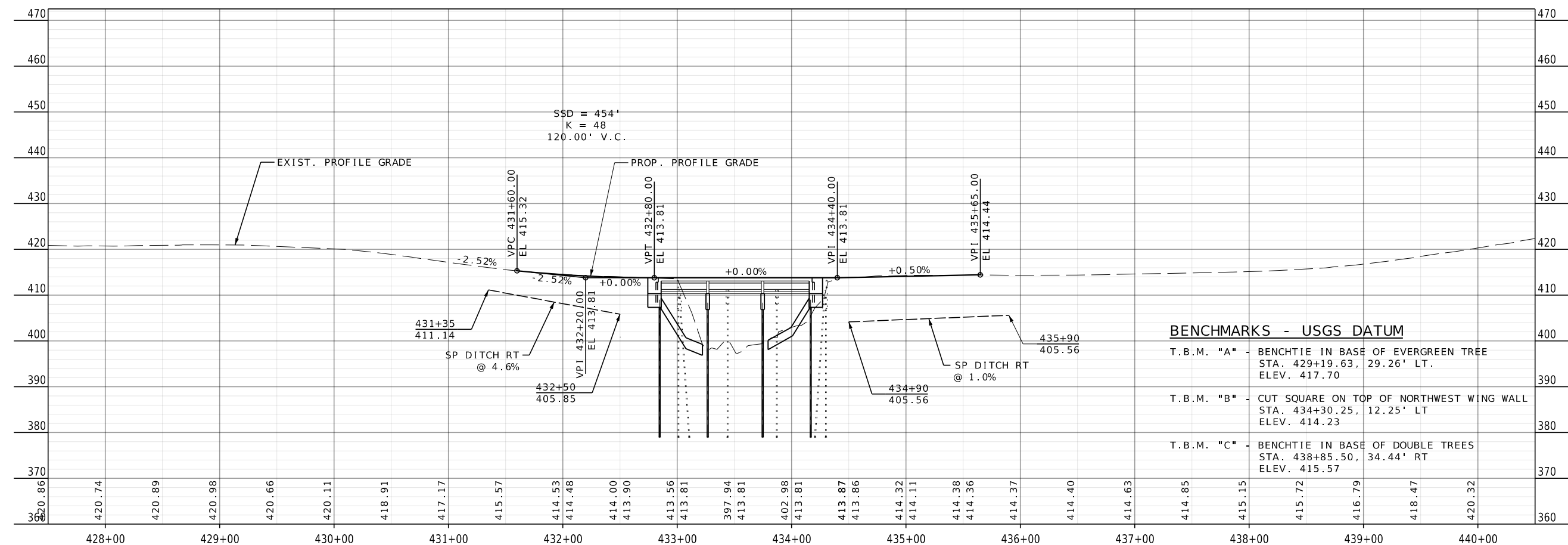
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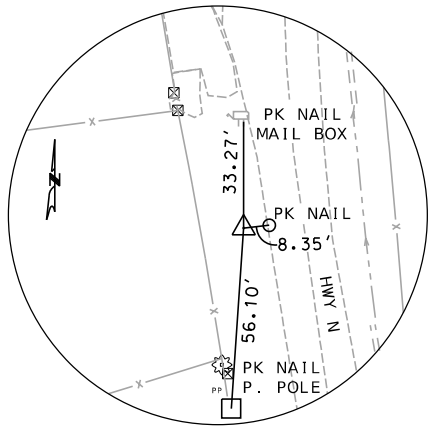
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SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL AREA SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NO.	DESCRIPTION	SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NO.	DESCRIPTION	ITEM NUMBER	TOTAL QTY	EFFECTIVE: 07-01-2025 DESCRIPTION
WARNING SIGNS									GUIDE SIGNS									6122008		IMPACT ATTENUATOR 40 MPH (SAND BARRELS)
WO1-1L	48X48	16.00						TURN (SYMBOL LEFT)	E05-1	36X48	12.00						GORE EXIT	6122008		IMPACT ATTENUATOR 40 MPH (SAND BARRELS)
WO1-1R	48X48	16.00						TURN (SYMBOL RIGHT)	E05-2	48X36	12.00						EXIT OPEN	6122009		IMPACT ATTENUATOR 45 MPH (SAND BARRELS)
WO1-2L	48X48	16.00						CURVE (SYMBOL LEFT)	E05-2a	48X36	12.00						EXIT CLOSED	6122010		IMPACT ATTENUATOR 50 MPH (SAND BARRELS)
WO1-2R	48X48	16.00						CURVE (SYMBOL RIGHT)	GO20-1	60X24	10.00						ROAD WORK NEXT XX MILES	6122012		IMPACT ATTENUATOR 55 MPH (SAND BARRELS)
WO1-3L	48X48	16.00						REVERSE TURN (SYMBOL LEFT)	GO20-2	48X24	8.00						END ROAD WORK	6122014		IMPACT ATTENUATOR 60 MPH (SAND BARRELS)
WO1-3R	48X48	16.00						REVERSE TURN (SYMBOL RIGHT)	GO20-4	36X18	4.50						PILOT CAR FOLLOW ME	6122017		IMPACT ATTENUATOR 65 MPH (SAND BARRELS)
WO1-4L	48X48	16.00						REVERSE CURVE (SYMBOL LEFT)	GO20-4a	42X30	8.75						PILOT CAR IN USE WAIT & FOLLOW	6122019		IMPACT ATTENUATOR 70 MPH (SAND BARRELS)
WO1-4R	48X48	16.00						REVERSE CURVE (SYMBOL RIGHT)	GO20-4a	18X12	1.50						REPLACEMENT SAND BARREL	6122020		IMPACT ATTENUATOR 70 MPH (SAND BARRELS)
WO1-4bL	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL LEFT)	GO20-5aP	36X24	6.00						PILOT CAR IN USE WAIT & FOLLOW	6122030		IMPACT ATTENUATOR (RELOCATION)
WO1-4bR	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL RIGHT)	MO4-8a	24X18	3.00	2	6.00			52	WORK ZONE (PLAQUE)	6122040		WORK ZONE CRASH CUSHION (NARROW)
WO1-4cL	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL LEFT)	MO4-9L	48X36	12.00						END DETOUR	6122041		WORK ZONE CRASH CUSHION (RELOCATION)
WO1-4cR	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL RIGHT)	MO4-9R	48X36	12.00						DETOUR (LEFT)	6123001		TRUCK MOUNTED ATTENUATOR (TMA)
WO1-6	60X30	12.50						HORIZONTAL ARROW (SYMBOL)	MO4-9P	48X12	4.00						DETOUR (RIGHT)	6161012		BUOYS (BOATS KEEP OUT)
WO1-6a	72X36	18.00						HORIZ. ARROW (SYMBOL ON PERMANENT BARRICADE)	MO4-9P	48X12	4.00						STREET NAME (PLAQUE)	6161013		BUOYS (NO WAKE)
WO1-7	60X30	12.50						DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)	MO4-10L	48X18	6.00						DETOUR ARROW (LEFT)	6161014		SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)
WO1-7a	72X36	18.00						DOUBLE HEAD HORIZ. ARROW (SYMBOL ON PERM. BARR.)	MO4-10R	48X18	6.00						DETOUR ARROW (RIGHT)	6161020		CHANNELIZER (DRUM-LIKE)
WO1-8	18X24	3.00						CHEVRON (SYMBOL)	REGULATORY SIGNS									6161022		CHANNELIZER (CONE)
WO1-8a	30X36	7.50						CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)	R1-1	48X48	13.25						STOP	6161025	20	CHANNELIZER (TRIM-LINE)
WO3-1	48X48	16.00						STOP AHEAD (SYMBOL)	R1-2	48TRI	6.93						YIELD	6161026		CHANNELIZER (VERTICAL PANEL)
WO3-2	48X48	16.00						YIELD AHEAD (SYMBOL)	R1-2a	36X36	9.00						TO ONCOMING TRAFFIC (PLAQUE)	6161030	13	TYPE 3 MOVEABLE BARRICADE
WO3-3	48X48	16.00						SIGNAL AHEAD (SYMBOL)	R1-3P	30X12	2.50						ALL WAY (PLAQUE)	6161033		DIRECTION INDICATOR BARRICADE
WO3-4	48X48	16.00						BE PREPARED TO STOP	R2-1	36X48	12.00						SPEED LIMIT XX	6161040		FLASHING ARROW PANEL
WO3-5	48X48	16.00						SPEED LIMIT AHEAD	R3-1	48X48	16.00						NO RIGHT TURN (SYMBOL)	6161047		TYPE 3 OBJECT MARKER
WO4-1L	48X48	16.00						MERGE (SYMBOL FROM LEFT)	R3-2	48X48	16.00						NO LEFT TURN (SYMBOL)	6161055		SEQUENTIAL FLASHING WARNING LIGHT
WO4-1R	48X48	16.00						MERGE (SYMBOL FROM RIGHT)	R3-3	36X36	9.00						NO TURNS	6161070		TUBULAR MARKER
WO4-1aL	48X48	16.00						MERGE (LEFT)	R3-4	48X48	16.00						NO U-TURN (SYMBOL)	6161095		RADAR SPEED ADVISORY SYSTEM
WO4-1aR	48X48	16.00						MERGE (RIGHT)	R3-7L	30X30	6.25						LEFT LANE MUST TURN LEFT	6161096		CHANGEABLE MESSAGE SIGN, COMMISSION FURNISHED/RETAINED
WO5-1	48X48	16.00						ROAD/BRIDGE/RAMP NARROWS	R3-7R	30X30	6.25						RIGHT LANE MUST TURN RIGHT			CHANGEABLE MESSAGE SIGN WITHOUT COMM. INTERFACE, CONTRACTOR FURNISHED/RETAINED
WO5-3	48X48	16.00						ONE LANE BRIDGE	R4-1	36X48	12.00						PASS WITH CARE	6161098A	4	CHANGEABLE MESSAGE SIGN WITH COMM. INTERFACE, CONTRACTOR FURNISHED/RETAINED
WO5-5	48X48	16.00						NARROW LANES	R4-2	36X48	12.00						KEEP RIGHT (HORIZONTAL ARROW)	6161099		CHANGEABLE MESSAGE SIGN WITH COMM. INTERFACE, CONTRACTOR FURNISHED/RETAINED
WO6-1	48X48	16.00						DIVIDED HIGHWAY (SYMBOL)	R4-7a	36X48	12.00						KEEP LEFT (HORIZONTAL ARROW)	6162000A		WORK ZONE TRAFFIC SIGNAL SYSTEM
WO6-2	48X48	16.00						DIVIDED HIGHWAY END (SYMBOL)	R4-8a	36X48	12.00						DO NOT ENTER	6162002		TEMPORARY LONG-TERM RUMBLE STRIPS
WO6-3	48X48	16.00						TWO WAY TRAFFIC (SYMBOL)	R5-1	30X30	6.25						WRONG WAY	6173600D		TEMPORARY TRAFFIC BARRIER, CONTRACTOR FURNISHED/RETAINED
WO7-3a	30X24	5.00						NEXT XX MILES (PLAQUE)	R5-1a	36X24	6.00						ONE WAY ARROW (LEFT)	6173700B		TEMP. TRAFFIC BARRIER ANCHORED, CONTRACTOR FURNISHED/RETAINED
WO8-1	48X48	16.00						BUMP	R6-1L	54X18	6.75						ONE WAY ARROW (RIGHT)	6173706		TEMP. TRAFFIC BARRIER STIFFNESS TRANSITION CONTRACTOR FURNISHED/RETAINED
WO8-2	48X48	16.00						DIP	R6-1R	54X18	6.75						ONE WAY (LEFT)	6174000A		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION, CONTRACTOR FURNISHED/RETAINED
WO8-3	48X48	16.00						PAVEMENT ENDS	R6-2L	24X30	5.00						ONE WAY (RIGHT)	6175010A		RELOCATING TEMPORARY TRAFFIC BARRIER
WO8-4	48X48	16.00						SOFT SHOULDER	R6-2R	24X30	5.00						ROAD CLOSED	6175011B		RELOCATING TEMP. TRAFFIC BARRIER ANCHORED
WO8-5	48X48	16.00						SLIPPERY WHEN WET (SYMBOL)	R9-9	24X12	2.00						ROAD CLOSED XX MILES AHEAD	6175013		RELOCATING TEMP. TRAFFIC BARRIER STIFFNESS
WO8-6	48X48	16.00						TRUCK CROSSING	R11-3a	60X30	12.50	2	25.00				LOCAL TRAFFIC ONLY (1 MI., 2 MI.)	6175020A		RELOCATING TEMP. TRAFFIC BARRIER HEIGHT
WO8-6c	48X48	16.00						TRUCK ENTRANCE	R11-4	60X30	12.50						ROAD CLOSED TO THRU TRAFFIC	6208064A		TEMPORARY RAISED PAVEMENT MARKER
WO8-7	36X36	9.00						LOOSE GRAVEL	CONST-3A	60X48	20.00						FINE SIGN	9029400		TEMPORARY TRAFFIC SIGNALS
WO8-7a	36X36	9.00						FRESH OIL / LOOSE GRAVEL	CONST-3X	56X12	4.67						SPEEDING/PASSING (PLATE)	9029401		TEMPORARY TRAFFIC SIGNALS AND LIGHTING
WO8-9	48X48	16.00						LOW SHOULDER	MISCELLANEOUS SIGNS											
WO8-11	48X48	16.00						UNEVEN LANES	CONST-5	48X36	12.00						POINT OF PRESENCE			
WO8-12	48X48	16.00						NO CENTER LINE	CONST-5	96X48	32.00						POINT OF PRESENCE			
WO8-15	48X48	16.00						GROOVED PAVEMENT	CONST-8	48X36	12.00						WORK ZONE NO PHONE ZONE			
WO8-15P	30X24	5.00						MOTORCYCLE (PLAQUE)	SPECIAL	96X48	32.00	1	32.00				ROUTE N CLOSED 1 MILES AHEAD			
WO8-17L	48X48	16.00						SHOULDER DROP-OFF (SYMBOL LEFT)	M1-5a	24X12	2.00	17	34.00				STATE ROUTE N			
WO8-17R	48X48	16.00						SHOULDER DROP-OFF (SYMBOL RIGHT)	M5-1	21X15	2.20	4	8.80				ADVANCE STRAIGHT ARROW	17A,17B		
WO8-17P	30X24	5.00						SHOULDER DROP-OFF (PLAQUE)	MO4-8	24X12	2.00	17	34.00				DETOUR	17		
W10-1	42RND.	9.62						RAILROAD CROSSING	M5-1L	21X15	2.20	5	11.00				ADVANCE TURN ARROW (90° LEFT)	17D,17I		
WO12-1	24X24	4.00						DOUBLE DOWN ARROW (SYMBOL)	M5-1R	21X15	2.20	2	4.40				ADVANCE TURN ARROW (90° RIGHT)	17C		
WO12-2	48X48	16.00						LOW CLEARANCE (SYMBOL)	M6-1L	21X15	2.20	3	6.60				LEFT TURN ARROW	17G,17H		
WO12-2x	24X18	3.00						LOW CLEARANCE (PLAQUE)	M6-1R	21X15	2.20	3	6.60				RIGHT TURN ARROW	17E,17F		
WO12-2a	84X24	14.00						OVERHEAD LOW CLEARANCE (FEET AND INCHES)	M3-1	24X12	2.00	9	18.00				CARDINAL DIRECTION NORTH	17E,17F		
WO12-4	120X60	50.00						LOW CLEARANCE XX FT XX IN XX MILES AHEAD	M3-3	24X12	2.00	8	16.00				CARDINAL DIRECTION SOUTH	17E,17F		
WO12-5	120X60	50.00						WIDTH RESTRICTION XX FT XX IN XX MILES AHEAD	616-10.05 TOTAL											
WO13-1	30X30	6.25						ADVISORY SPEED (PLAQUE)	CONSTRUCTION SIGNS											
WO16-2	30X24	5.00						XXX FEET (PLAQUE)	616-10.10 TOTAL											
WO16-3	30X24	5.00						X MILE (PLAQUE)	RELOCATED SIGNS											
WO20-1	48X48	16.00						ROAD/BRIDGE/RAMP WORK AHEAD	* *											
WO20-2	48X48	16.00	2	32.00			18	DETOUR AHEAD												
WO20-3	48X48	16.00	4	64.00			20	ROAD CLOSED AHEAD (AHEAD-2, 500 FT-2)												
WO20-4	48X48	16.00						ONE LANE ROAD AHEAD												
WO20-5	48X48	16.00						RIGHT/CENTER/LEFT LANE CLOSED AHEAD												
WO20-5a	48X48	16.00						2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD												
WO20-6a	48X48	16.00						RIGHT/CENTER/LEFT LANE CLOSED												
WO20-7a	48X48	16.00						FLAGGER (SYMBOL)												
WO21-2	36X36	9.00						FRESH OIL												
WO21-5	48X48	16.00						SHOULDER WORK / SHOULDER WORK AHEAD												
WO22-1	48X48	16.00						BLASTING ZONE AHEAD												
WO22-2	42X36	10.50						TURN OFF 2-WAY RADIO AND PHONE												
WO22-3	42X36	10.50						END BLASTING ZONE												
GO22-1	21X15	2.19						WET PAINT (ARROW PIVOTS)												

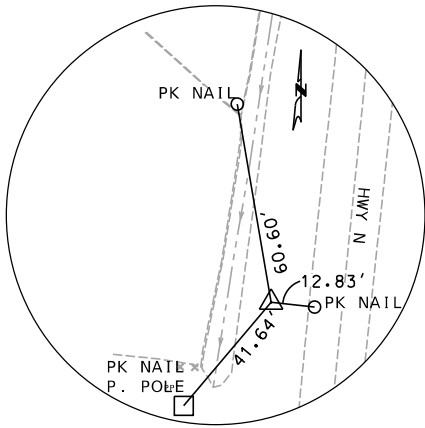
* * NO DIRECT PAY FOR RELOCATING
TEMPORARY TRAFFIC CONTROL
DEVICES



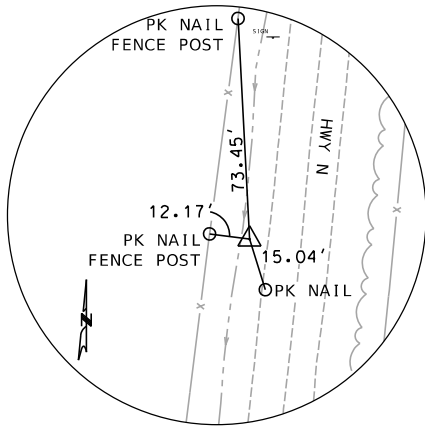
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CONTROL POINT #1
SET IRON ROD WITH ALUMINUM CAP
17' ± EAST OF CL OF ROUTE N & 310' ±
SOUTH OF SOUTH END OF BRIDGE P0631
N: 732900.8132
E: 955401.0428
ELEV: 419.29



CONTROL POINT #2
SET IRON ROD WITH ALUMINUM CAP
120' ± NORTH OF THE NORTH END OF BRIDGE
P0631 & 20' ± WEST OF THE CL OF ROUTE N
N: 733466.8583
E: 955434.6209
ELEV: 409.77



CONTROL POINT #3
SET IRON ROD WITH ALUMINUM CAP
14' ± NORTH OF THE CL OF THE ENTRANCE
TO LITTLE SALINE SPORTSMAN CLUB
N: 734042.2980
E: 955500.3461
ELEV: 423.612

HORIZONTAL AND VERTICAL CONTROL STATEMENT

STATE PLANE COORDINATES ON THIS PROJECT WERE ESTABLISHED UTILIZING THE MISSOURI HIGHWAYS AND TRANSPORTATION COMISSION GLOBAL NAVIGATION SATELLITE REAL TIME NETWORK FOR CONTINUOUSLY OPERATING REFERENCE STATIONS DURING APRIL, 2024 AND ARE BASED ON THE MISSOURI COORDIANTE SYSTEM OF 1983, EAST ZONE. THE AVERAGE COMBINED PROJECT GRID FACTOR IS 0.9999393592

COORDINATE BASE ARE MODIFIED MISSOURI STATE PLANE COORDINATES AND WERE ESTABLISHED BY APPLYING THE INVERSE OF THE PROJECT GRID FACTOR (1.0000606445) ABOUT THE ORIGIN (0,0)

VERTICAL DATUM IS NAVD 88 AS BROADCAST WITH THE MODOT GNSS NETWORK

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Collinsville
100 Lamar Court, Suite 1
Collinsville, MO 63904
618.345.2200

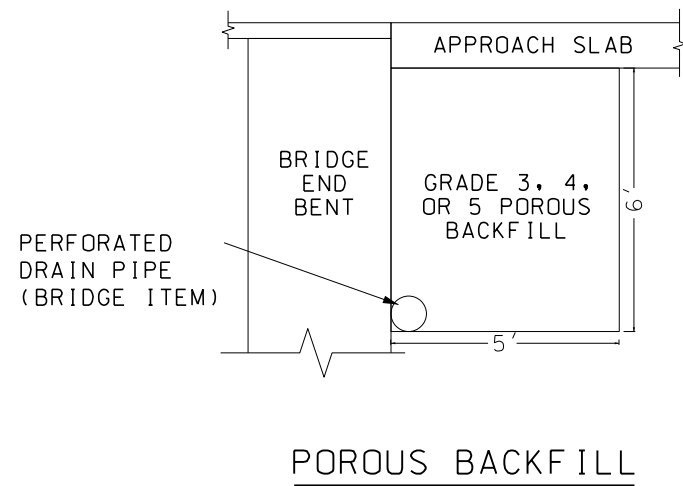
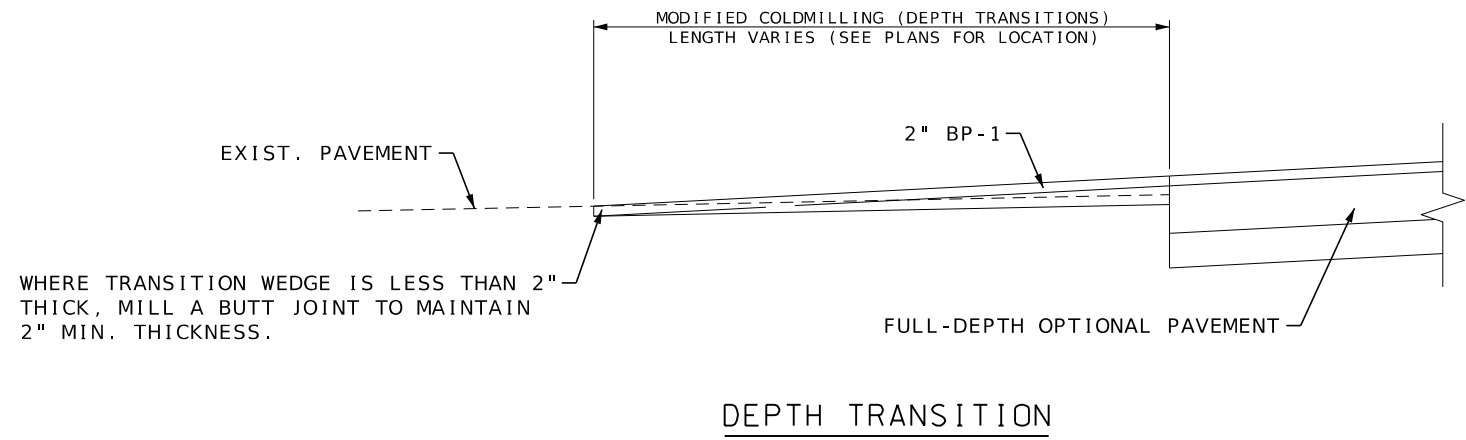
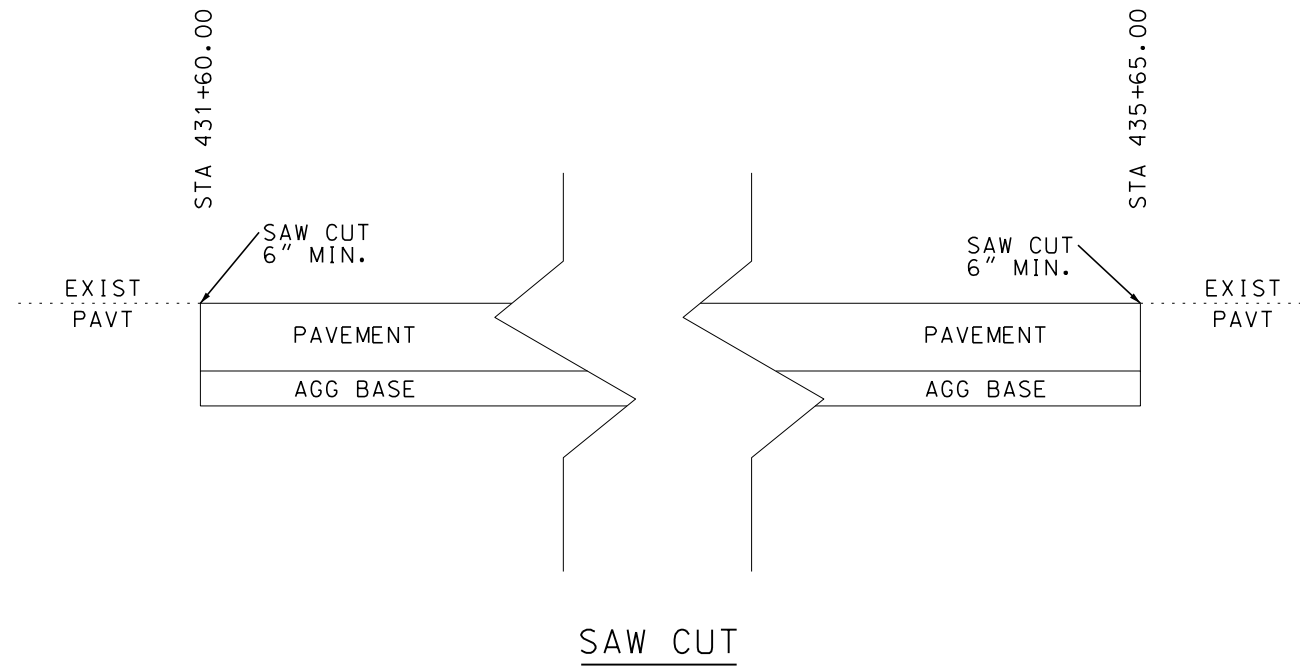
St. Louis
720 Olive, Suite 200
St. Louis, MO 63101
314.598.8381

Bellaire
1 South Church, Suite 200
Bellaire, IL 62220
618.416.4688

St. Charles
870 South Main, Suite 300
St. Charles, MO 63301
636.493.6277

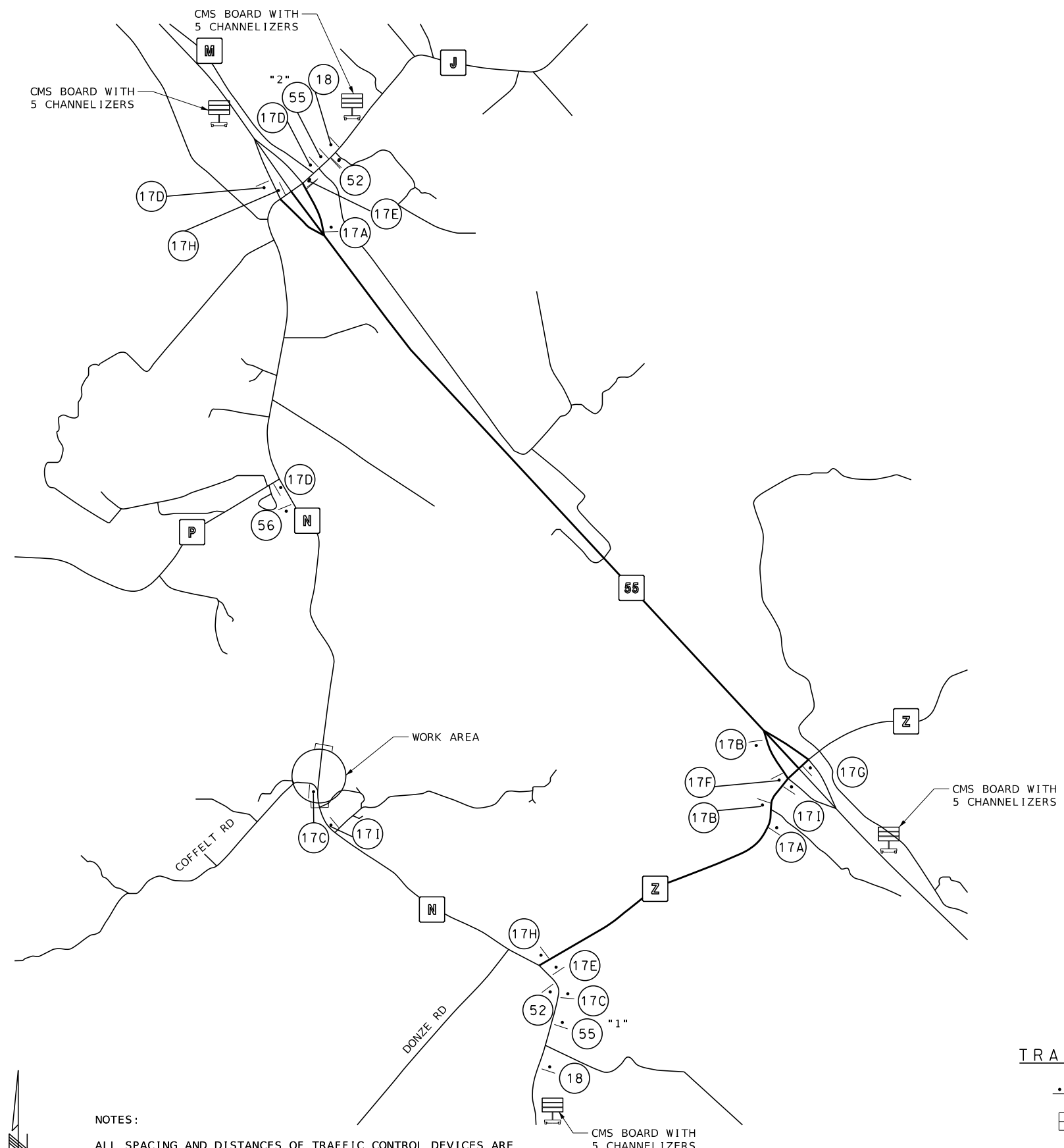
OATES
ASSOCIATES

MISSOURI DESIGN FIRM PE-001166



SPECIAL SHEETS
SHEET 1 OF 1

DATE PREPARED 7/21/2025	
ROUTE N	STATE MO
DISTRICT SE	SHEET NO. 7
COUNTY STE. GENEVIEVE	
JOB NO. JSE0026	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	
DESCRIPTION	DATE
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION	105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)
Collinsville 100 Lamar Court Suite 1 Collinsville, MO 63224 618.345.2200 www.oatesassociates.com St. Louis 720 Olive Suite 200 St. Louis, MO 63101 314.588.8381 St. Charles 870 South Main Suite 300 St. Charles, MO 63301 636.493.6277	Missouri Design Firm PE-001166 OATES ASSOCIATES



NOTES:

ALL SPACING AND DISTANCES OF TRAFFIC CONTROL DEVICES ARE APPROXIMATE. THEY SHALL BE RELOCATED AS DIRECTED BY THE ENGINEER TO FIT FIELD CONDITIONS.

ANY EXISTING SIGNS THAT CONFLICT WITH THIS TRAFFIC CONTROL PLAN SHALL BE COVERED OR REMOVED.

DRAWING NOT TO SCALE

- TRAFFIC CONTROL LEGEND
- SIGN (SINGLE SIDED)
 - E TYPE III MOVEABLE BARRICADE
 - CHANGEABLE MESSAGE BOARD

DETOUR

NORTH

N

↑

MO4-8
M3-1
M1-5a
M5-1

17A

DETOUR

SOUTH

N

↑

MO4-8
M3-3
M1-5a
M5-1

17B

DETOUR

NORTH

N

→

MO4-8
M3-1
M1-5a
M5-1R

17C

DETOUR

SOUTH

N

←

MO4-8
M3-3
M1-5a
M5-1L

17D

DETOUR

NORTH

N

←

MO4-8
M3-1
M1-5a
M5-1L

17I

DETOUR

NORTH

N

→

MO4-8
M3-1
M1-5a
M6-1R

17E

DETOUR

SOUTH

N

→

MO4-8
M3-3
M1-5a
M6-1R

17F

END
DETOUR

MO4-8a

52

DETOUR

NORTH

N

←

MO4-8
M3-1
M1-5a
M6-1L

17G

DETOUR

SOUTH

N

←

MO4-8
M3-3
M1-5a
M6-1L

17H

CLOSED
1 MILES
AHEAD

SPECIAL

56

DETOUR
AHEAD

WO20-2

18

ROAD CLOSED
X MILES AHEAD
LOCAL TRAFFIC ONLY

R11-3a

55

"X" EQUALS MILES
NOTED NEXT TO
SIGN NUMBER

DATE PREPARED 7/21/2025	
ROUTE N	STATE MO
DISTRICT SE	SHEET NO. 8
COUNTY STE. GENEVIEVE	
JOB NO. JSE0026	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	
DESCRIPTION	
DATE	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION	
105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)	
St. Louis 720 Olive, Suite 200 St. Louis, MO 63101 618.416.6688	St. Charles 870 South Main, Suite 300 St. Charles, MO 63301 636.493.6277
Collinsville 100 Lander Court, Suite 1 Collinsville, MO 63904 618.345.2200	Bellaire 1 South Church, Suite 200 Bellaire, IL 62220 618.416.6688
MISSOURI DESIGN FIRM PE-001166	

	SILT FENCE
	2' TYPE 2 ROCK BLANKET W/PERMANENT EROSION CONTROL GEOTEXTILE
	TYPE 2D HEAVY DOUBLE-NET EROSION CONTROL BLANKET
	TYPE C BERM
	ROCK DITCH CHECK

TYPE C BERM
 ROCK DITCH CHECK
 PRIMARY RECEIVING WATERS: LITTLE SALINE CREEK

430
 435
 440

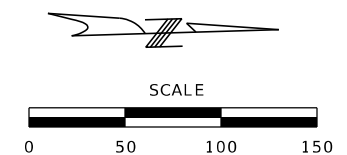
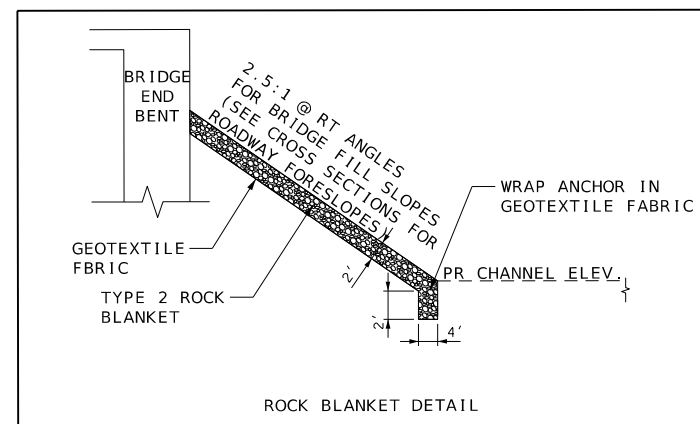
LITTLE SALINE CREEK
 EX ESM'T
 EX R/W
 EX ESM'T
 EX R/W
 N05°58'26"E
 30'

SILT FENCE 153 LF
 +72 22' LT
 +64 31' LT
 +64 12' LT
 +23 34' LT
 +35 36' RT
 SILT FENCE 190 LF
 PT STA 431+93.70
 +64 12' RT
 +64 40' RT
 2' F.B.D. & VARIES
 5 ROCK DITCH CHECKS
 SPACED AT 30'
 TYPE C BERM 194 LF
 +23 42' RT

+99 38' LT
 TYPE C BERM 159 LF
 +38 41' LT
 SILT FENCE 183 LF
 +78 28' LT
 EX R/W
 EX R/W
 +90 35' RT
 SILT FENCE 195 LF
 +38 41' RT
 2' F.B.D. & VARIES
 2 ROCK DITCH CHECKS
 SPACED AT 150'

BRIDGE END BENT
 2.5:1 @ RT ANGLES
 FOR BRIDGE FILL SLOPES
 (SEE CROSS SECTIONS FOR
 ROADWAY FORESLOPES)
 GEOTEXTILE FBRIC
 TYPE 2 ROCK
 WRAP ANCHOR IN
 GEOTEXTILE FABRIC
 PR. CHANNEL ELEV.

SCALE



EROSION CONTROL SHEET
SHEET 1 OF 1

DATE PREPARED	
7/21/2025	
ROUTE	STATE
N	MO
DISTRICT	SHEET NO.
SE	10
COUNTY	
STE. GENEVIEVE	
JOB NO.	
JSE0026	
CONTRACT ID.	
.	
PROJECT NO.	
.	
BRIDGE NO.	

[illegible]

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



OATES
ASSOCIATES

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Belleville, IL 62220
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St. Charles
820 South Main, Suite 309
St. Charles, MO 63301
(636) 493-6277

MISSOURI DESIGN FIRM PE-001166
www.oatesassociates.com

Estimated Quantities				
Item		Substr.	Superstr.	Total
Class 1 Excavation	cu. yard	65		65
Removal of Bridges (P0631)	lump sum			1
Bridge Approach Slab (Minor)	sq. yard		107	107
Galvanized Structural Steel Piles (12 in.)	linear foot	196		196
Galvanized Structural Steel Piles (14 in.)	linear foot	345		345
Pre-Bore for Piling	linear foot	250		250
Pile Point Reinforcement	each	18		18
Class B Concrete (Substructure)	cu. yard	39.4		39.4
Slab on Concrete I-Girder	sq. yard		399	399
Type H Barrier	linear foot		306	306
Type 2 (32 in.), Prestressed Concrete I-Girder	linear foot		527	527
Reinforcing Steel (Bridges)	pound	2780		2780
Fabricated Structural Carbon Steel (Misc.)	pound	900		900
Slab Drain	each		26	26
Vertical Drain at End Bents	each			2
Plain Neoprene Bearing Pad	each		24	24

All concrete above the construction joint in the end bents is included in the Estimated Quantities for Slab on Concrete I-Girder.

All reinforcement in the end bents is included in the Estimated Quantities for Slab on Concrete I-Girder.

All reinforcement in the intermediate bent concrete diaphragms except reinforcement embedded in the beam cap is included in the Estimated Quantities for Slab on Concrete I-Girder.

All concrete above the intermediate beam cap is included in the Estimated Quantities for Slab on Concrete I-Girder.

Cost of L4x4 ASTM A709 Grade 36 HP pile anchors and 3/4-inch diameter ASTM F3125 Grade A325 Type 1 bolts, complete in place, will be considered completely covered by the contract unit prices for Galvanized Structural Steel Piles (12 in.) and Galvanized Structural Steel Piles (14 in.).

The cost of furnishing and installing steel sway bracing on piles at the intermediate bents will be considered completely covered by the contract unit price for Fabricated Structural Carbon Steel (Misc.).

Cost of cleaning and galvanizing of bracing at intermediate bents will be considered completely covered by the contract unit price for other items.

General Notes:

Design Specifications:
2020 AASHTO LRFD Bridge Design Specifications (9th Ed.)
2023 AASHTO Guide Specifications for LRFD Seismic Bridge Design (3rd Ed.)
Seismic Design Category = C (Seismic Details)
Design earthquake response spectral acceleration coefficient at 1.0 second period, SD1 = 0.206g
Acceleration Coefficient (effective peak ground acceleration coefficient), As = 0.317g

Design Loading:
Vehicular = HL-93
Future Wearing Surface = 35 lb/sf
Earth = 120 lb/cf
Equivalent Fluid Pressure = 45 lb/cf
Superstructure: Simply-Supported, Non-Composite for dead load.
Continuous Composite for live load.

Design Unit Stresses:
Class B Concrete (Substructure) f'c = 3,000 psi
Class B-2 Concrete (Superstructure, except Prestressed Girders and Barrier) f'c = 4,000 psi
Class B-1 Concrete (Barrier) f'c = 4,000 psi
Reinforcing Steel (ASTM A706 Grade 60) fy = 60,000 psi
Structural Carbon Steel (ASTM A709 Grade 36) fy = 36,000 psi
Structural Steel HP Pile (ASTM A709 Grade 50S) fy = 50,000 psi

For precast prestressed panel stresses, see Sheet No. 17.
For prestressed girder stresses, see Sheets No. 14 and 15.

Neoprene Pads:
Neoprene bearing pads shall be 60 durometer and shall be in accordance with Sec 716.

Joint Filler:
All joint filler shall be in accordance with Sec 1057 for preformed sponge rubber expansion and partition joint filler, except as noted.

Reinforcing Steel:
Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.

Minimum clearance between galvanized piles and uncoated (plain) reinforcing steel including bar supports shall be 1 1/2". Nylon, PVC, or polyethylene spacers shall be used to maintain clearance. Nylon cable ties shall be used to bind the spacers to the reinforcement.

Traffic Handling:
Structure to be closed during construction. Traffic to be maintained on other routes during construction. See roadway plans for traffic control.

Miscellaneous:
MoDOT Construction personnel will indicate the type of joint filler option used under the precast panels for this structure:
☐ Constant Joint Filler
☐ Variable Joint Filler

Estimated Quantities for Slab on Concrete I-Girder		
Item		Total
Class B-2 Concrete	cu. yard	103
Reinforcing Steel (Epoxy Coated)	pound	26,790

The table of Estimated Quantities for Slab on Concrete I-Girder represents the quantities used by the State in preparing the cost estimate for concrete slabs. The area of the concrete slab will be measured to the nearest square yard longitudinally from end of slab to end of slab and transversely from out to out of bridge slab (or with the horizontal dimensions as shown on the plan of slab). Payment for prestressed panels, conventional forms, all concrete and epoxy coated reinforcing steel will be considered completely covered by the contract unit price for the slab. Variations may be encountered in the estimated quantities but the variations cannot be used for an adjustment in the contract unit price.

Method of forming the slab shall be as shown on the plans and in accordance with Sec 703. All hardware for forming the slab to be left in place as a permanent part of the structure shall be coated in accordance with ASTM A123 or ASTM B633 with a thickness class SC 4 and a finish type 1, 11 or 111.

Class B-2 Concrete quantity is based on minimum top flange thickness and minimum joint material thickness.

The prestressed panel quantities are not included in the table of Estimated Quantities for Slab and Concrete I-Girder.

Foundation Data					
Type	Design Data	Bent Number			
		1	2	3	4
Load Bearing Pile	Pile Type and Size	HP 12x53	HP 14x73	HP 14x73	HP 12x53
	Number	ea 4	5	5	4
	Approximate Length Per Each	ft 23	31	38	26
	Pile Point Reinforcement	ea All	All	All	All
	Min. Galvanized Penetration (Elev.)	ft Full Length	Full Length	Full Length	Full Length
	Est. Max. Scour Depth 100-yr (Elev.)	ft -	393	393	-
	Minimum Tip Penetration (Elev.)	ft 390	377	370	393
	Criteria for Min. Tip Penetration	Min. Embed	Lateral Stab.	Other	Min. Embed
	Pile Driving Verification Method	ft DF	DF	DF	DF
	Resistance Factor	0.4	0.4	0.4	0.4
	Minimum Nominal Axial Compressive Resistance	kip 368	550	550	368

DF = FHWA-modified Gates Dynamic Formula

Load Bearing Piles:
Minimum Nominal Axial Compressive Resistance = $\frac{\text{Maximum Factored Loads}}{\text{Resistance Factor}}$

Prebore for piles at Bents No. 2 and 3 to elevations 377.4 and 370.3, respectively.

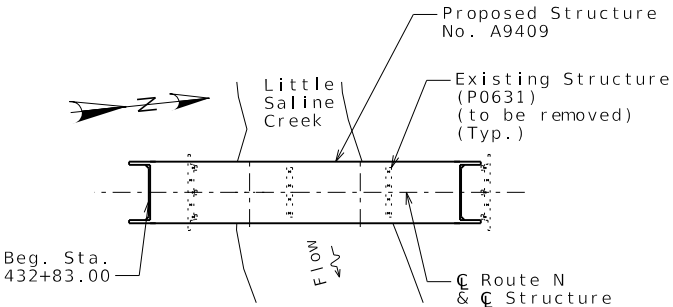
Piles at Bents No. 2 and 3 to be set-in-rock at the specified elevations and tapped with the pile driving hammer to ensure the piles are seated on rock. Rock socket diameters to be 24 inches. Piles shall be encased in Class B concrete within the rock socket.

Pile point reinforcement need not be galvanized. Shop drawings will not be required for pile point reinforcement.

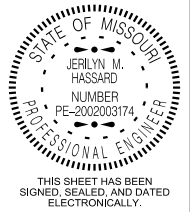
All pile shall be galvanized down to the minimum galvanized penetration (elevation).

The contractor shall make every effort to achieve the minimum galvanized penetration (elevation) shown on the plans for all piles. Deviations in penetration less than 5 feet of the minimum will be considered acceptable provided the contractor makes the nessesary corrections to ensure the minumum penetration is achieved on subsequent piles.

Hydrologic Data
Drainage Area = 14 mi ²
Design Flood Frequency = 50 years
Design Flood Discharge = 5200 cfs
Design Flood (D.F.) Elevation = 409.5
Base Flood (100-year)
Base Flood Elevation = 410.2
Base Flood Discharge = 6100 cfs
Estimated Backwater = 0.6 ft
Average Velocity thru Opening = 7.3 ft/s
Freeboard (50-year)
Freeboard = 1.1 ft
Roadway Overtopping
Overtopping Flood Discharge = N/A
Overtopping Flood Frequency = > 500 years
500-year Flood Elevation = 412.4



LOCATION SKETCH



DATE PREPARED
5/1/25

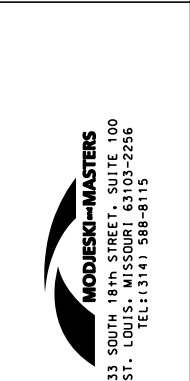
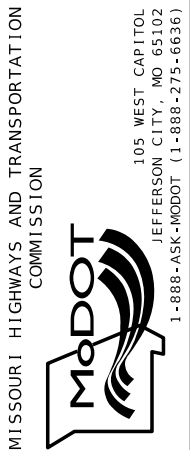
ROUTE N STATE MO
DISTRICT BR SHEET NO. 2

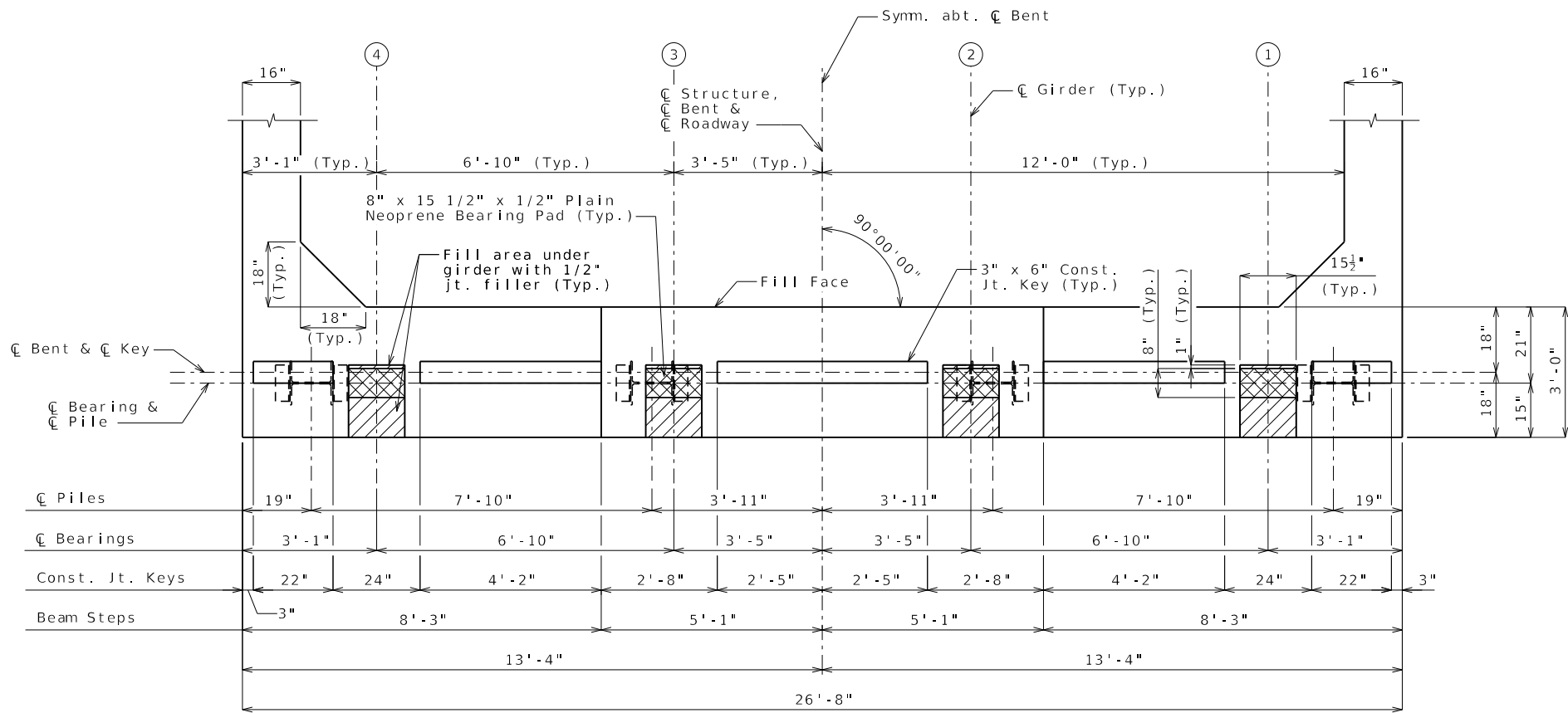
COUNTY
STE. GENEVIEVE
JOB NO.
JSE0026
CONTRACT ID.

PROJECT NO.

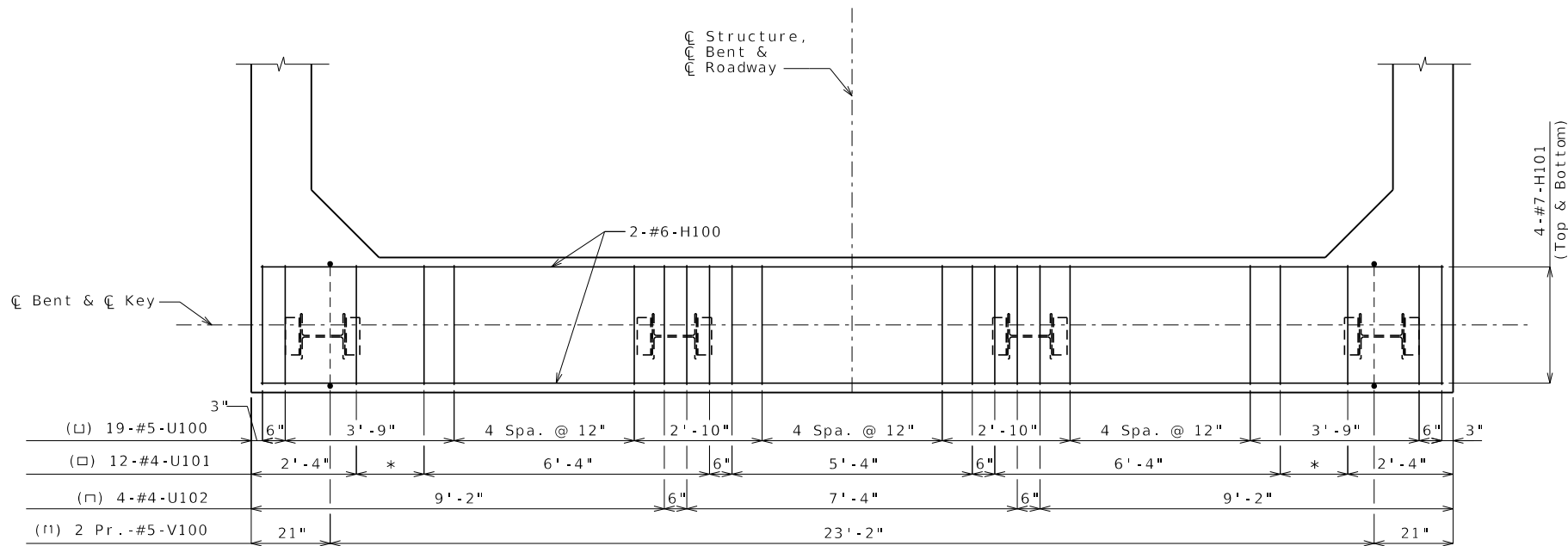
BRIDGE NO.
A9409

DESCRIPTION	DATE



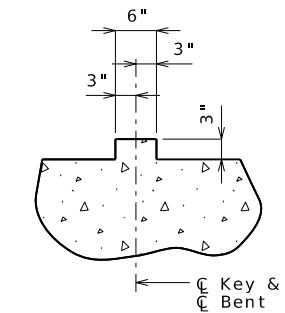


PLAN OF BEAM

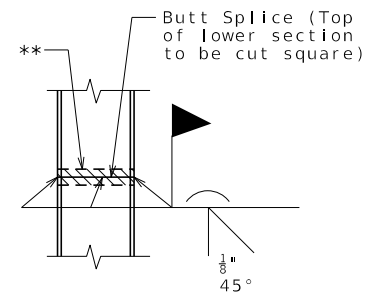


PLAN OF BEAM SHOWING REINFORCEMENT

Keys not shown for clarity.



SECTION THRU KEY



STEEL PILE SPLICE
(If required)

** Galvanizing material shall be omitted or removed one inch clear of weld locations in accordance with Sec 702.

* 3 Spa. @ 6"

NOTES:

Work this sheet with Sheets No. 4 & 5.

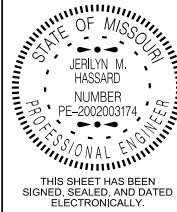
Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

For details of Vertical Drain at End Bents, see Sheet No. 6.

Substructure Quantity Table for Bent No. 1

Item	Quantity
Class 1 Excavation	cu. yard 60
Galvanized Structural Steel Pile (12 in.)	linear foot 92
Pile Point Reinforcement	each 4
Class B Concrete (Substructure)	cu. yard 10.4

These quantities are included in the Estimated Quantities table on Sheet No. 2.



DATE PREPARED
5/1/25

ROUTE
N

STATE
MO

DISTRICT
BR

SHEET NO.
3

COUNTY
STE. GENEVIEVE

JOB NO.
JSE0026

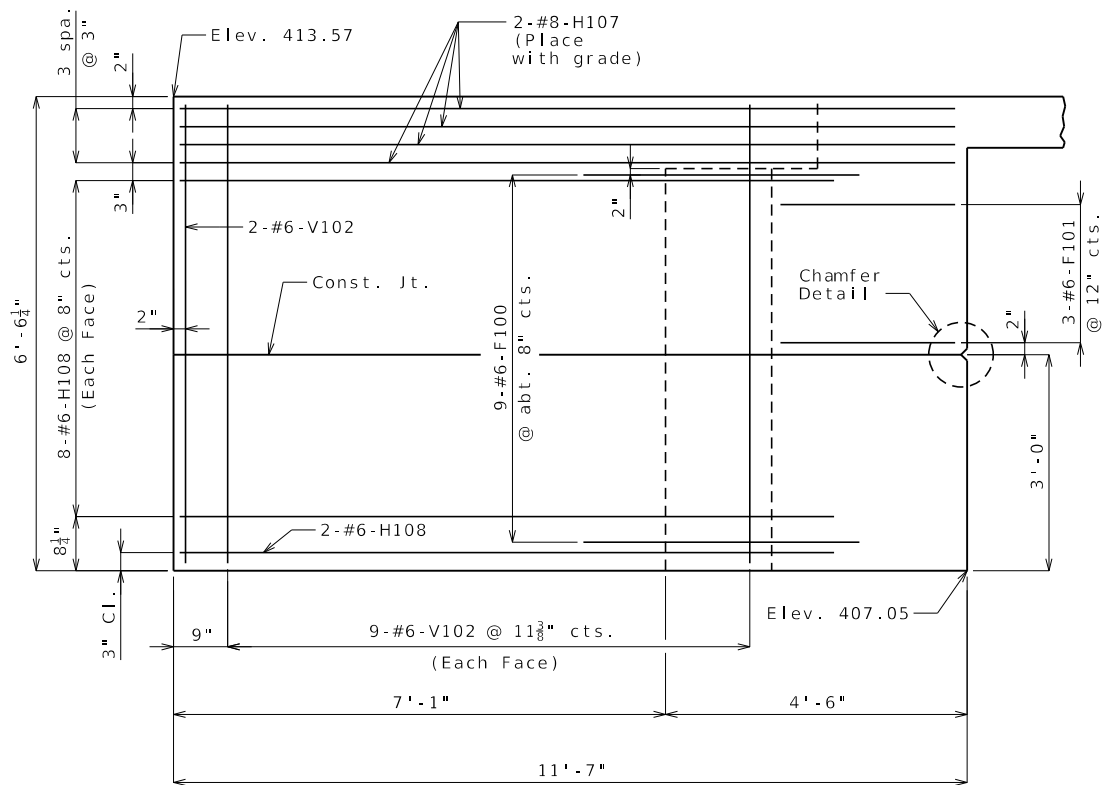
CONTRACT ID.

PROJECT NO.

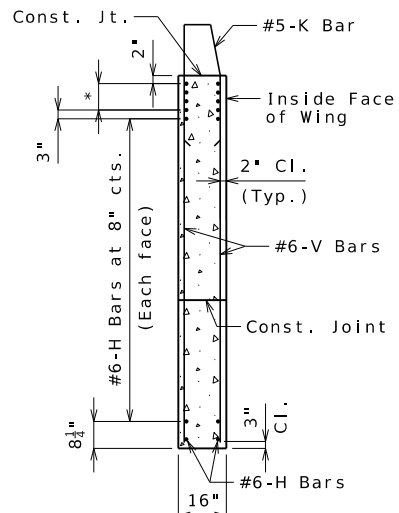
BRIDGE NO.
A9409

DESCRIPTION	DATE

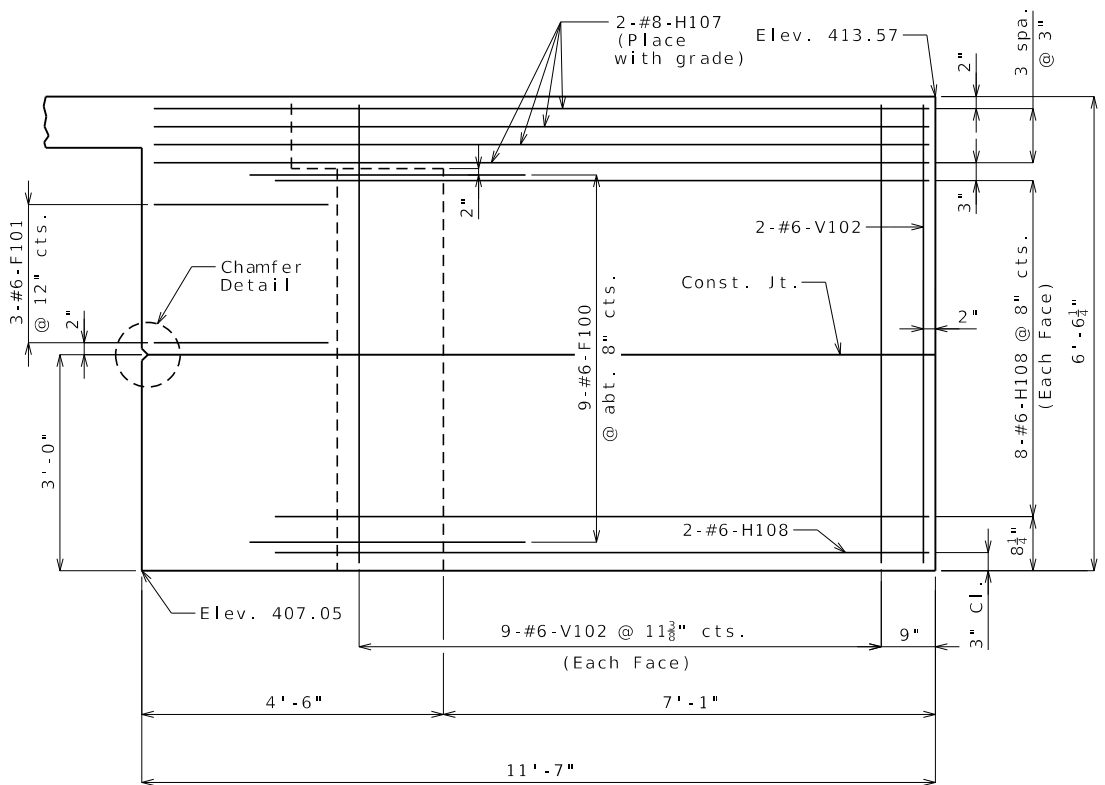




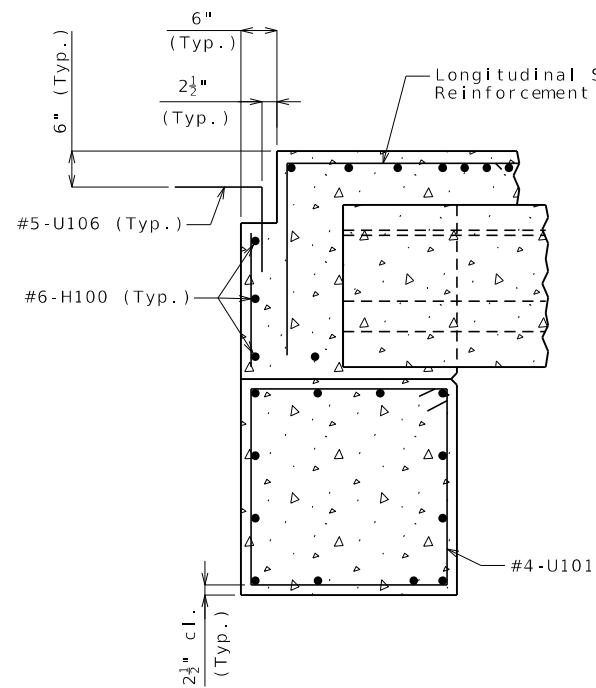
ELEVATION E-E



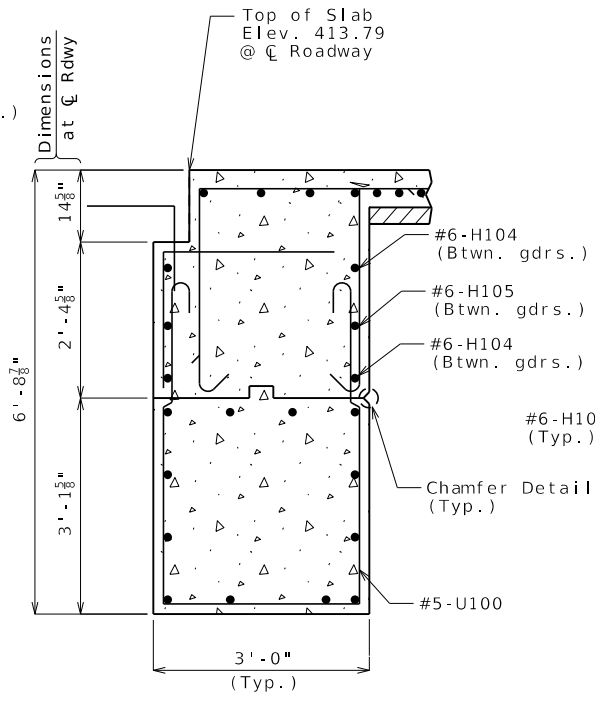
TYPICAL SECTION THRU WING
* #8-H Bars at 3" cts. (Each face) (Place with grade)



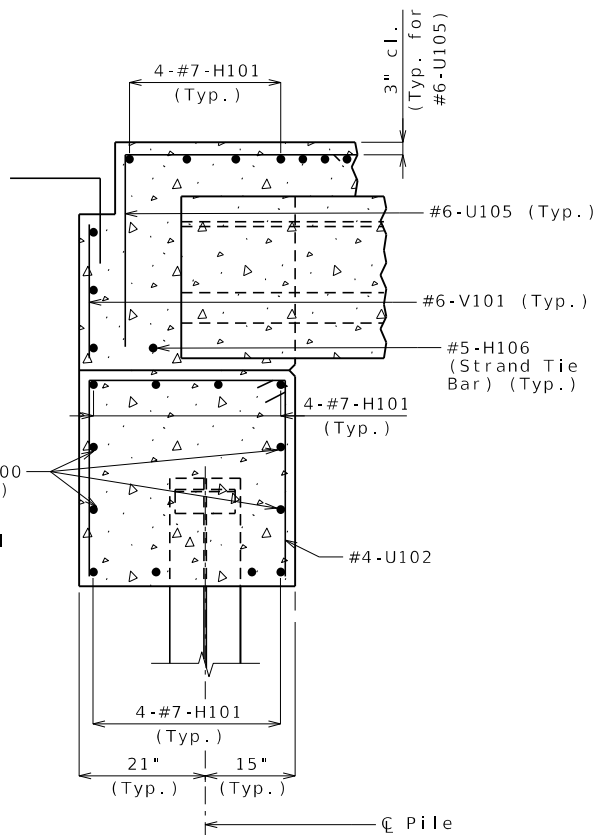
ELEVATION F-F



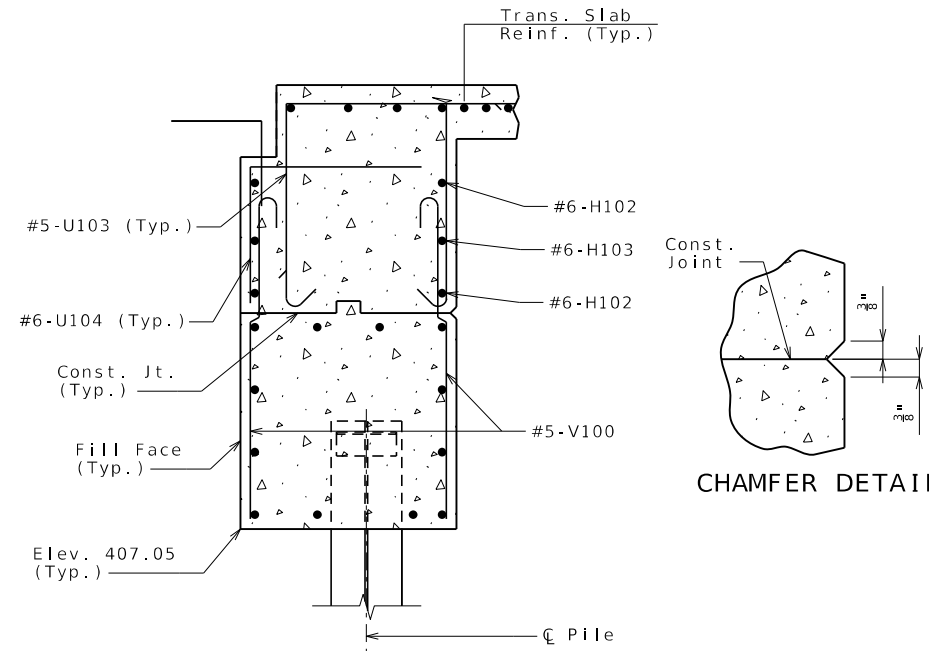
SECTION A-A



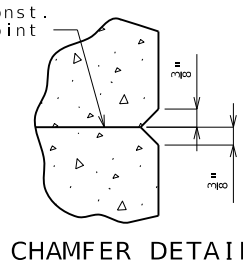
SECTION B-B



SECTION C-C



SECTION D-D



CHAMFER DETAIL

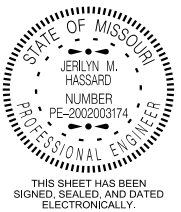
Detailed Nov. 2024
Checked Jan. 2025

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 5 of 31

DETAILS OF END BENT NO. 1

Notes:
Work this sheet with Sheets No. 3 & 4.
For location of Sections A-A, B-B, C-C, & D-D and Elevations E-E & F-F, see Sheet No. 4.
For reinforcement of the barrier, see Sheet No. 23.



DATE PREPARED 5/1/25	
ROUTE N	STATE MO
DISTRICT BR	SHEET NO. 5
COUNTY STE. GENEVIEVE	
JOB NO. JSE0026	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. A9409	

DESCRIPTION	DATE

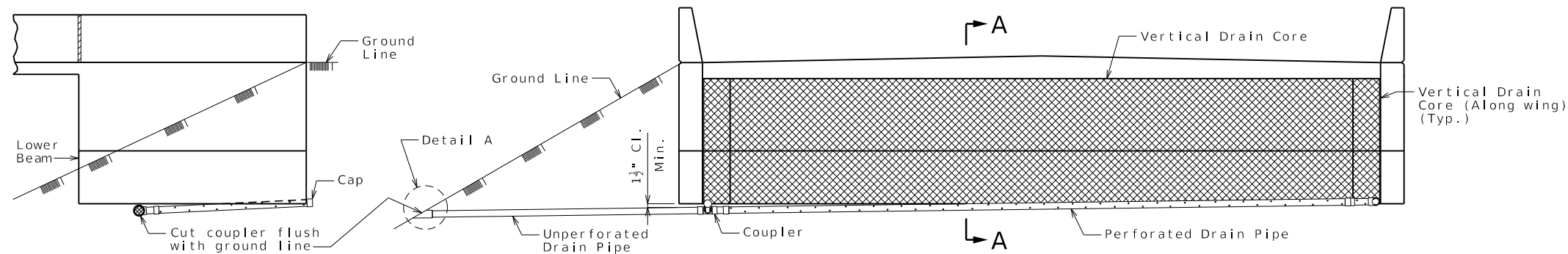
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

MODOT

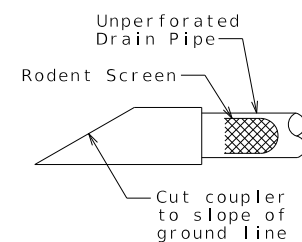
MODJESKI-MASTERS

333 SOUTH 18th STREET, SUITE 100
ST. LOUIS, MISSOURI 63103-2256
TEL: (314) 588-8115

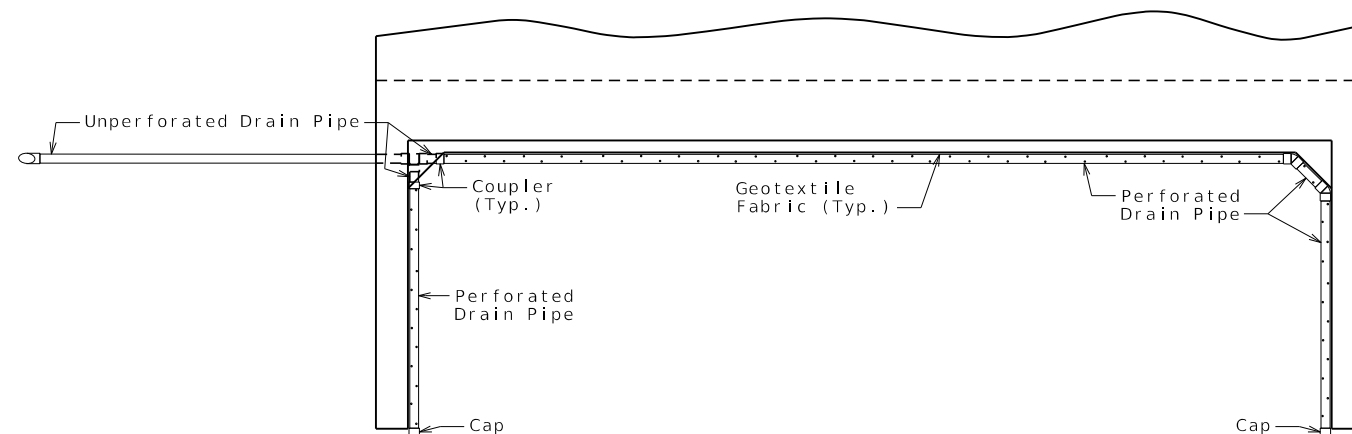


ELEVATION OF WING

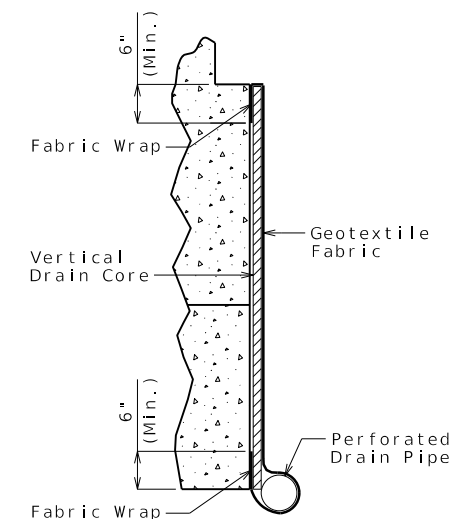
ELEVATION OF END BENT



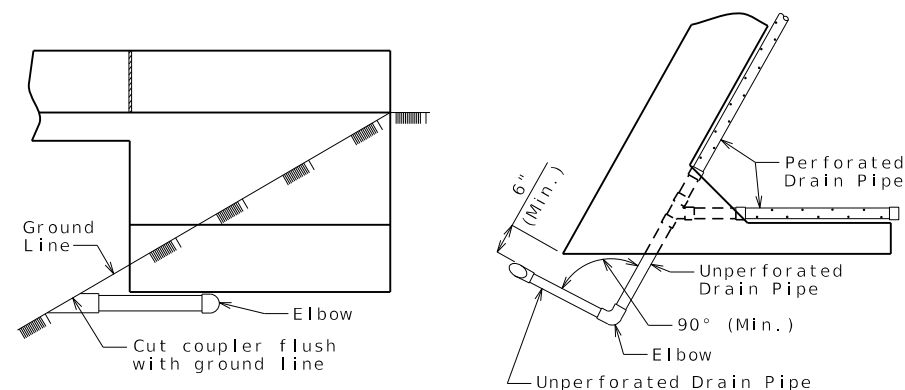
DETAIL A



PLAN OF END BENT



PART SECTION A-A
(Section thru wing similar)



ELEVATION OF WING

PART PLAN

OPTIONAL TURNED DRAIN

(Use only when straight drain is not practical.)

VERTICAL DRAIN AT END BENTS

(Squared end bent shown, skewed end bent similar)

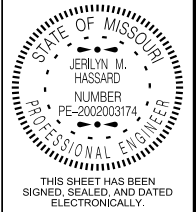
General Notes:

All drain pipe shall be sloped 1 to 2 percent.

Drain pipe may be either 6-inch diameter corrugated metallic-coated steel pipe underdrain, 4-inch diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4-inch diameter corrugated polyethylene (PE) drain pipe.

Drain pipe shall be placed at fill face of end bent and inside face of wings. The pipe shall slope to lowest grade of ground line, also missing the lower beam of end bent by a minimum of 1 1/2 inches.

Perforated pipe shall be placed at fill face side and inside face of wings at the bottom of end bent and plain pipe shall be used where the vertical drain ends to the exit at ground line.



DATE PREPARED
5/1/25

ROUTE N	STATE MO
DISTRICT BR	SHEET NO 6

COUNTY

STE. GENEVIEVE

JOB NO.

JSE0026

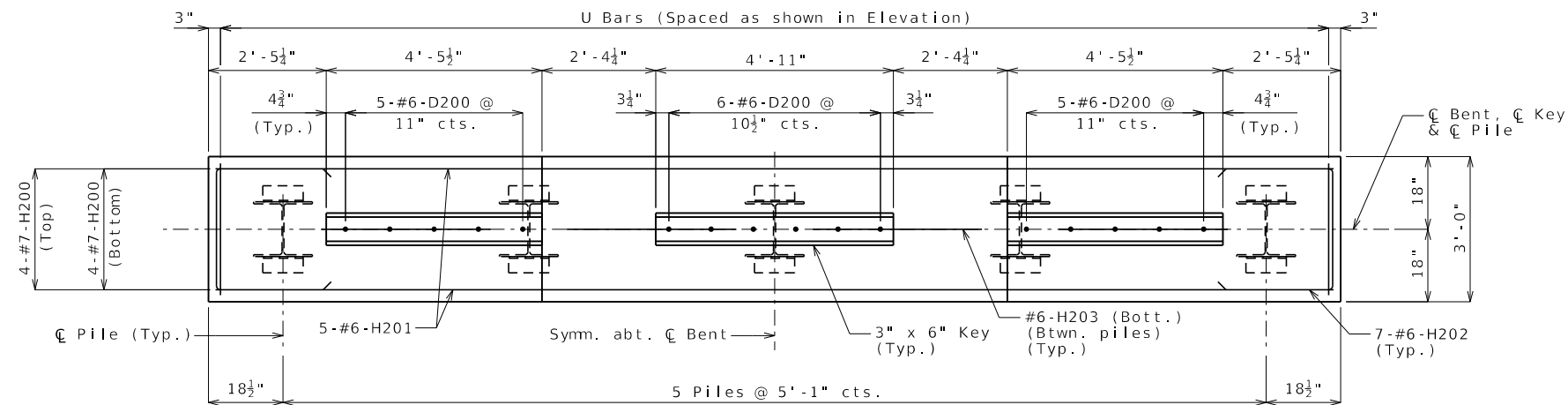
CONTRACT ID.

PROJECT NO.

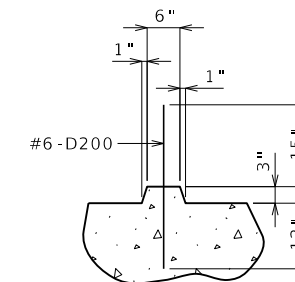
BRIDGE NO.

A9409

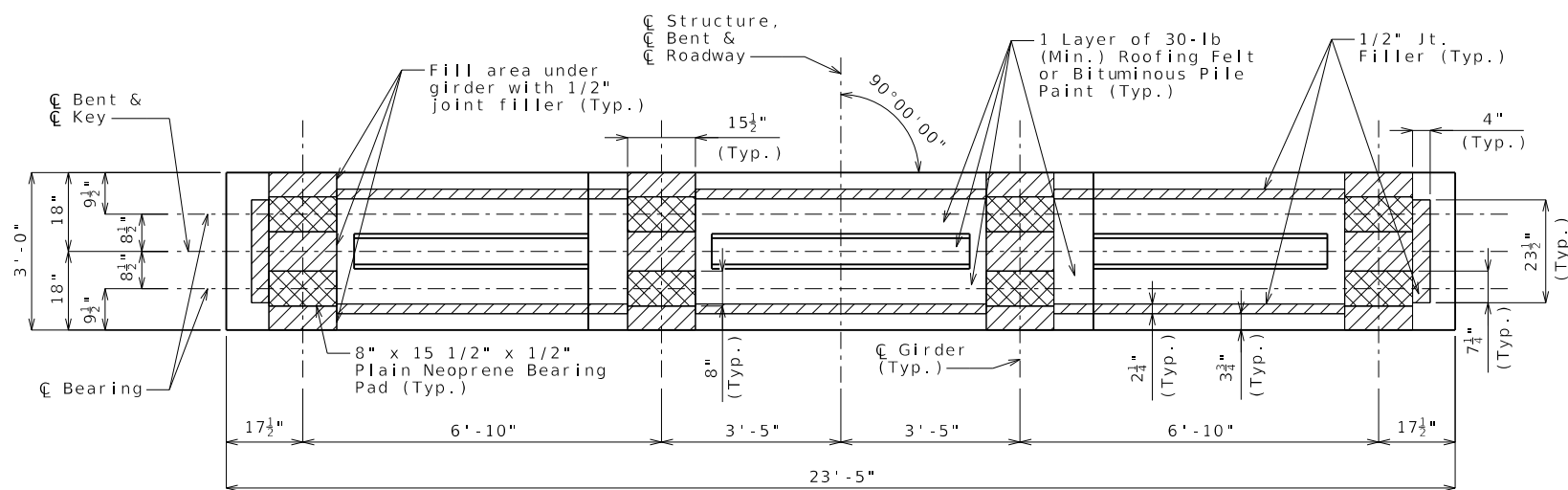
[illegible]MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION



PLAN OF BEAM SHOWING REINFORCEMENT



SECTION THRU KEY



PLAN OF BEAM

DETAILS OF INTERMEDIATE BENT NO. 2

Substructure Quantity Table for Bent No. 2		
Item		Quantity
Galvanized Structural Steel Pile (14 in.)	linear foot	155
Pre-Bore for Piling	linear foot	105
Pile Point Reinforcement	each	5
Class B Concrete (Substructure)	cu. yard	9.3
Reinforcing Steel (Bridges)	pound	1390
Fabricated Structural Carbon Steel (Misc.)	pound	450

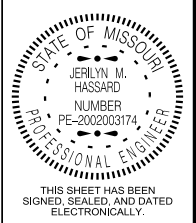
These quantities are included in the Estimated Quantities table on Sheet No. 2.

Work this sheet with Sheet No. 8.

Detailed Nov. 2024
Checked Jan. 2025

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 7 of 31



DATE PREPARED
5/1/25

ROUTE
N

DISTRICT
BR

STATE
MO

SHEET NO.
7

COUNTY
STE. GENEVIEVE

JOB NO.
JSE0026

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9409

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

MODJESKI-MASTERS

333 SOUTH 18th STREET, SUITE 100
ST. LOUIS, MISSOURI 63103-2256
TEL: (314) 588-8115



DATE PREPARED
5/1/25

ROUTE
N MO

DISTRICT
BR SHEET NO. 9

COUNTY
STE. GENEVIEVE

JOB NO.
JSE0026

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9409

DESCRIPTION

DATE

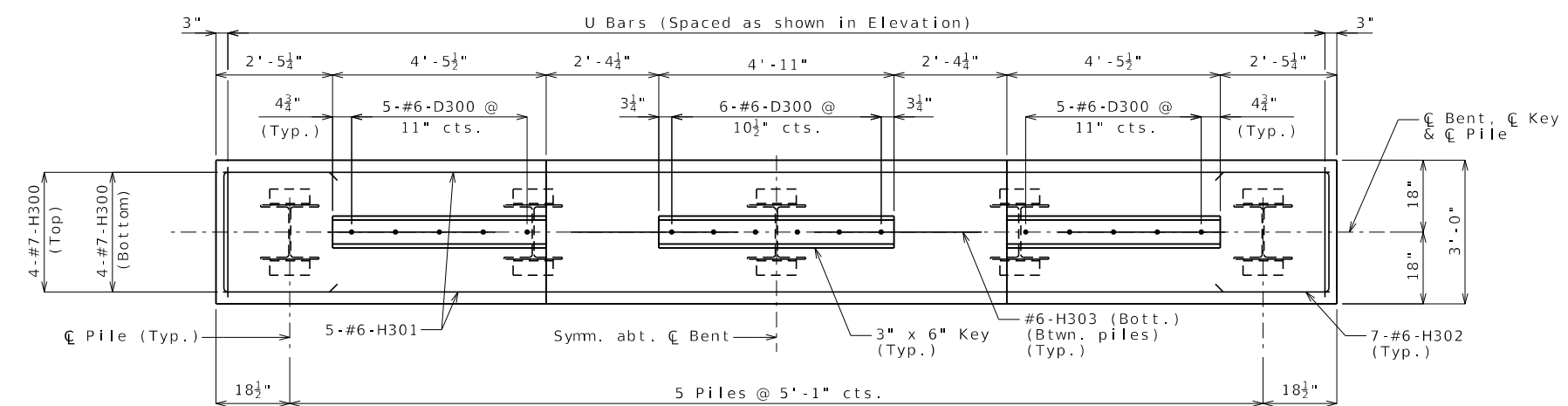
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

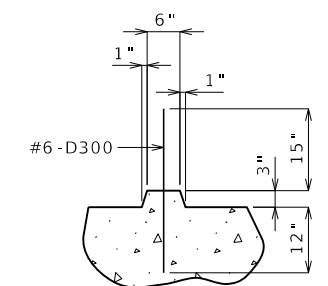
MODOT

MODJSKI-MASTERS

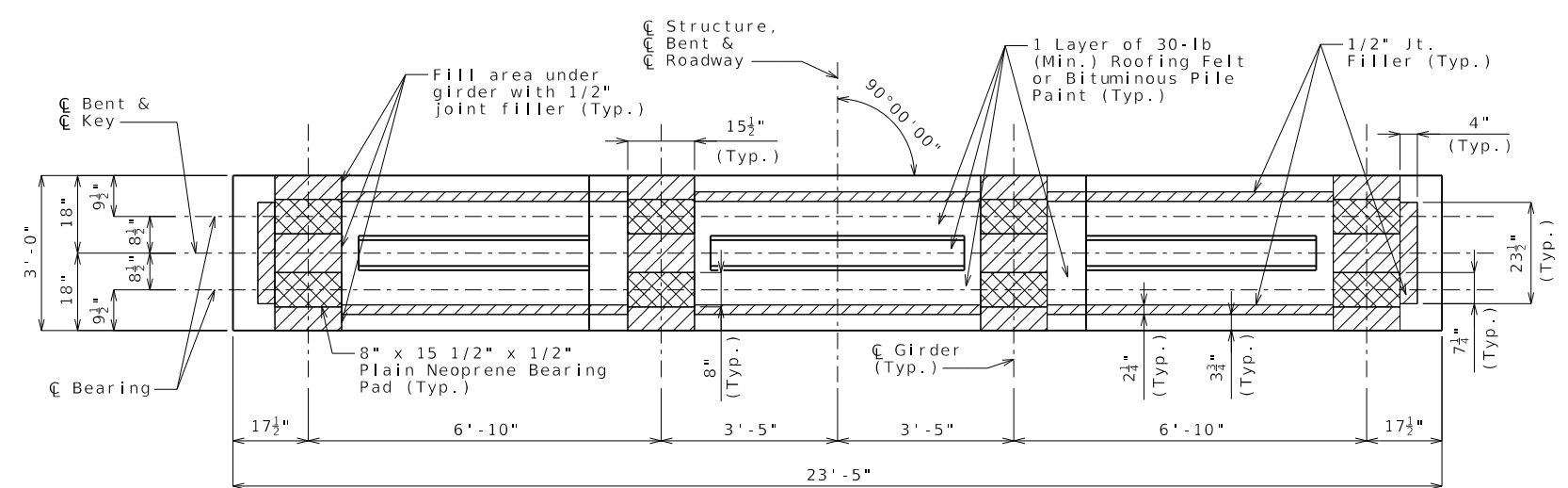
333 SOUTH 18th STREET, SUITE 100
ST. LOUIS, MISSOURI 63103-2256
TEL: (314) 588-8115



PLAN OF BEAM SHOWING REINFORCEMENT



SECTION THRU KEY



PLAN OF BEAM

DETAILS OF INTERMEDIATE BENT NO. 3

Substructure Quantity Table for Bent No. 3			
Item		Quantity	
Galvanized Structural Steel Pile (14 in.)	linear foot	190	
Pre-Bore for Piling	linear foot	145	
Pile Point Reinforcement	each	5	
Class B Concrete (Substructure)	cu. yard	9.3	
Reinforcing Steel (Bridges)	pound	1390	
Fabricated Structural Carbon Steel (Misc.)	pound	450	

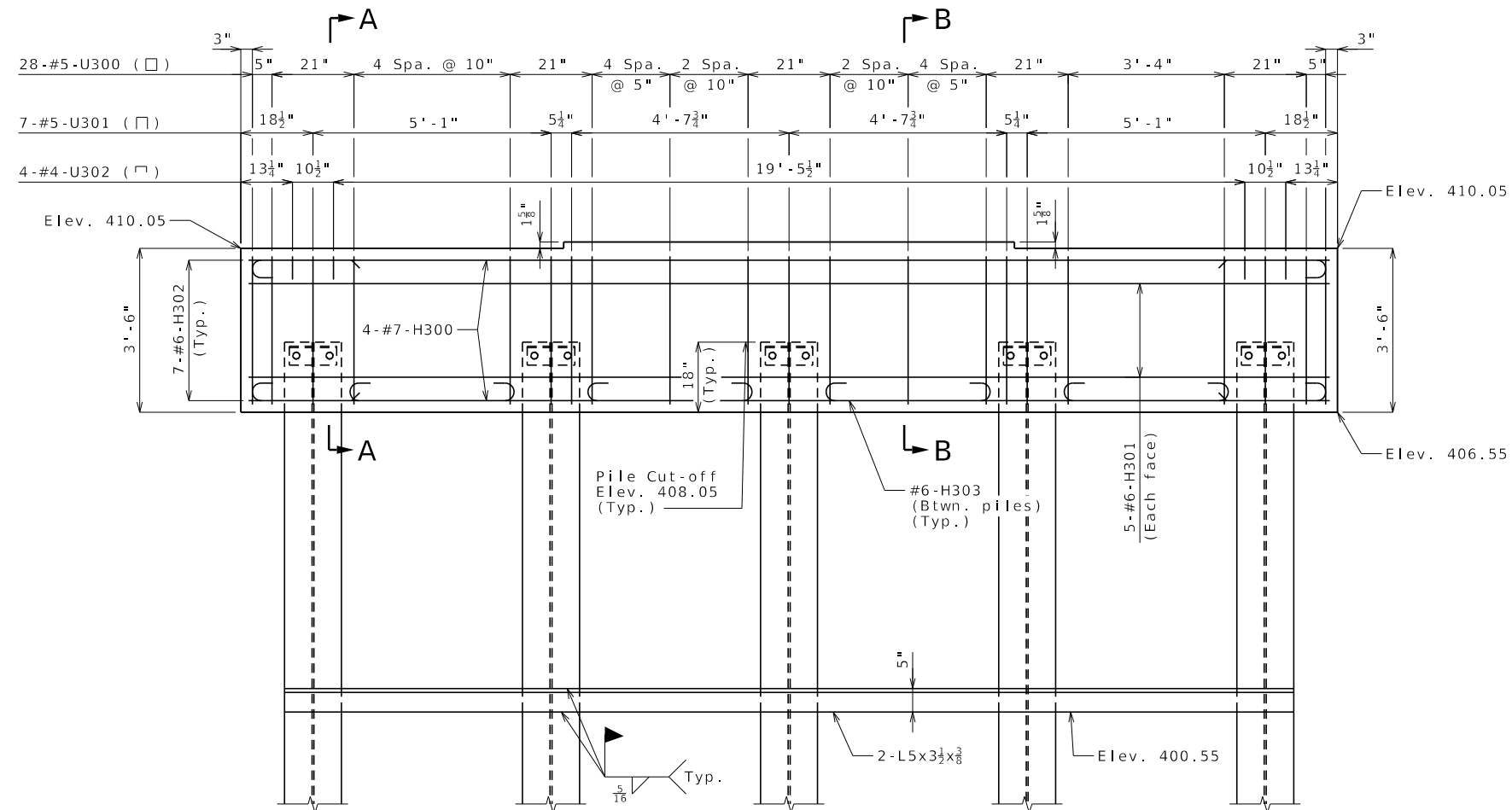
These quantities are included in the Estimated Quantities table on Sheet No. 2.

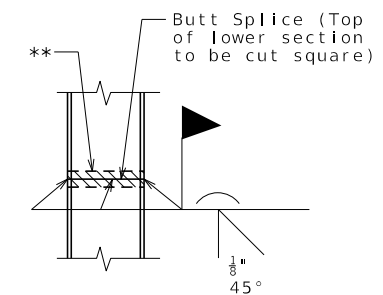
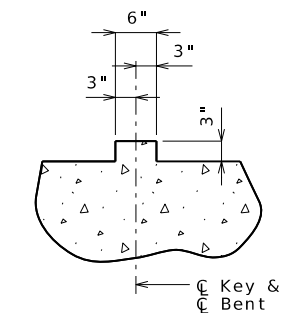
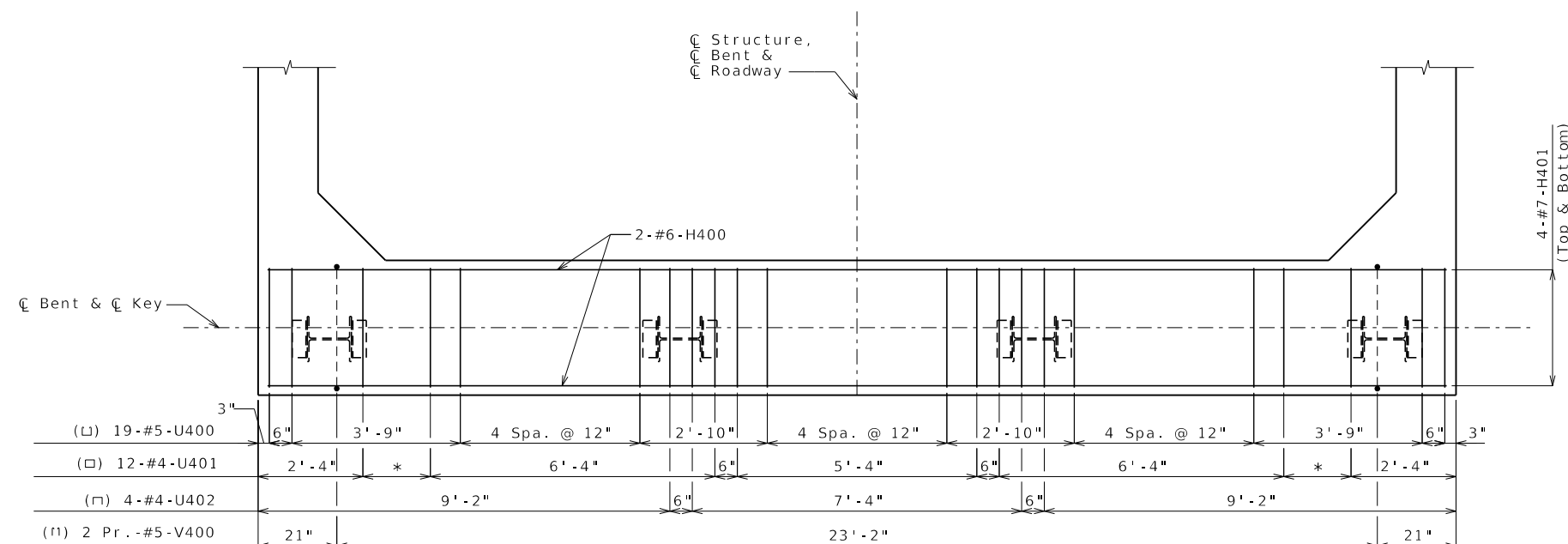
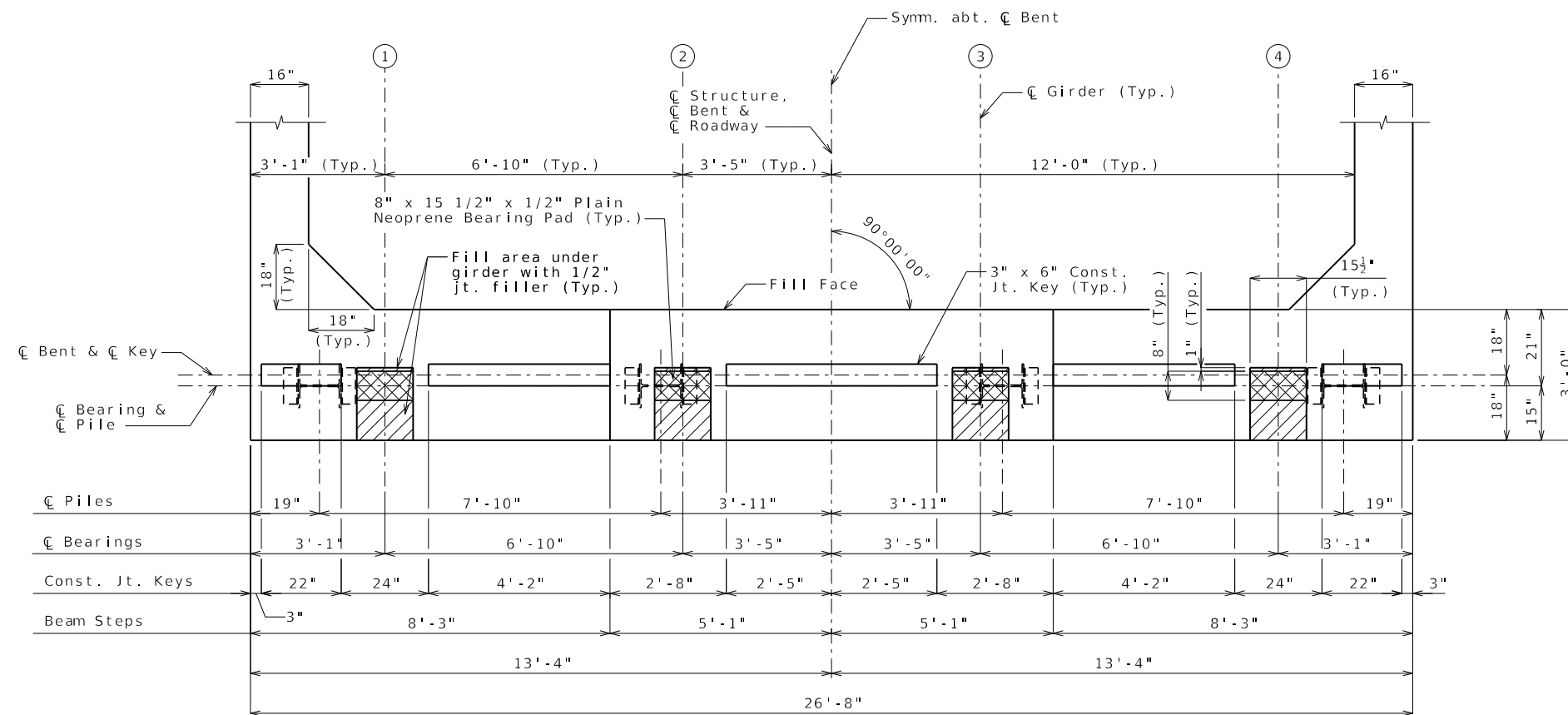
Work this sheet with Sheet No. 10.

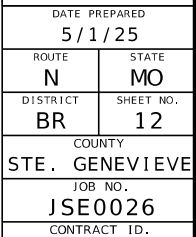
Detailed Nov. 2024
Checked Jan. 2025

Note: This drawing is not to scale. Follow dimensions.

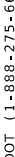
Sheet No. 9 of 31







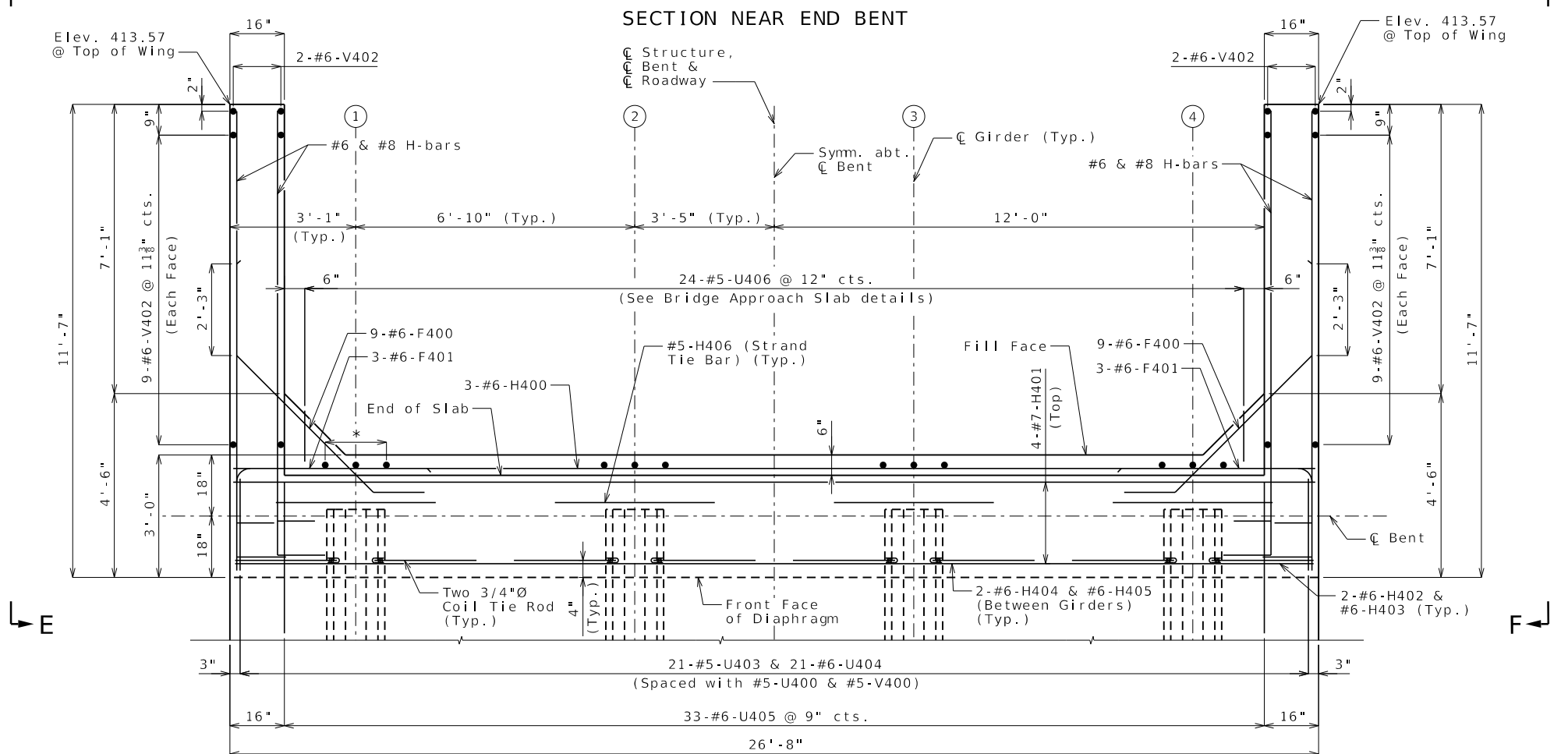
PROJECT NO.
BRIDGE NO. A9409

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MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

MODJESKI  **MASTERS**
333 SOUTH 18TH STREET, SUITE 100
ST. LOUIS, MISSOURI 63103-2256
TEL:(314) 588-8115



DETAILS OF END BENT NO. 4

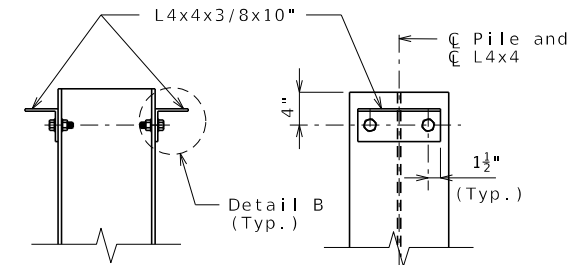
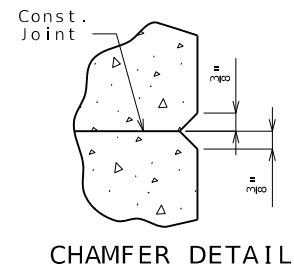
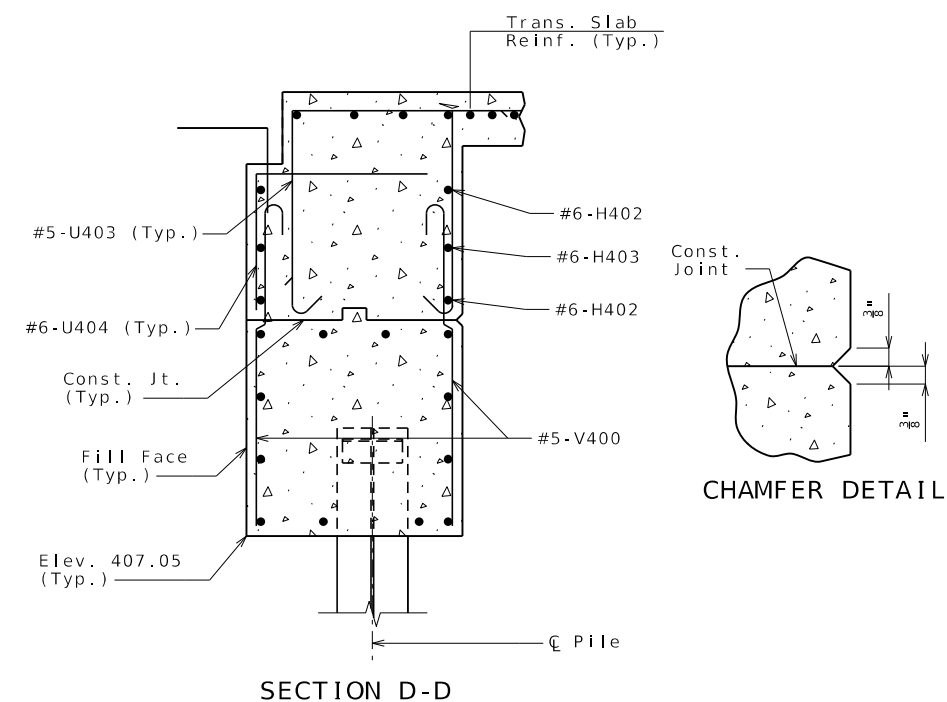
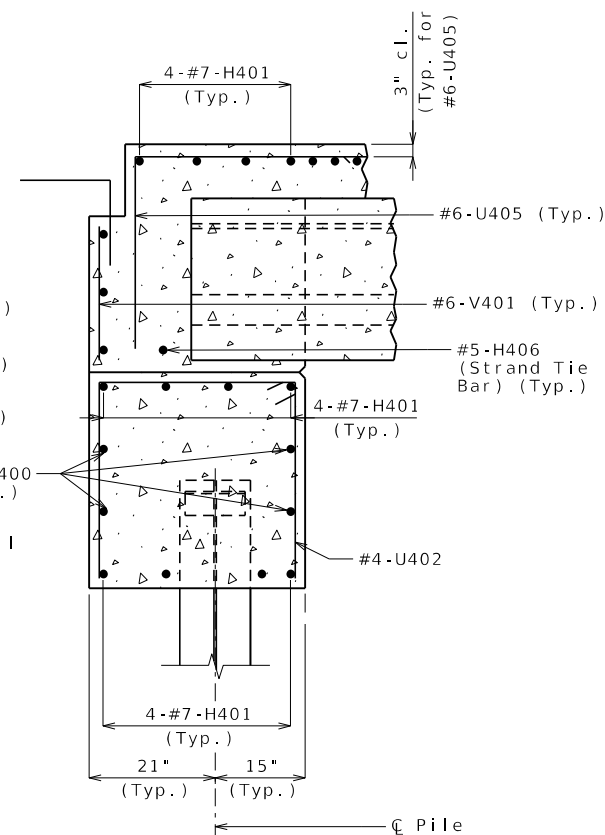
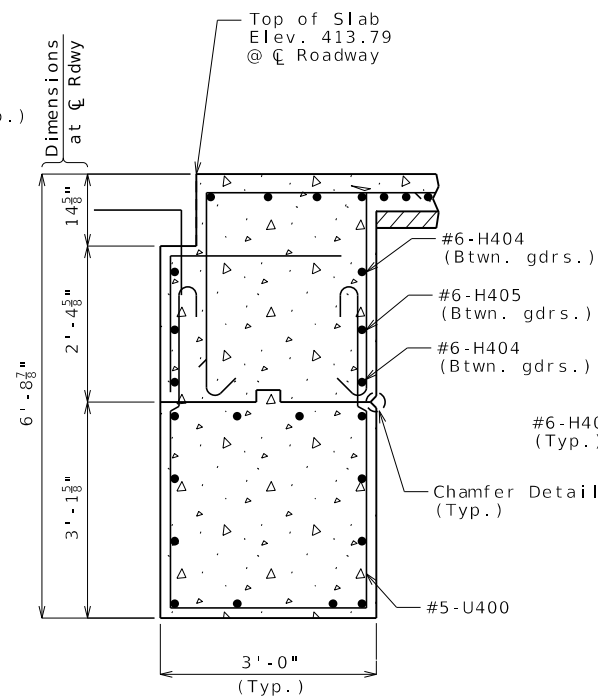
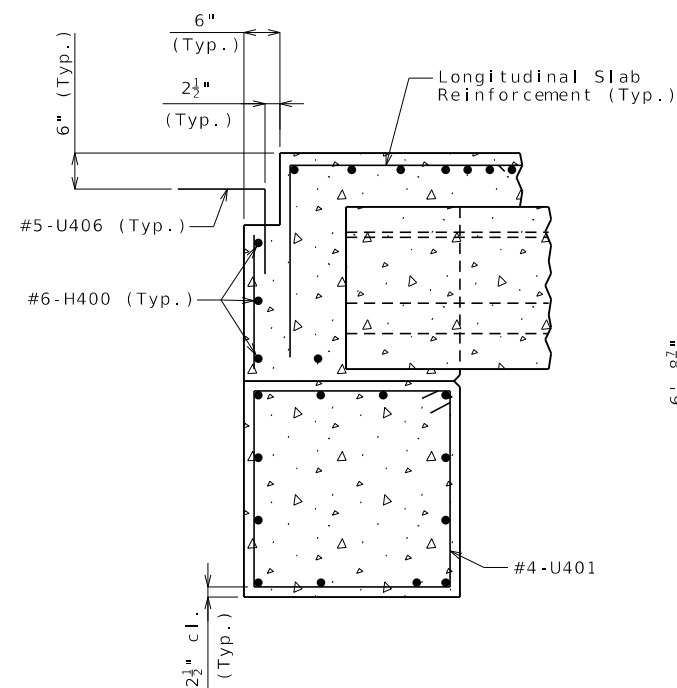
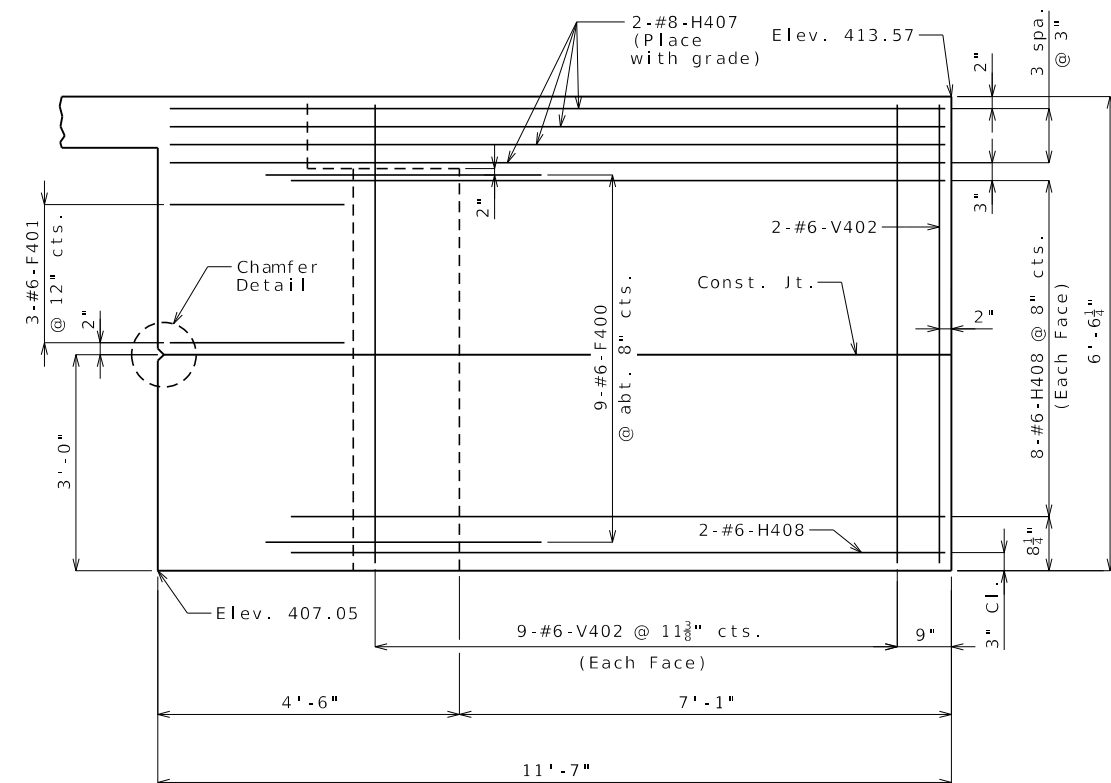
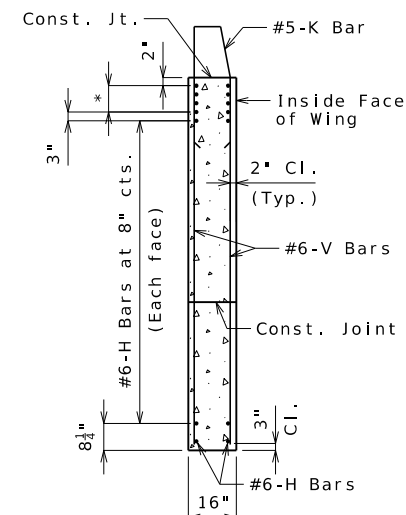
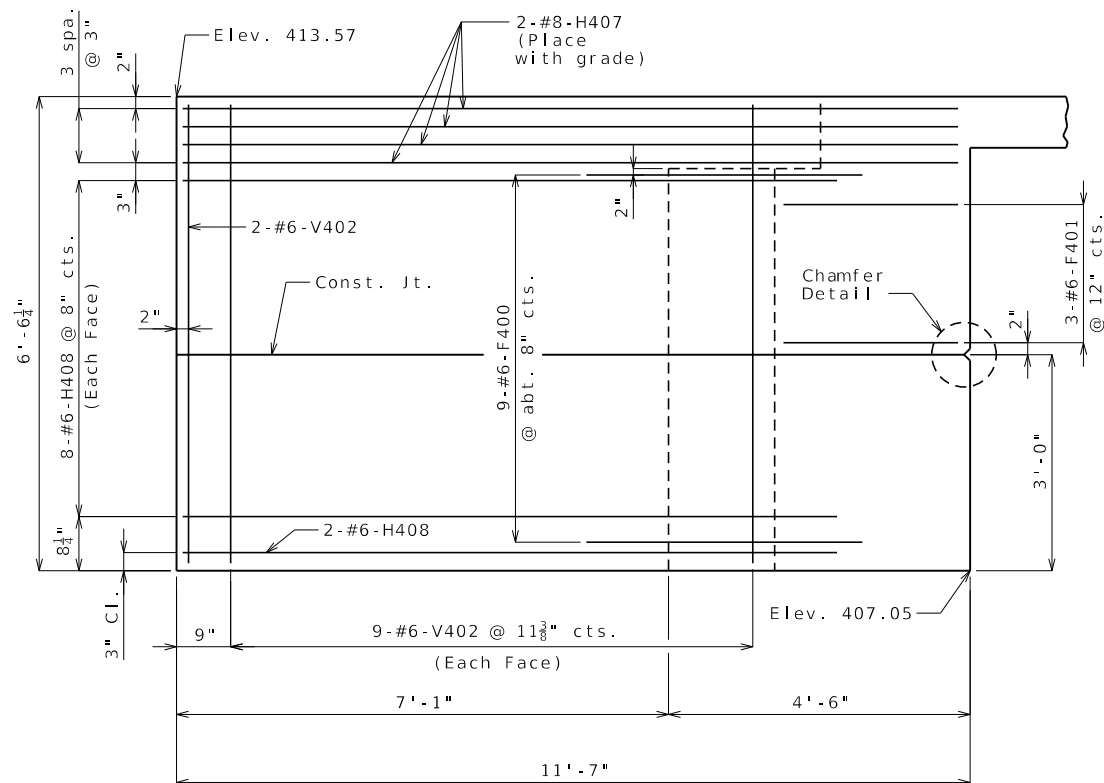


Diagram of a 4x4x3/8 L-Bracket. The vertical leg has a total height of 4" and a flange width of 1 1/2". The horizontal leg has a total width of 4" and a flange height of 2 1/2". The bracket is fastened with two 13/16" 3/4" Ø bolts, Grade A325, with two washers and a nut each.

Angles shall be coated with a minimum of two coats of non-aluminum epoxy mastic primer to provide a dry film thickness of 4 mils minimum, 8 mils maximum, or galvanized in accordance with Sec 1081. Bolts, washers and nuts shall be galvanized in accordance with AASHTO M 232 (ASTM A153), Class C.

For details of bridge approach slab, see
Sheet No. 24.

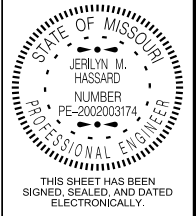


Notes:

Work this sheet with Sheets No. 11 & 12.

For location of Sections A-A, B-B, C-C, & D-D and Elevations E-E & F-F, see Sheet No. 12.

For reinforcement of the barrier, see Sheet No. 23.



DATE PREPARED

5 / 1 / 25

ROUTE N	STATE MO
DISTRICT BR	SHEET NO. 13

COUNTY

STE. GENEVIEVE

JOB NO.
1650026

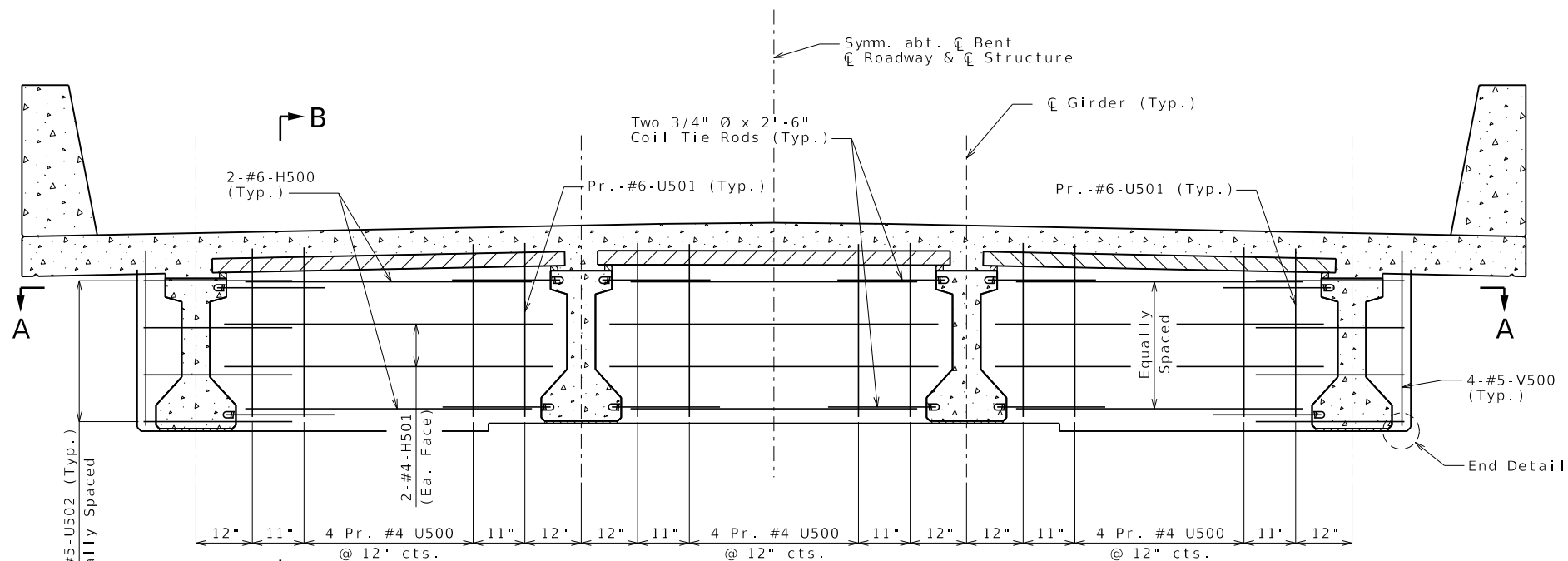
JSE0026
CONTRACT ID

CONTRACT ID.					
PROJECT NO.					
BRIDGE NO. A9409					
DESCRIPTION					
DATE					

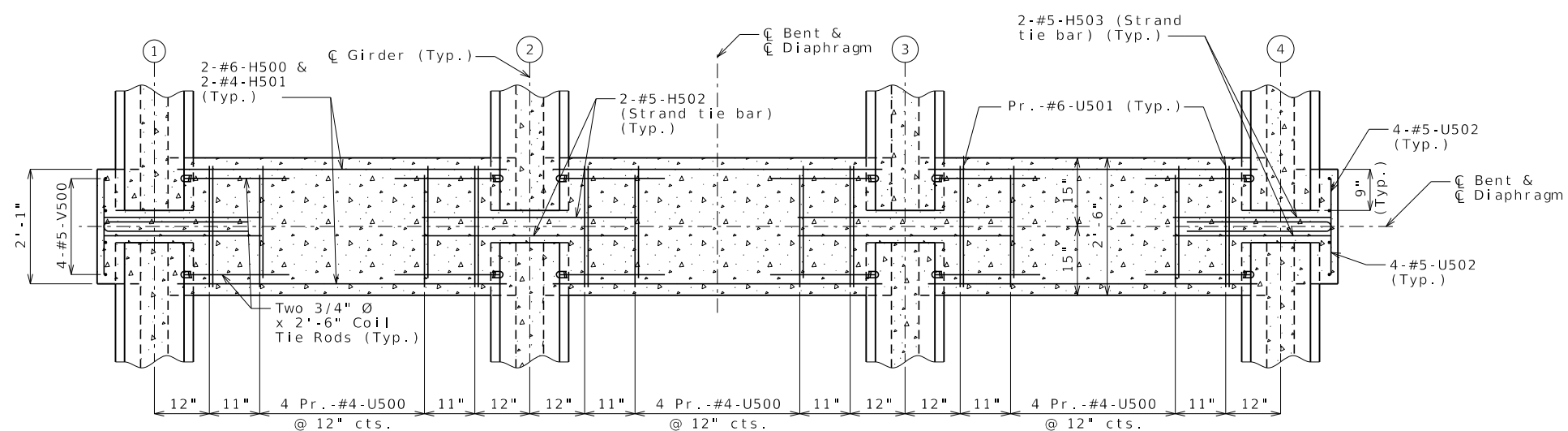
MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



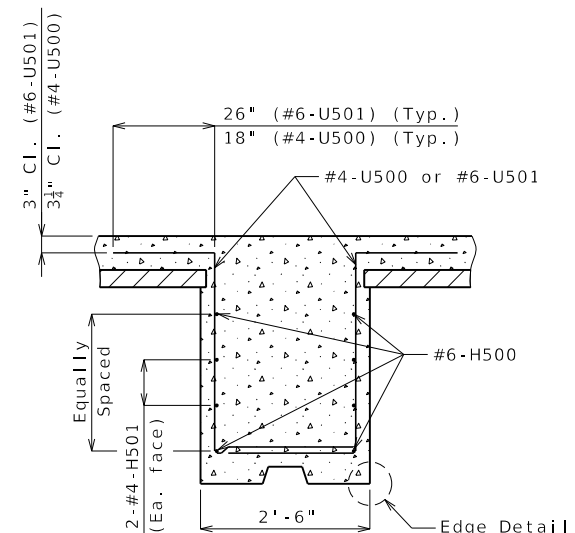


SECTION NEAR INTERMEDIATE BENTS

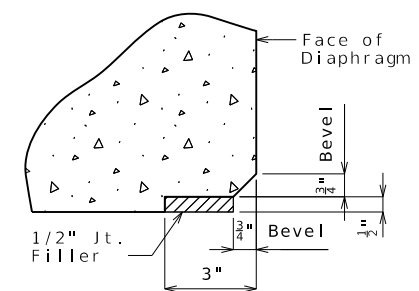


SECTION A-A

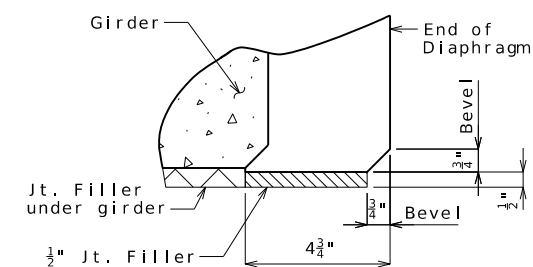
DETAILS OF CONCRETE DIAPHRAGM AT INTERMEDIATE BENTS NO. 2 & 3



SECTION B-B



EDGE DETAIL



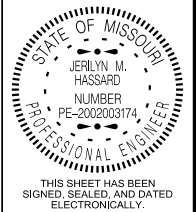
END DETAIL

Notes:

For location of Strand Tie Bars, see Sheet No. 14 & 15.

For location and details of Coil Tie Rods, see Sheet No. 14 & 15.

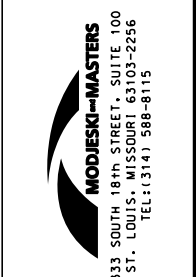
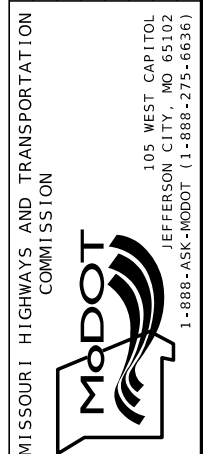
Diaphragms at intermediate bents shall be built vertical.



DATE PREPARED 5/1/25	
ROUTE N	STATE MO
DISTRICT BR	SHEET NO. 16
COUNTY STE. GENEVIEVE	
JOB NO. JSE0026	
CONTRACT ID.	

PROJECT NO.
BRIDGE NO. A9409

DESCRIPTION	DATE





THIS SHEET HAS BEEN
SIGNED, SEALED, AND DATED
ELECTRONICALLY.

DATE PREPARED
5/1/25

ROUTE N STATE MO
DISTRICT BR SHEET NO. 19

COUNTY
STE. GENEVIEVE

JOB NO.
JSE0026
CONTRACT ID.

PROJECT NO.

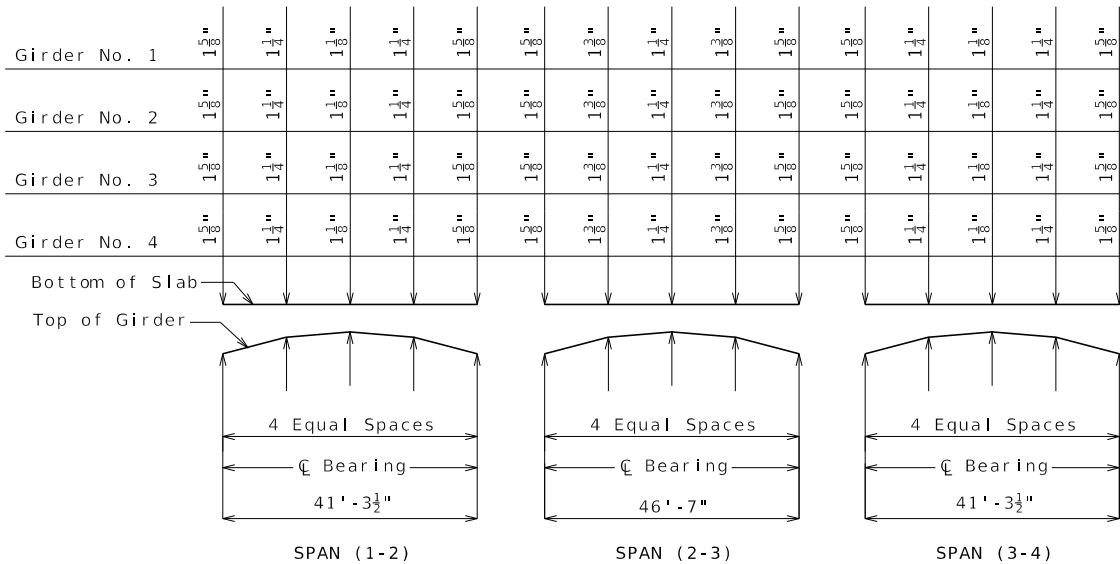
BRIDGE NO.
A9409

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

MODJESKI-MASTERS
333 SOUTH 18TH STREET, SUITE 100
ST. LOUIS, MISSOURI 63103-2256
TEL: (314) 588-8115



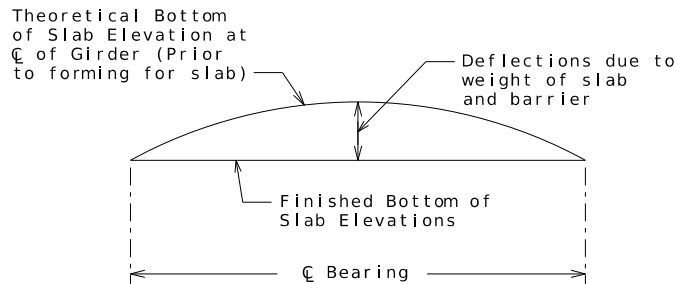
THEORETICAL SLAB HAUNCHING DIAGRAM (ESTIMATED AT 90 DAYS)

If girder camber is different from that shown in the camber diagram, in order to maintain minimum slab thickness, an adjustment of the slab haunches, an increase in slab thickness or a raise in grade uniformly throughout the structure shall be necessary. No payment will be made for additional labor or materials required for variation in haunching, slab thickness or grade adjustment.

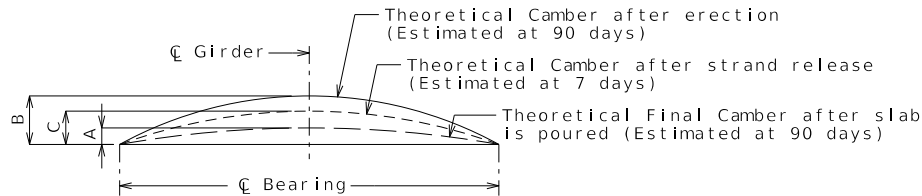
Concrete in the slab haunches is included in the Estimated Quantities for Slab on Concrete I-Girder.

Theoretical Bottom of Slab Elevations at Centerline of Girder (Prior to forming for slab) (Estimated at 90 days)															
Girder Number	Span (1-2) (41'- 3½" C Brg. - C Brg.)					Span (2-3) (46'- 7" C Brg. - C Brg.)					Span (3-4) (41'- 3½" C Brg. - C Brg.)				
	C Brg.	.25	.50	.75	C Brg.	C Brg.	.25	.50	.75	C Brg.	C Brg.	.25	.50	.75	C Brg.
1	412.90	412.92	412.92	412.91	412.90	412.90	412.93	412.94	412.93	412.90	412.90	412.91	412.92	412.92	412.90
2	413.03	413.05	413.06	413.05	413.03	413.03	413.06	413.08	413.06	413.03	413.03	413.05	413.06	413.05	413.03
3	413.03	413.05	413.06	413.05	413.03	413.03	413.06	413.08	413.06	413.03	413.03	413.05	413.06	413.05	413.03
4	412.90	412.92	412.92	412.91	412.90	412.90	412.93	412.94	412.93	412.90	412.90	412.91	412.92	412.92	412.90

Elevations are based on a constant slab thickness of 8 1/2" and include allowance for theoretical dead load deflections due to weight of slab (including precast panel) and barrier.



TYPICAL SLAB ELEVATIONS DIAGRAM

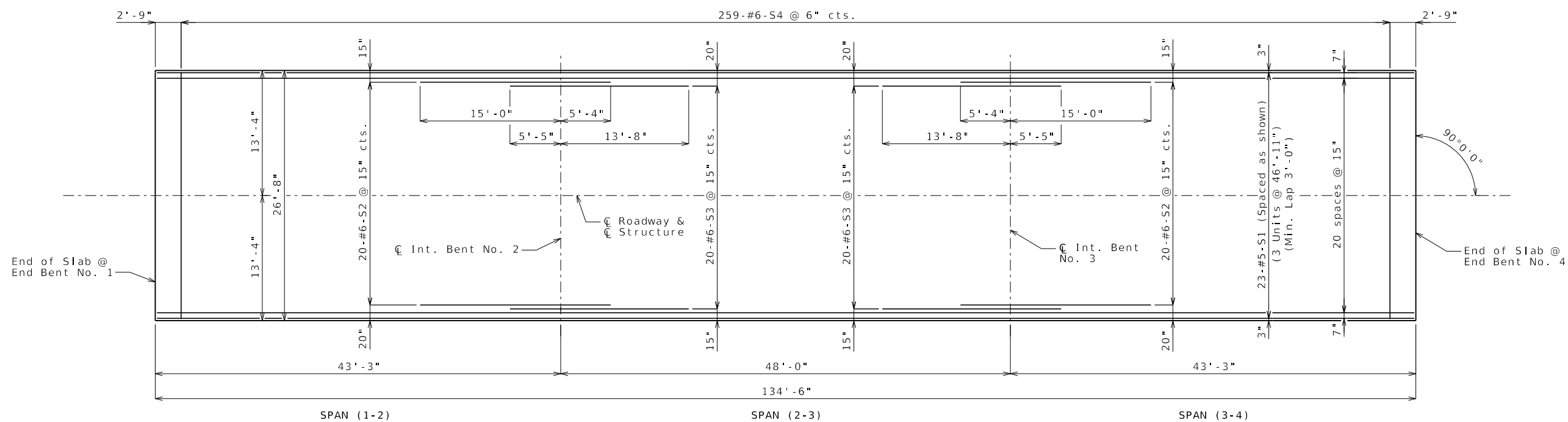


Girder	Span (1-2)			Span (2-3)			Span (3-4)		
	A	B	C	A	B	C	A	B	C
Exterior	1/2"	1/4"	5/8"	5/8"	7/8"	3/4"	1/2"	1/4"	5/8"
Interior	1/2"			5/8"	7/8"	3/4"	1/2"		

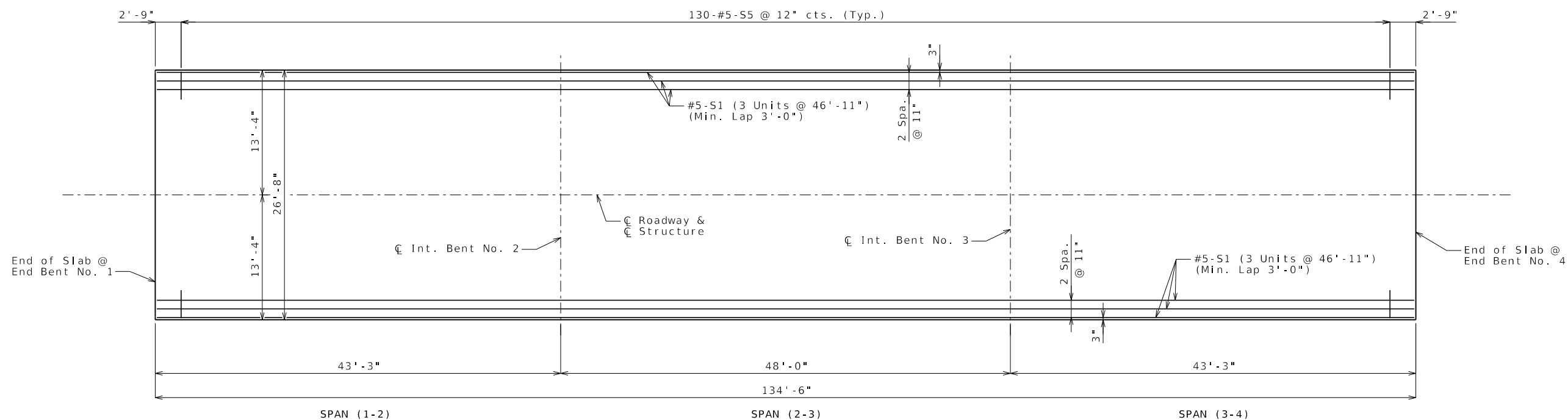
GIRDER CAMBER DIAGRAM

Conversion Factors for Girder Camber (Estimated at 90 days):

0.25 pt. = 0.7125 x 0.5 pt.



TOP REINFORCEMENT



BOTTOM REINFORCEMENT

PLAN OF SLAB SHOWING REINFORCEMENT

Notes:

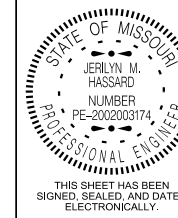
For Section Thru Slab and Slab Pouring Sequence, see Sheet No. 21.

For Details and Reinforcement of Type H barrier not shown, see
Sheets No. 22 & 23.

For Theoretical Bottom of Slab Elevations, Girder Camber Diagram
and Theoretical Slab Haunching Diagram, see Sheet No. 19.

For Details of Precast Prestressed Panels, see Sheet No. 17.

For details and locations of Slab Drains, see Sheet No. 18.



DATE PREPARED _____

5 / 1 / 25

ROUTE	STATE
-------	-------

N	MO
---	----

DISTRICT	SHEET 1
----------	---------

BR	20
----	----

COUNTY

STE. GENEVIEVE

JOB NO.

JSE0026

CONTRACT ID.

PROJECT NO. _____

BRIDGE NO.

A9409

[illegible]

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

MoDOT

105 WEST CAPITOL
JEFFERSON CITY, MO 65102

MISSOURI HIGHWAYS AND TRANSPORTATION



105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



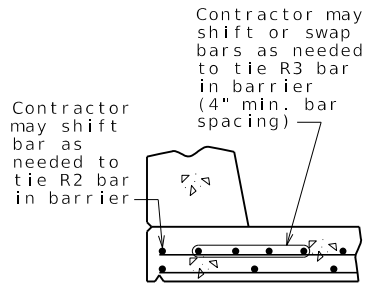
MODJESKI and MASTERS
333 SOUTH 18th STREET, SUITE 100
ST. LOUIS, MISSOURI 63103-2256
TEL: (314) 588-8115

Detailed	Nov. 2024
Checked	Jan. 2025

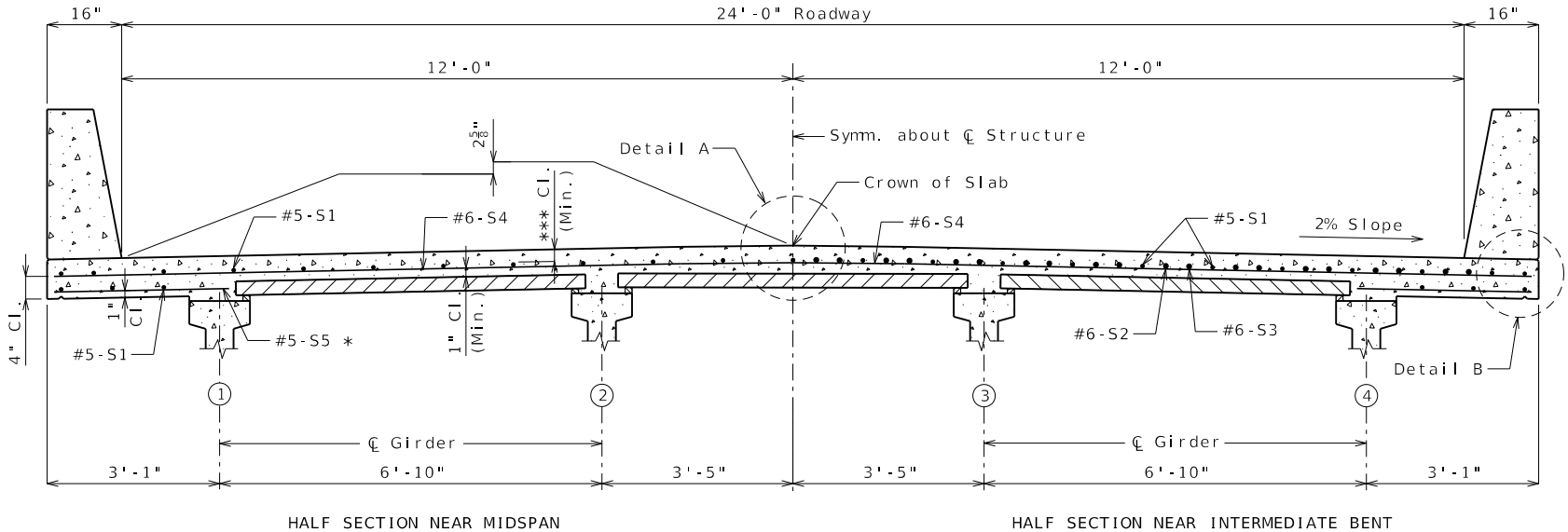
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 20 of 31

B_A9409_20_JSE0026_SLAB1.dgn 2:11:48 PM 4/29/2025

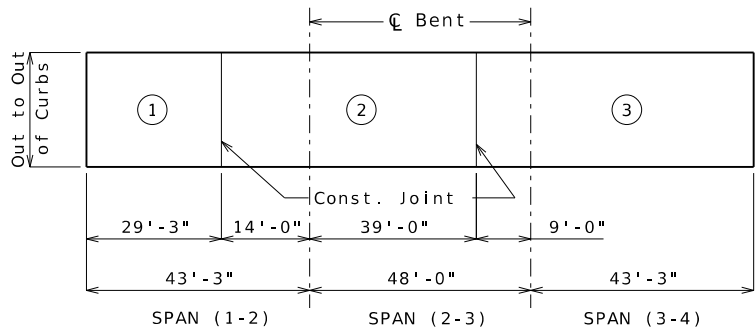


OPTIONAL SHIFTING TOP BARS AT BARRIER



SECTION THRU SLAB

* Alternate bar shape available, see barrier sheet.
*** 3 1/8" (#5)
3" (#6)

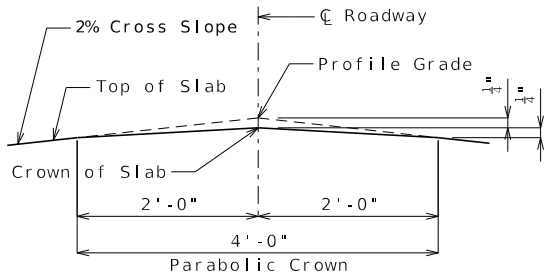


	Sequence of Pours			Min. Rate of Pour Cu. Yds./Hr.
	Direction			With Retarder
Basic Sequence	1	2	3	25
	End to 2	1 to 3	2 to End	
Alternate pours to the basic sequence are subject to the approval of the engineer in accordance with Sec 703.				
Alternate A Pours	1 + 2		3	25
	End to 3		2 to End	
Alternate B Pours	1 + 2 + 3			25
	End to End			

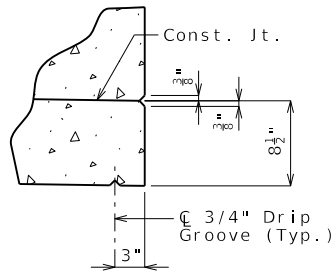
The contractor shall furnish an approved retarder to retard the set of the concrete to 2.5 hours, and shall pour and satisfactorily finish the slab pours at the rate given.

The concrete diaphragm at the intermediate bents and integral end bents shall be poured a minimum of 30 minutes and a maximum of 2 hours before the slab is poured.

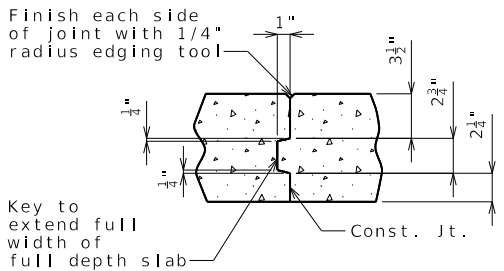
SLAB POURING SEQUENCE



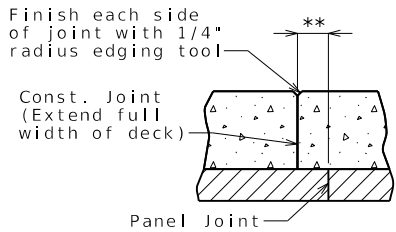
DETAIL A



DETAIL B



FULL DEPTH SLAB



SLAB ON PANELS

SLAB CONSTRUCTION JOINT

Notes:

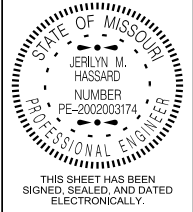
For details of precast prestressed panels, see Sheet No. 17.

For reinforcement of barrier not shown, see Sheets No. 22 & 23.

For Theoretical Bottom of Slab Elevations, Girder Camber Diagram and Theoretical Slab Haunching Diagram, see Sheet No. 19.

For Plan of Slab Showing Reinforcement, see Sheet No. 20.

SLAB DETAILS



DATE PREPARED 5/1/25	
ROUTE N	STATE MO
DISTRICT BR	SHEET NO. 21
COUNTY STE. GENEVIEVE	
JOB NO. JSE0026	
CONTRACT ID.	

PROJECT NO.	
BRIDGE NO. A9409	

DESCRIPTION	DATE

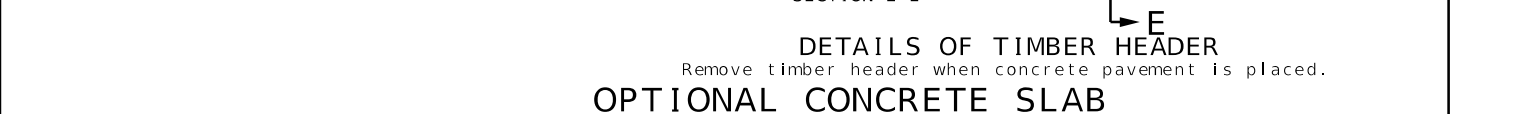
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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JEFFERSON CITY, MO 65102
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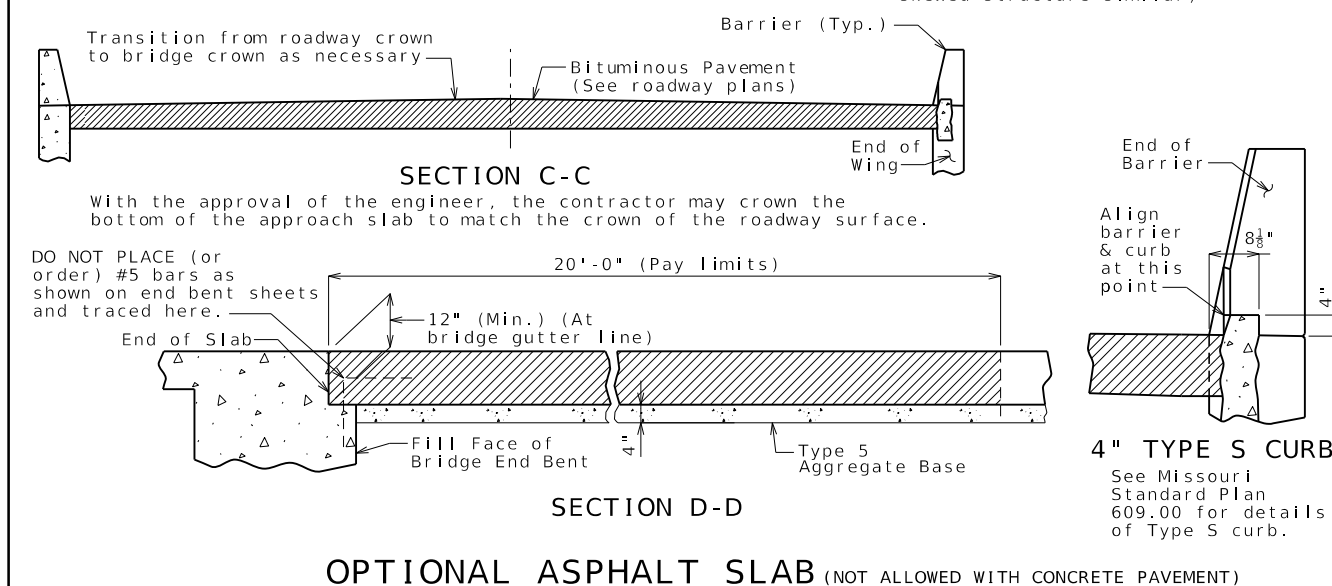
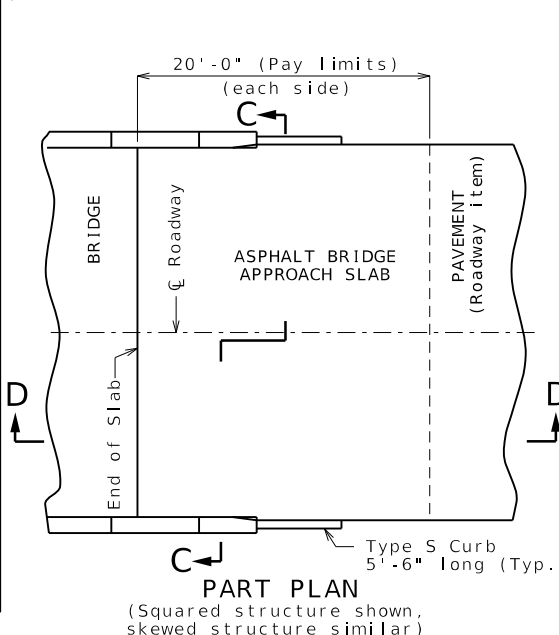
MODOT

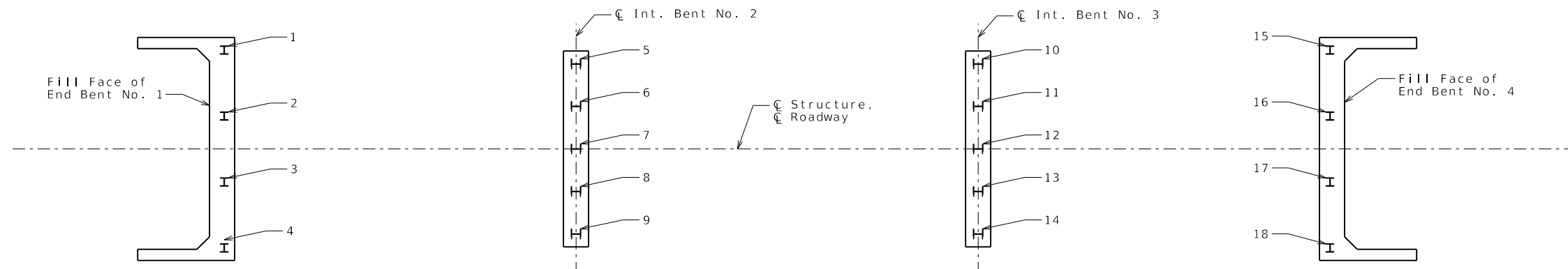
MODJSKI-MASTERS

333 SOUTH 18th STREET, SUITE 100
ST. LOUIS, MISSOURI 63103-2256
TEL: (314) 588-8115



- * Seal joint between vertical face of approach slab and wing with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.





PART PLAN SHOWING PILE NUMBERING FOR RECORDING AS-BUILT PILE DATA

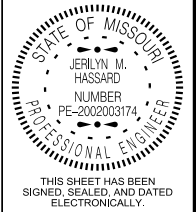
As-Built Pile Data			
Pile No.	Length in Place (ft)	Computed Nominal Axial Compressive Resistance (kips)	Remarks
			End Bent No. 1
1			
2			
3			
4			
			Int. Bent No. 2
5			
6			
7			
8			
9			

As-Built Pile Data			
Pile No.	Length in Place (ft)	Computed Nominal Axial Compressive Resistance (kips)	Remarks
			Int. Bent No. 3
10			
11			
12			
13			
14			
			End Bent No. 4
15			
16			
17			
18			

AS-BUILT PILE DATA

Note:
Indicate in remarks column:
A. Pile type and grade
B. Batter
C. Driven to practical refusal

This sheet to be completed by MoDOT construction personnel.



DATE PREPARED
5/1/25

ROUTE N	STATE MO
DISTRICT BR	SHEET NO 27

COUNTY
STE. GENEVIEVE

JOB NO.
JSE0026
CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9409[illegible]

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

MODJESKI & MASTERS
333 SOUTH 18TH STREET, SUITE 100
ST. LOUIS, MISSOURI 63103-2256
TEL: (314) 588-8115



SCI ENGINEERING, INC.
130 Point West Boulevard
St. Charles, Missouri 63301
636-949-8200
www.sciengineering.com

BORING LOG LEGEND AND NOMENCLATURE

Depth is in feet below ground surface. **Elevation** is in feet mean sea level, site datum, or as otherwise noted.

Sample Type

- SS** Split-spoon sample, disturbed, obtained by driving a 2-inch-O.D. split-spoon sampler (ASTM D 1586).
- NX** Diamond core bit, nominal 2-inch-diameter rock sample (ASTM D 2113).
- ST** Thin-walled (Shelby) tube sample, relatively undisturbed, obtained by pushing a 3-inch-diameter, tube (ASTM D 1587).
- CS** Continuous sample tube system, relatively undisturbed, obtained by split-barrel sampler in conjunction with auger advancement.
- SV** Shear vane, field test to determine strength of cohesive soil by pushing or driving a 2-inch-diameter vane, and then shearing by torquing soil in existing and remolded states (ASTM D 2573).
- BS** Bag sample, disturbed, obtained from cuttings.

Recovery is expressed as a ratio of the length recovered to the total length pushed, driven, cored.

Blows Numbers indicate blows per 6 inches of split-spoon sampler penetration when driven with a 140-pound hammer falling freely 30 inches. The number of total blows obtained for the second and third 6-inch increments is the N value (Standard Penetration Test or SPT) in blows per foot (ASTM D 1586). Practical refusal is considered to be 50 or more blows without achieving 6 inches of penetration and is expressed as a ratio of 50 to actual penetration, e.g., 50/2 (50 blows for 2 inches).

For analysis, the N value is used when obtained by a cathead and rope system. When obtained by an automatic hammer, the N value may be increased by a factor of 1.3.

Vane Shear Strength is expressed as the peak strength (existing state) / the residual strength (remolded state).

Description indicates soil constituents and other classification characteristics (ASTM D 2488) and the Unified Soil Classification (ASTM D 2487). Secondary soil constituents (expressed as a percentage) are described as follows:

Trace	<5
Few	5-15
With	>15-30

Stratigraphic Breaks may be observed or interpreted and are indicated by a dashed line. Transition between described materials may be gradual.

Laboratory Test Results

- Natural moisture content (ASTM D 2216) in percent.
- Dry density in pounds per cubic foot (pcf).
- Hand penetrometer value of apparently intact cohesive sample in kips per square foot (ksf).
- Unconfined compressive strength (ASTM D 2166) in kips per square foot (ksf).
- Liquid and Plastic Limits (ASTM D 4318) in percent.

RQD (Rock Quality Designation) is the ratio between the total length of core segments 4 inches or more in length and the total length of core drilled. RQD (expressed as a percentage) indicates insitu rock quality as follows:

Excellent	90 to 100
Good	75 to 90
Fair	50 to 75
Poor	25 to 50
Very Poor	0 to 25



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ROCK CORE DESCRIPTIONS

Descriptions of rock core are defined as follows:

Hardness	Very Soft	Easily indented with the thumb.
	Soft	Able to be scratched with a fingernail.
	Moderately Hard	Easily scratched with a knife.
	Hard	Difficult to scratch with a knife.
	Very Hard	Cannot be scratched with a knife.
Crystallinity	Aphanitic (Micritic)	Crystals cannot be distinguished with the naked eye.
	Very Finely Crystalline	Crystals are barely discernible with the naked eye.
	Finely Crystalline	Crystals are easily discernible with the naked eye.
	Medium Crystalline	Crystals are medium size; up to 1/8 inch in diameter.
	Coarsely Crystalline	Crystals are 1/8 inch to ¼ inch in diameter.
Mass Bedding	Very Coarsely Crystalline	Crystals are larger than ¼ inch in diameter.
	Parting	Thinner than 0.02 feet (< 0.60 cm).
	Band	0.02 to 0.2 feet (0.60 to 6.1 cm).
	Thin Bed	0.2 to 0.5 feet (6.1 to 15.2 cm).
	Medium Bed	0.5 to 1.0 feet (15.2 to 30.5 cm).
Weathering	Thick Bed	1.0 to 2.0 feet (30.2 to 61.0 cm).
	Massive	Thicker than 2.0 feet (> 61.0 cm).
	Fresh	No visible signs of decomposition or discoloration.
	Slightly Weathered	Slight discoloration inward from open fractures.
	Moderately Weathered	Discoloration throughout, some loss of strength, texture intact.
Voids	Highly Weathered	Specimens easily broken by hand, texture indistinct.
	Dense	Usually not discernible with the naked eye.
	Pit (Pitted)	Discernible to ¼ inch.
	Vug (Vuggy)	¼ inch to diameter of the core.
	Cavity	Larger than 6 inches in diameter.

Geologic Definitions

Argillaceous A term applied to all rocks or substances composed of clay minerals or having a notable portion (> 30 percent) clay in composition.

Fissility A property of splitting along closely spaced parallel planes.

Calcareous A term applied to rocks containing calcium carbonate.

BORING DATA

Note: For locations of borings, see Sheet No. 1.

STATE OF MISSOURI

JERILYN M. HASSARD

NUMBER PE-2002003174

PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY.

DATE PREPARED
5 / 1 / 25

ROUTE
N

STATE
MO

DISTRICT
BR

SHEET NO.
28

COUNTY
STE. GENEVIEVE

JOB NO.
JSE0026

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9409

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)

MODJSKI-MASTERS

333 SOUTH 18TH STREET, SUITE 100 ST. LOUIS, MISSOURI 63103-2256 TEL:(314) 588-8115

B_A9409_28_JSE0026_BORLGND.dgn 4:46:28 PM 4/24/2025

BORING NO. B-201
Page 1 of 2

Route: N

Location: St. Mary

Operator: Midwest Drilling, Inc.

Date of Work: 08/05/24

Depth to Water: None

Depth Hole Open: 46.5

Time Change: 0

Q

hbound lane through the bridge deck

Drilling Method: Hollow Stem Auger

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N ₆₀)	Shear Data	Field Tests	Index Tests
0									
0.0-0.5'		CONCRETE							
0.5-13.0'		AIR							
5			410						
10			405						
13.0-16.0'		WATER	400						
16.0-24.0'		(GC) Brown, CLAYEY GRAVEL, fine, clay is lean	395						
20				X	22	2-5-5 (15)			
25			390	X	6	3-4-5 (14)			
24.0-31.5'		(SC) Gray, CLAYEY SAND, fine- to coarse-grained, with fine to coarse gravel, clay is lean		X	56	2-1-2 (5)			
30			385						
30.3'		PERCENT PASSING THE NUMBER 200 SIEVE: 35.3%		X	72	1-1-3 (6)			
31.5-46.5'		DOLomite: Dark gray, moderately hard, micritic, thick bedding, slightly weathered, dense	380		100 (70)				
35									
							Qu Test Results UCS = 413 ksf		

$N_{60} = (Em/60)N_m$ N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System:	Modified State Plane	Coordinate Zone:	Missouri East	Coordinate Proj. Factor:	1.0000606445
Coordinate Datum:	NAD 1983	Coordinate Units:	U.S. Survey Feet		

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.



Note: For locations of borings, see Sheet No. 1.

BORING NO. B-401
Page 1 of 1

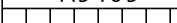
Job No.: JSE0026 (SCI No. 2024-0652.13)	County: St. Genevieve	Route: N
Design: A9409	Skew: 0	Location: St. Mary
Bent: End Bent #4	Logged By: Ian Aubuchon	Operator: Midwest Drilling, Inc.
Station: 434+55	Northing: 955444.99	Date of Work: 08/05/24
Offset: 2' LT	Easting: 733368.37	Depth to Water: 13.0
Elevation: 414.0	Requested Northing: N/A	Depth Hole Open: 31.0
Requested Station: 434+22	Requested Easting: N/A	Time Change: 0
Requested Offset: 7' or 13' LT	Equipment: CME 750 Split-Spoon Sampler, Shelby Tube	
Requested Elevation:	Location Note: Drilled near the center of the southbound lane	
Drill No.: 255648	Hammer Efficiency: 93.7%	Drilling Method: Continuous Flight Auger

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0									
0		0.0-0.3' 4" ASPHALTIC CONCRETE							
0		0.3-5.5' (FILL) Brown and gray, SANDY SILTY CLAY, with fine to coarse gravel, sand is fine- to coarse-grained			88		Qu Test Results UCS = 5.40 ksf MC = 11.9% $\gamma_{moist} = 129$ pcf		LL = 26 PL = 20
5			410	X	33	10-9-7 (24)		PP = 1.00 tsf	MC = 15.9%
5		5.5-8.0' (SP) Brown, POORLY GRADED SAND, fine- to coarse-grained		X	44	4-4-3 (11)			
10		8.0-12.0' (CL) Brown, SANDY LEAN CLAY, few fine to coarse gravel, sand is fine- to coarse-grained	405	X	39	5-5-6 (17)			LL = 49 PL = 22 MC = 8.9%
15		12.0-22.0' (SP) Brown, GRAVELLY SAND, fine- to coarse-grained, with lean clay, gravel is fine to coarse	400	X	39	4-5-5 (15)			Sieve Analysis Sieve # % Passing 1/2-inch 100.0 3/8-inch 92.2 #4 65.3 #10 45.2 #20 33.8 #40 21.8 #60 12.0 #100 9.3 #140 8.5 #200 8.0
20			395	X	100	3-3-4 (11)			
25		22.0-31.0' (GC) Gray, CLAYEY GRAVEL, fine to coarse, with fine- to coarse-grained sand, clay is lean 24.3' PERCENT PASSING THE NUMBER 200 SIEVE: 12.9%	390	X	100	4-4-4 (12)			
30			385	X	39	3-4-4 (12)			
		Refusal at 31.0 feet. Bottom of borehole at 31.0 feet.							

$N_{60} = (Em/60)N_m$ N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; N_m - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: Modified State Plane Coordinate Zone: Missouri East Coordinate Proj. Factor: 1.0000606445
Coordinate Datum: NAD 1983 Coordinate Units: U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

[illegible]

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ST. LOUIS, MISSOURI 63103-2256
TEL: (314) 588-8115

Note: For locations of borings, see Sheet No. 1.