

DESIGN DESIGNATION

A.A.D.T. - 2024 = 830
A.A.D.T. - 2044 = 917
D.H.V. = 12.10%
T = 11.25%
V = 55 M.P.H.
D = 52% / 48%

FUNCTIONAL CLASSIFICATION - RURAL MAJOR COLLECTOR

NO NEW RIGHT OF WAY

DISCLAIMER

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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

OVERHEAD CABLE TV

UNDERGROUND CABLE TV

OVERHEAD TELEPHONE

UNDERGROUND TELEPHONE

OVERHEAD POWER

UNDERGROUND POWER

SANITARY SEWER

STORM SEWER

GAS

WATER

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

PLANS FOR PROPOSED

STATE HIGHWAY

CAPE GIRARDEAU COUNTY

NOT TO SCALE

THE EXISTENCE AND APPROXIMATE LOCATION OF UTILITY FACILITIES KNOWN TO EXIST, AS SHOWN ON THE PLANS, ARE BASED ON THE BEST INFORMATION AVAILABLE TO THE COMMISSION AT THIS TIME. THIS INFORMATION IS PROVIDED BY THE COMMISSION "AS-IS" AND THE COMMISSION EXPRESSLY DISCLAIMS ANY REPRESENTATION OR WARRANTY AS TO THE COMPLETENESS, ACCURACY, OR SUITABILITY OF THE INFORMATION FOR ANY USE. RELIANCE UPON THIS INFORMATION IS DONE AT THE RISK AND PERIL OF THE USER, AND THE COMMISSION SHALL NOT BE LIABLE FOR ANY DAMAGES THAT MAY ARISE FROM ANY ERROR IN THE INFORMATION. IT IS, THEREFORE, THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE, LOCATION AND STATUS OF ANY FACILITY. SUCH VERIFICATION INCLUDES DIRECT CONTACT WITH THE LISTED UTILITIES.

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STATE OF MISSOURI

TRICIA M. BOHLER

NUMBER

PE-2000149099

PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED

3/1/2024

ROUTE

Y

STATE

MO

DISTRICT

SE

SHEET NO.

1

COUNTY

CAPE GIRARDEAU

JOB NO.

J9S3589

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

A9223

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

105 WEST CAPITOL

JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

LENGTH OF PROJECT

BEGINNING OF PROJECT STA. 164 + 94.13

END OF PROJECT STA. 169 + 89.37

APPARENT LENGTH 495.24 FEET

EQUATIONS AND EXCEPTIONS:

TOTAL CORRECTIONS 0.00 FEET

NET LENGTH OF PROJECT 495.24 FEET

STATE LENGTH 0.011 MILES

5220 Oakland Avenue

St. Louis, MO 63110

314.860.3370

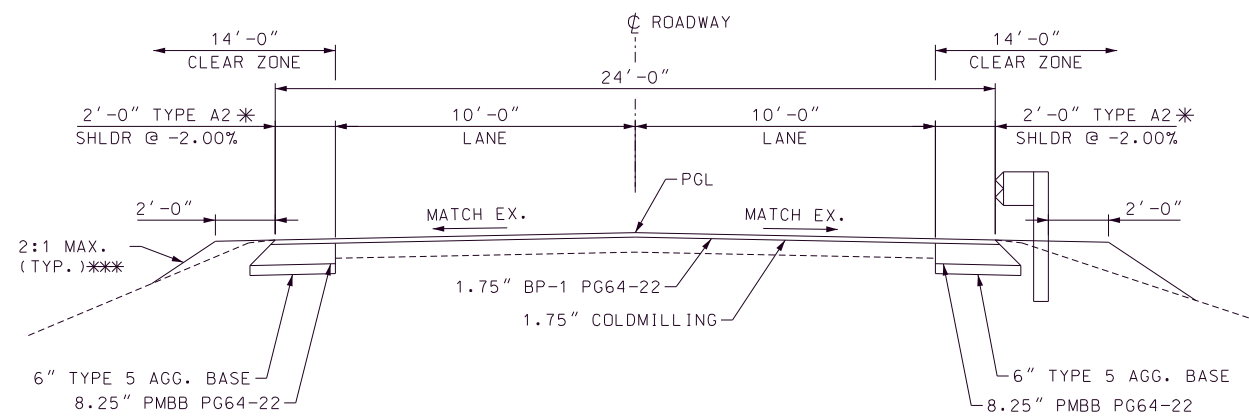
CDI

CIVIL DESIGN, INC.

Missouri State Certificate

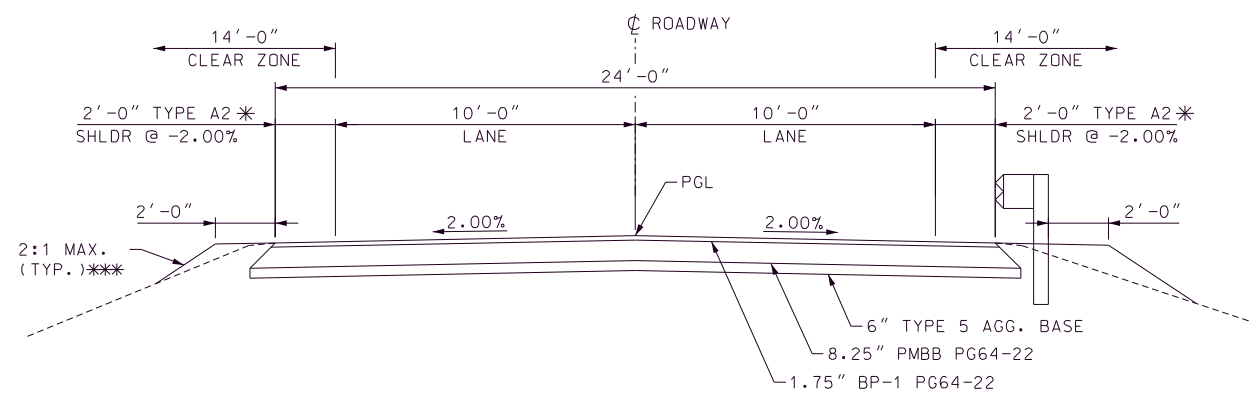
of Authority #202006804

REV.



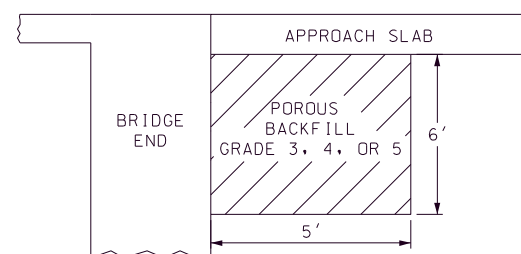
ROUTE Y - MILL & FILL

STA. 164+94.13 TO STA. 167+06.57



ROUTE Y - FULL DEPTH PAVEMENT

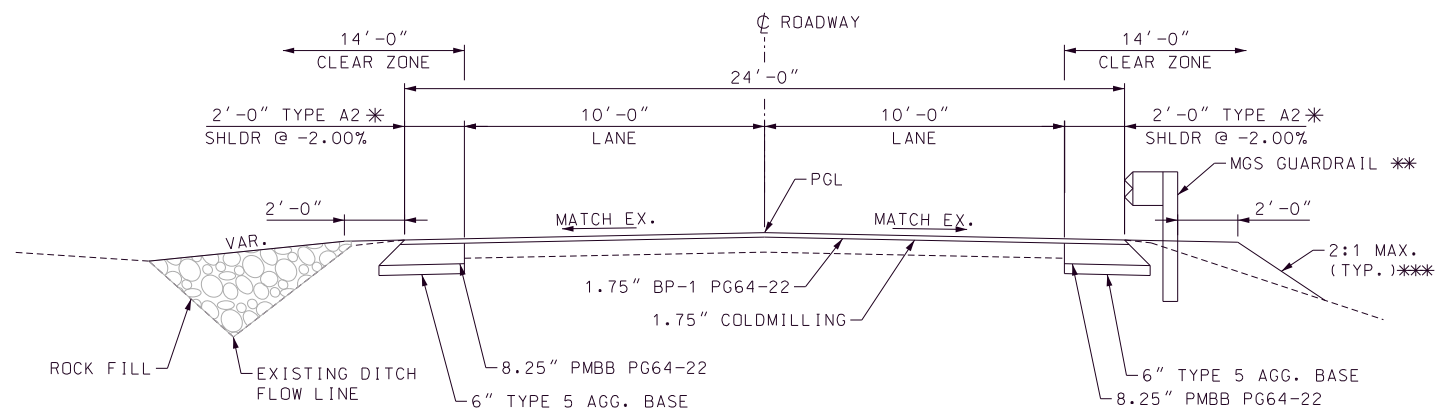
STA. 167+06.57 TO STA. 167+10.73



DETAIL A
BRIDGE APPROACH SLAB
POROUS BACKFILL

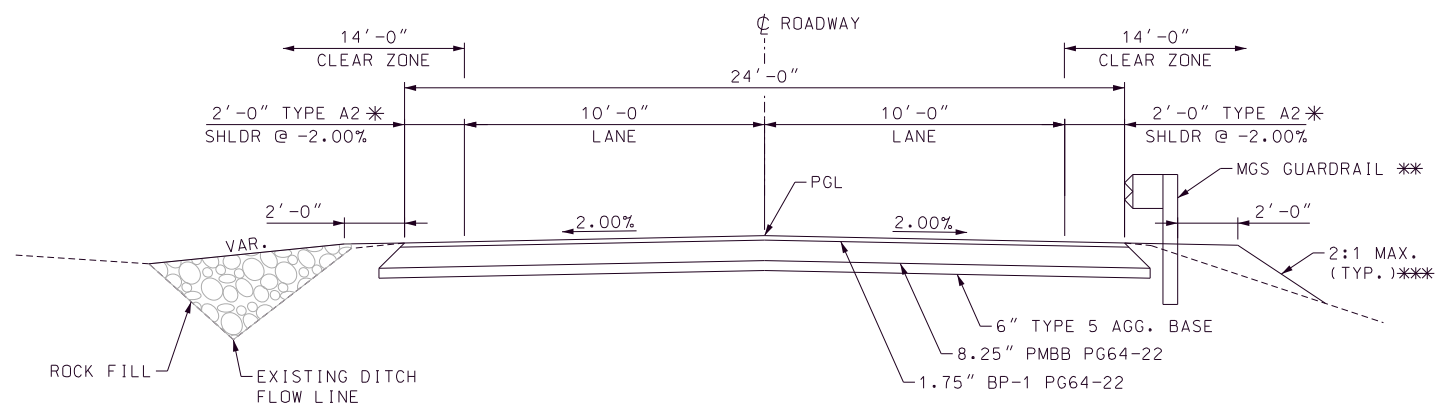
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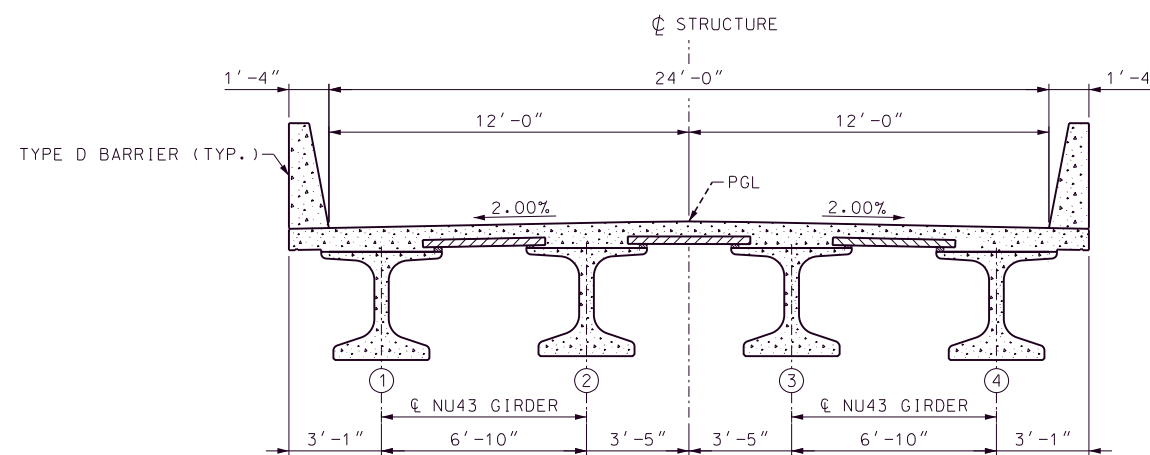
ROUTE Y - MILL & FILL

STA. 168+91.92 TO STA. 169+89.37



ROUTE Y - FULL DEPTH PAVEMENT

STA. 168+90.31 TO STA. 168+91.92



ROUTE Y
BRIDGE TYPICAL
STA. 167+45.18 TO STA. 168+55.86

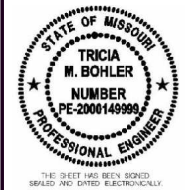
STA. 167+45.18 TO STA. 168+55.86

* TYPE A2 SHOULDER - SEE STANDARD PLAN 401.00
 ** GUARDRAIL INSTALLATION SHALL BE IN ACCORDANCE
 WITH STANDARD PLANS 606.50 AND 606. 81
 *** SLOPES GREATER THAN 3:1 REQUIRE TYPE 2
 ROCK BLANKET (2' THICKNESS)

NOTE:
CONCRETE APPROACH PAVEMENT
STA. 167+10.73 TO STA. 167+25.73
STA. 168+75.31 TO STA. 168+90.31
BRIDGE APPROACH SLAB (MINOR) - SEE DETAIL A
STA. 167+25.73 TO STA. 167+45.73
STA. 168+55.31 TO STA. 168+75.31

TYPICAL SECTIONS
SHEET 1 OF 1

SHEET 1 OF 1



DATE PREPARED
3/1/2024

ROUTE V	STATE MO
------------	-------------

Y	MU
DISTRICT	SHEET NO.

SE	2
----	---

COUNTY
CARB CIRARDAL

CAPE GIRARDEAU
JOB NO.

J9S3589

CONTRACT ID.

[illegible]

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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



5220 Oakland Avenue
St. Louis, MO 63110
314.863.5570

Missouri State Certificate
of Authority #2002006804

TEMPORARY EROSION CONTROL							
PLAN SHEET	BEGIN STATION	END STATION	SIDE	SILT FENCE	ALTERNATE DITCH CHECK	TYPE C BERM	SEDIMENT REMOVAL
				LF	LF	LF	CY
8	164+94.13	165+33.91	RT	41			0.5
8	164+94.13	166+22.38	LT		24		4
8	164+94.13	167+76.11	RT		78		13
8	166+50.57	167+23.61	LT		12		2
8	166+94.37	167+52.57	LT	59			1
8	167+87.66		BOTH			54	
8	168+14.26		BOTH			59	
8	168+09.74	169+56.41	LT		12		2
8	168+90.91	169+35.25	RT		24		4
8	168+60.03	168+99.44	RT	40			0.5
8	169+56.71	169+89.37	RT	35			0.5
		TOTAL		175	150	113	28
NOTE: SEDIMENT REMOVAL IS BASED ON 1 CY PER DITCH CHECK, 1 CY PER 100 FT OF SILT FENCE							

PERMANENT EROSION CONTROL					
PLAN SHEET	BEGIN STATION	END STATION	FURNISHING	PLACING	PERMANENT
			TYPE 2	TYPE 2	EROSION CONTROL
			ROCK BLANKET	ROCK BLANKET	TEXTILE
			CY	CY	SY
4	164+94.13	167+70.57	341	341	497
4	168+25.42	169+89.37	171	171	259
		TOTAL	512	512	755

SEEDING					
PLAN SHEET	BEGIN STATION	END STATION	SEEDING	MULCHING	REMARKS
			COOL SEASON MIX (ACRES)	(ACRES)	
4	164+94.13	169+89.37	1	1	
NOTE: 1 AC OF SEEDING – COOL SEASON MIXTURES AND MULCHING WILL BE PAID UNLESS ADDITIONAL AUTORIZED BY ENGINEER					

PERMANENT PAVEMENT MARKING						
PLAN SHEET	BEGIN STATION	END STATION	SIDE	WATERBORNE W/ TYPE P BEADS		REMARKS
				4 INCH YELLOW	4 INCH WHITE	
				LF	LF	
9	164+94.13	169+89.37	RT		495	
9	164+94.13	169+89.37	LT		495	
9	164+94.13	167+00.00	CENTER/RT	52		INTERMITTENT
9	164+94.13	167+50.00	CENTER/LT	256		
9	167+00.00	169+89.37	CENTER/RT	289		
9	167+50.00	169+89.37	CENTER/LT	60		INTERMITTENT
		TOTAL		657	990	

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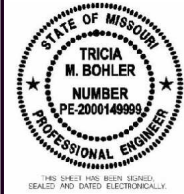
CONTRACTOR FURNISHED SURVEYING AND STAKING TOTAL = 1 LUMP SUM

MOBILIZATION
TOTAL = 1 LUMP SUM

MOBILIZATION FOR SEEDING
TOTAL = 3 EACH

CLEARING AND GRUBBING	
TOTAL (ACRE)	1

QUANTITY SHEET
SHEET 2 OF 3



DATE PREPARED 3/1/2024	
ROUTE Y	STATE MO
DISTRICT SE	SHEET NO. 3
COUNTY CAPE GIRARDEAU	
JOB NO. J9S3589	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. A9223	

DESCRIPTION	DATE						

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



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

5220 Oakland Avenue
St. Louis, MO 63110
314.860.3370



CIVIL DESIGN, INC.
WBE / DBE
Missouri State Certificate
of Authority #200200604

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

SIGN	SIZE	AREA	QTY	TOTAL	RELOC	RELOC	SIGN	DESCRIPTION	ITEM	TOTAL	DESCRIPTION
SIGN	IN.	SO.FT.	EACH	SO.FT.	EACH	SO.FT.	NUM.		NUMBER	QTY	
GUIDE SIGNS											
E05-1	36X48	12.00						GORE EXIT	6122008		IMPACT ATTENUATOR 40 MPH (SAND BARRELS)
E05-2	48X36	12.00						EXIT OPEN	6122009		IMPACT ATTENUATOR 45 MPH (SAND BARRELS)
E05-2a	48X36	12.00						EXIT CLOSED	6122010		IMPACT ATTENUATOR 50 MPH (SAND BARRELS)
G020-1	60X24	10.00						ROAD WORK NEXT XX MILES	6122012		IMPACT ATTENUATOR 55 MPH (SAND BARRELS)
G020-2	48X24	8.00						END ROAD WORK	6122014		IMPACT ATTENUATOR 60 MPH (SAND BARRELS)
G020-4	36X18	4.50						PILOT CAR FOLLOW ME	6122017		IMPACT ATTENUATOR 65 MPH (SAND BARRELS)
G020-4a	42X30	8.75						PILOT CAR IN USE WAIT & FOLLOW	6122019		IMPACT ATTENUATOR 70 MPH (SAND BARRELS)
G020-4a	18X12	1.50						PILOT CAR IN USE WAIT & FOLLOW	6122020		REPLACEMENT SAND BARREL
G020-5aP	36X24	6.00						WORK ZONE (PLAQUE)	6122030		IMPACT ATTENUATOR (RELOCATION)
M04-8a	24X18	3.00	2	6.00			52	END DETOUR	6123000A		TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)
M04-9L	48X36	12.00						DETOUR (LEFT ARROW)	6161008	4	ADVANCED WARNING RAIL SYSTEM
M04-9R	48X36	12.00						DETOUR (RIGHT ARROW)	6161009		FLAG ASSEMBLY
M04-9P	48X12	4.00						STREET NAME (PLAQUE)	6161012		BUOYS (BOATS KEEP OUT)
M04-10L	48X18	6.00						DETOUR (ARROW LEFT)	6161013		BUOYS (NO WAKE)
M04-10R	48X18	6.00						DETOUR (ARROW RIGHT)	6161014		SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)
REGULATORY SIGNS									6161024		CHANNELIZER (TRIM LINE) WITH LIGHT
R1-1	48X48	13.25						STOP	6161025		CHANNELIZER (TRIM LINE)
R1-2	48TRI	6.93						YIELD	6161030	10	TYPE III MOVEABLE BARRICADE
R1-2a	36X36	9.00						TO ONCOMING TRAFFIC (PLAQUE)	6161031		TYPE III MOVEABLE BARRICADE WITH LIGHTS
R1-3P	30X12	2.50						ALL WAY (PLAQUE)	6161033		DIRECTION INDICATOR BARRICADE
R2-1	36X48	12.00						SPEED LIMIT XX	6161034		DIRECTION INDICATOR BARRICADE, WITH LIGHT
R3-1	48X48	16.00						NO RIGHT TURN (SYMBOL)	6161040		FLASHING ARROW PANEL
R3-2	48X48	16.00						NO LEFT TURN (SYMBOL)	6161047		TYPE III OBJECT MARKER
R3-3	36X36	9.00						NO TURNS	6161052		WARNING LIGHT, TYPE B
R3-4	48X48	16.00						NO U-TURN (SYMBOL)	6161055		SEQUENTIAL FLASHING WARNING LIGHT
R3-7L	30X30	6.25						LEFT LANE MUST TURN LEFT	6161070		TUBULAR MARKER
R3-7R	30X30	6.25						RIGHT LANE MUST TURN RIGHT	6161095		RADAR SPEED ADVISORY SYSTEM
R4-1	36X48	12.00						DO NOT PASS			CHANGEABLE MESSAGE SIGN,
R4-2	36X48	12.00						PASS WITH CARE	6161096		COMMISSION FURNISHED/RETAINED
R4-8a	36X48	12.00						KEEP LEFT (HORIZONTAL ARROW)			CHANGEABLE MESSAGE SIGN W/O COMM.
R4-7a	36X48	12.00						KEEP RIGHT (HORIZONTAL ARROW)	6161098A		INTERFACE, CONTRACTOR FURNISHED/RETAINED
R5-1	30X30	6.25						DO NOT ENTER			CHANGEABLE MESSAGE SIGN WITH COMM.
R5-1a	36X24	6.00						WRONG WAY	6161099		INTERFACE, CONTRACTOR FURNISHED/RETAINED
R6-1L	54X18	6.75						ONE WAY ARROW (LEFT)	6162000A		WORK ZONE TRAFFIC SIGNAL SYSTEM
R6-1R	54X18	6.75						ONE WAY ARROW (RIGHT)	6162002		TEMPORARY LONG-TERM RUMBLE STRIPS
R6-2L	24X30	5.00						ONE WAY (LEFT)	6162004		TEMPORARY SHORT-TERM RUMBLE STRIPS
R6-2R	24X30	5.00						ONE WAY (RIGHT)			TEMPORARY TRAFFIC BARRIER
R9-9	24X12	2.00						SIDEWALK CLOSED	6173600D		CONTRACTOR FURNISHED/RETAINED
								SIDEWALK CLOSED AHEAD,			TEMPORARY TRAFFIC BARRIER
R9-11L	24X18	3.00						(ARROW LEFT) CROSS HERE	6173602B		CONTRACTOR FURNISHED/COMMISSION RETAINED
								SIDEWALK CLOSED AHEAD,	6174000A		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION
R9-11R	24X18	3.00						(ARROW RIGHT) CROSS HERE	6175010A		RELOCATING TEMPORARY TRAFFIC BARRIER
R10-6	24X36	6.00						STOP HERE ON RED (45° ARROW)			TEMPORARY TRAFFIC BARRIER
R11-2	48X30	10.00	2	20.00			29	ROAD CLOSED	6176000B		COMMISSION FURNISHED/RETAINED
								ROAD CLOSED XX MILES AHEAD			TEMP. TRAFFIC BARRIER HEIGHT TRANSITION
R11-3a	60X30	12.50	2	25.00			55A/B	LOCAL TRAFFIC ONLY	6177000B		COMMISSION FURNISHED/RETAINED
R11-4	60X30	12.50	1	12.50			55C	ROAD CLOSED TO THRU TRAFFIC	6208064A		TEMPORARY RAISED PAVEMENT MARKER
CONST-3A	60X48	20.00						FINE SIGN	9029400		TEMPORARY TRAFFIC SIGNALS
CONST-3X	56X12	4.67						SPEEDING/PASSING (PLATE)	9029401		TEMPORARY TRAFFIC SIGNALS AND LIGHTING
MISCELLANEOUS SIGNS											
CONST-5	48X36	12.00						POINT OF PRESENCE			
CONST-5	96X48	32.00						POINT OF PRESENCE			
CONST-7	48X24	8.00						RATE OUR WORK ZONE			
CONST-7	72X36	18.00						RATE OUR WORK ZONE			
CONST-8	48X36	12.00						WORK ZONE NO PHONE ZONE			
CONST-10	36X60	15.00	2	30.00			50A	DETOUR EAST RTE Y STRAIGHT			
CONST-11	36X60	15.00	3	45.00			50C	DETOUR EAST RTE Y RIGHT			
CONST-12	36X60	15.00	2	30.00			50E	DETOUR EAST RTE Y LEFT			
CONST-13	36X60	15.00	1	15.00			51A	DETOUR WEST RTE Y STRAIGHT			
CONST-14	36X60	15.00	1	15.00			51C	DETOUR WEST RTE Y RIGHT			
CONST-15	36X60	15.00	2	30.00			51E	DETOUR WEST RTE Y LEFT			
616-10.05 CONSTRUCTION SIGNS				TOTAL					DISCLAIMER THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.		
616-10.10 RELOCATED SIGNS				357							
							TOTAL	* NO DIRECT PAY WILL BE MADE FOR RELOCATING SIGNS			
							*				

QUANTITY SHEET
SHEET 3 OF 3

QUANTITY SHEET
SHEET 3 OF 3



DATE PREPARED	
3/1/2024	
ROUTE	STATE
Y	MO
DISTRICT	SHEET NO.
SE	3
COUNTY	
CAPE GIRARDEAU	
JOB NO.	
J9S3589	
CONTRACT ID.	

PROJECT NO.

BRIDGE NO.
A9223

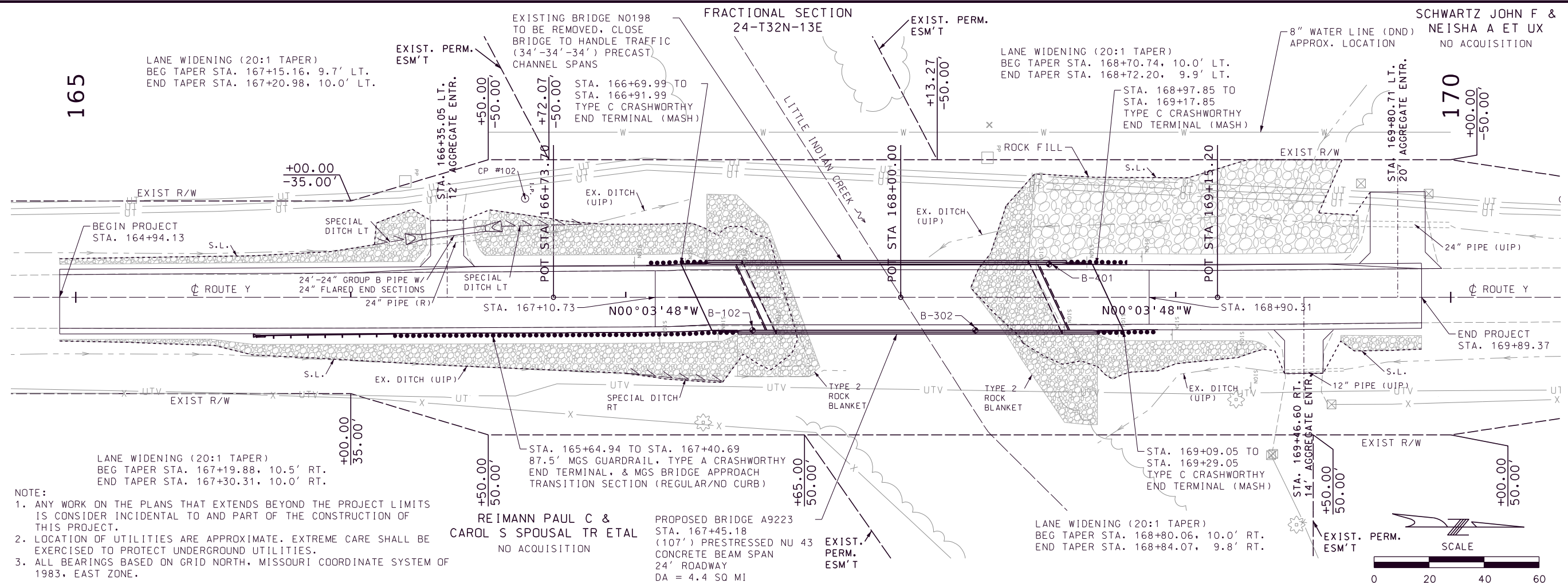
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MISSOURI DEPARTMENT OF TRANSPORTATION
COMMISSION

105 WEST CAPITAL
JEFFERSON CITY, MO 65102

5220 Oakland Avenue
St. Louis, MO 63110
314.863.5570



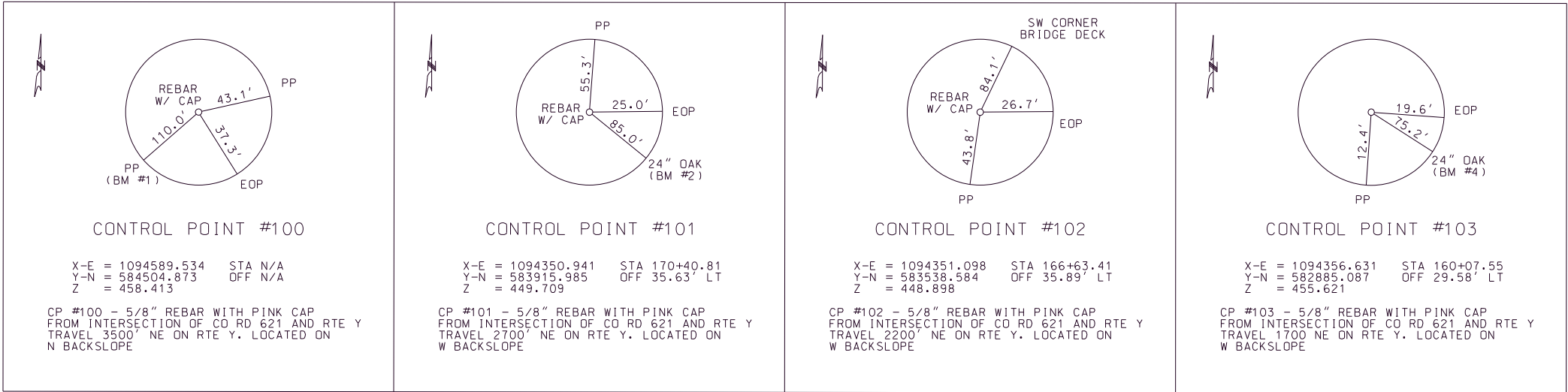


STATE OF MISSOURI
 TRICIA
 M. BOHLER
 NUMBER
 PE-2000149999
 PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED,
 SEALED AND DATED ELECTRONICALLY.

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REFERENCE POINTS
NAD83 (EAST ZONE)
PROJECTION FACTOR = 1.0



COORDINATE POINT LISTING
MISSOURI COORDINATE SYSTEM OF 1983 (EAST ZONE)

COORDINATE POINTS						
SHEET NO.	STATION	LOCATION	OFFSET (FEET)	STATE PLANE		DESCRIPTION
				NORTHING (FEET)	EASTING (FEET)	
4	N/A	ROUTE Y	N/A	584504.873	1094589.534	CP 100
4	170+40.81	ROUTE Y	35.63' LT	583915.985	1094350.941	CP 101
4	166+63.41	ROUTE Y	35.89' LT	583538.584	1094351.098	CP 102
4	160+07.55	ROUTE Y	29.58' LT	582885.087	1094356.631	CP 103
ALIGNMENT						
4	156+65.44	ROUTE Y	0.00'	582573.967	1094253.758	BEGIN ALIGNMENT
4	160+48.30	ROUTE Y	0.00'	582923.518	1094387.671	PT STATION
4	166+73.70	ROUTE Y	0.00'	583548.918	1094386.980	POT STATION
4	168+00.00	ROUTE Y	0.00'	583675.218	1094386.841	POT STATION
4	169+15.20	ROUTE Y	0.00'	583790.418	1094386.714	POT STATION
4	172+28.80	ROUTE Y	0.00'	584104.018	1094386.367	PC STATION
4	176+17.14	ROUTE Y	0.00'	584429.373	1094566.555	END ALIGNMENT

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DATE PREPARED
3/1/2024

ROUTE
Y

DISTRICT
SE

STATE
MO

SHEET NO.
5

COUNTY
CAPE GIRARDEAU

JOB NO.
J9S3589

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9223

DESCRIPTION	DATE

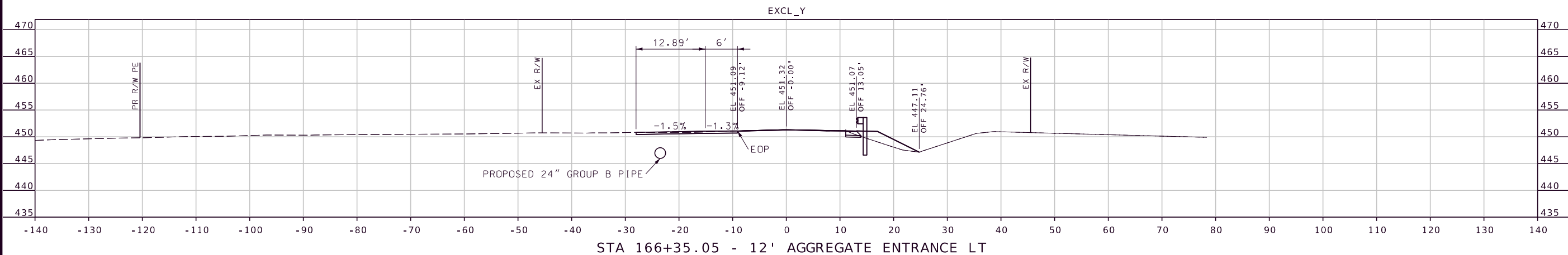
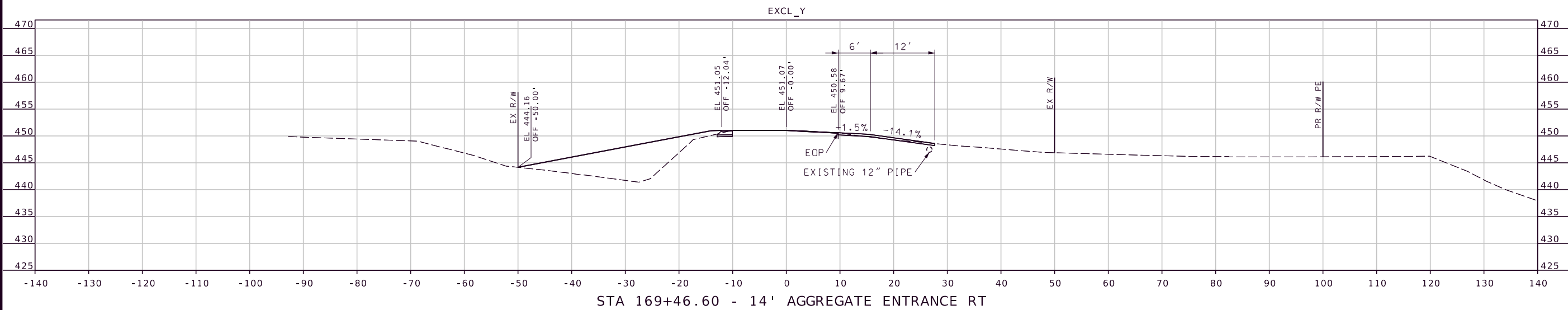
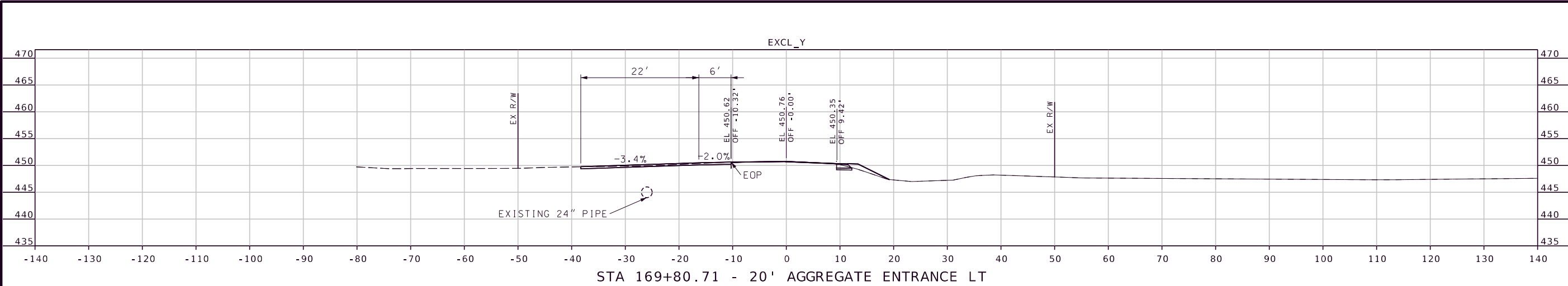
MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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314.860.3370

CIVIL DESIGN, INC.
MISSOURI STATE CERTIFICATE
OF AUTHORITY #200200604

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SPECIAL SHEETS
DRIVEWAY PROFILES
SHEET 1 OF 1

STATE OF MISSOURI

TRICIA M. BOHLER

NUMBER

PE-2000149999

PROFESSIONAL ENGINEER

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DATE PREPARED

3/1/2024

ROUTE

Y

DISTRICT

SE

STATE

MO

SHEET NO.

6

COUNTY

CAPE GIRARDEAU

JOB NO.

J9S3589

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

A9223

DATE

DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL

JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

5220 Oakland Avenue

St. Louis, MO 63110

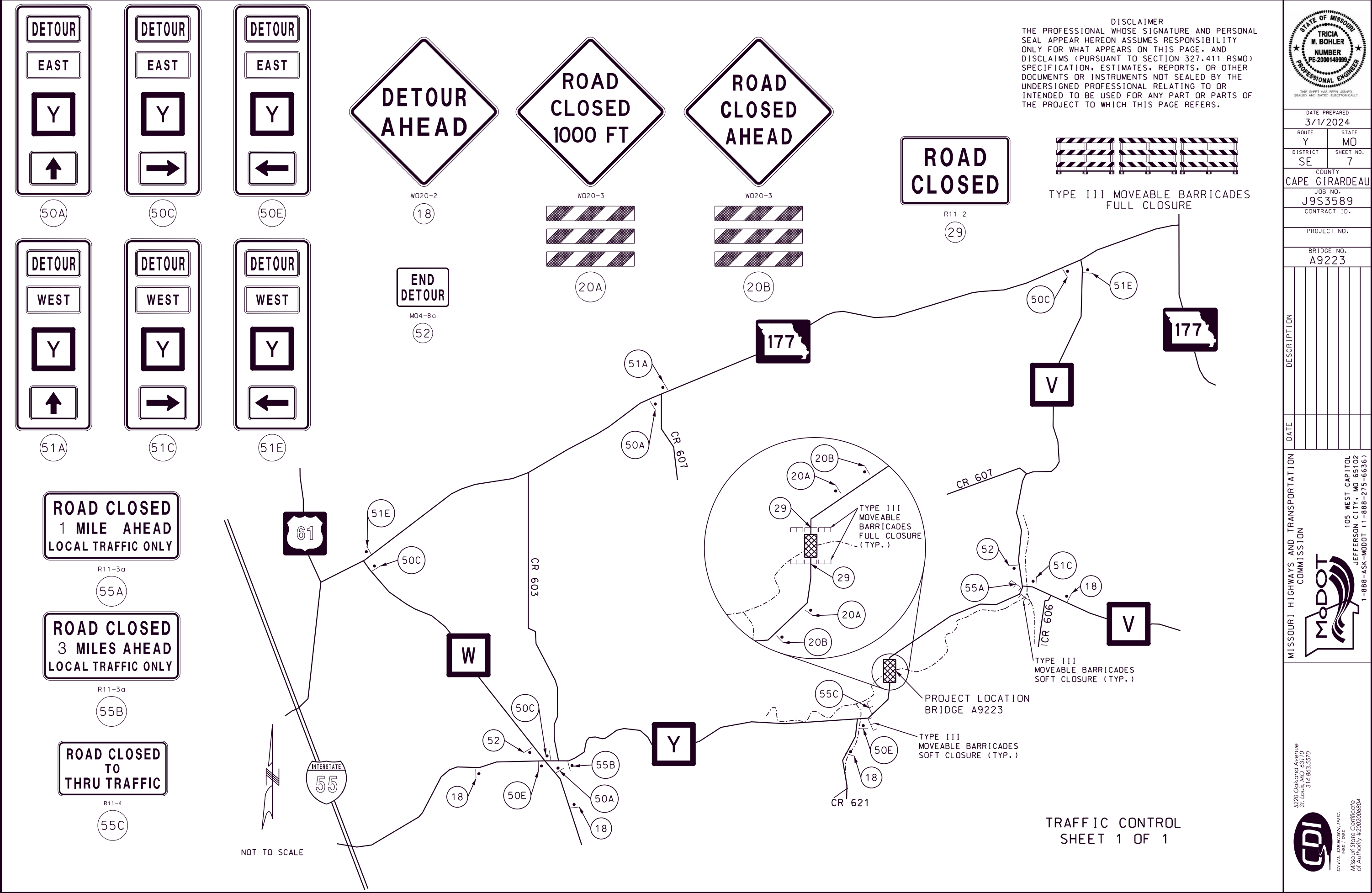
314.860.3370

CDI

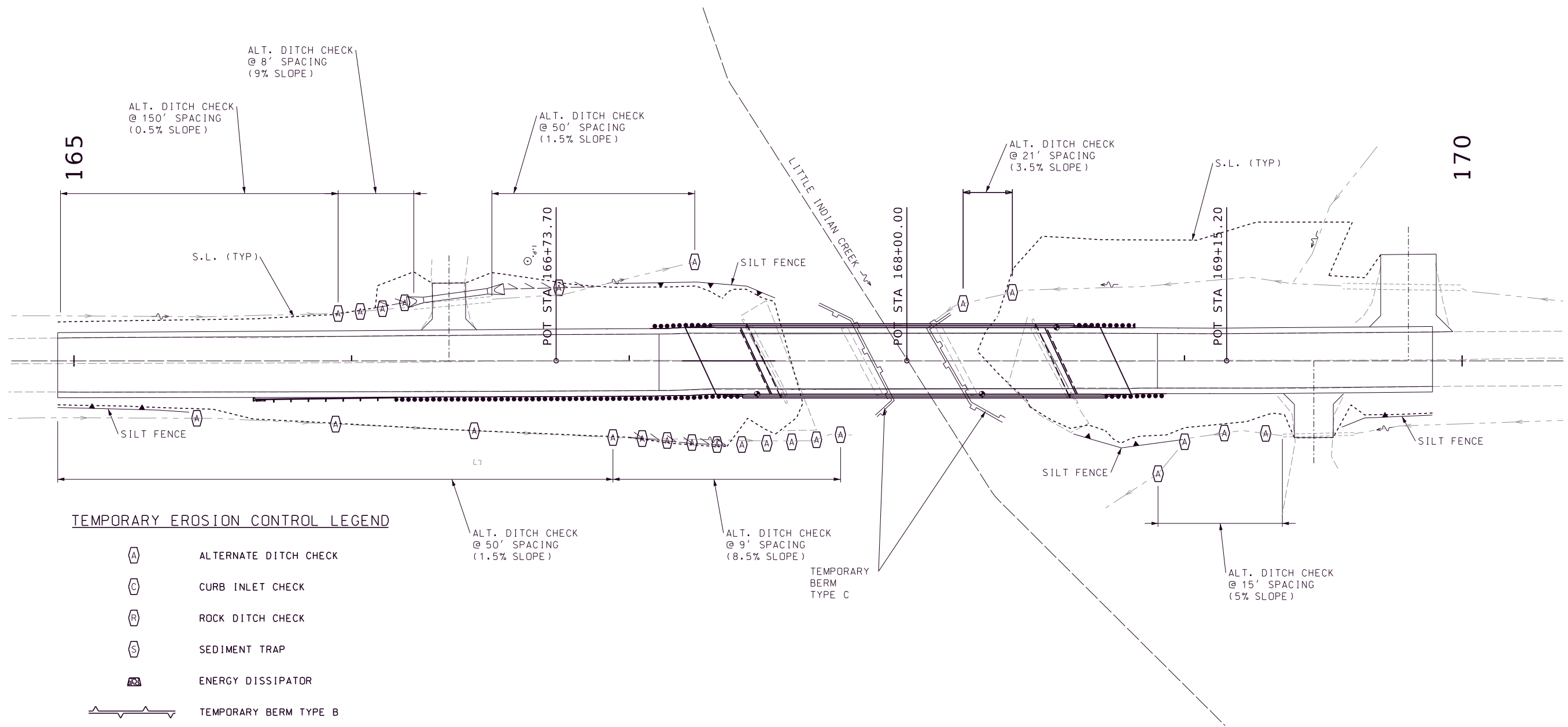
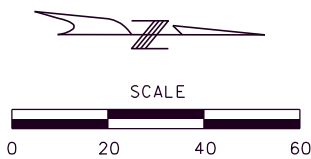
CIVIL DESIGN, INC.

MISSOURI STATE CERTIFICATE OF AUTHORITY #200200604

P:\5XXX\50XX-51XX\5155 - MoDOT SE Bridge Bundles\28-Trans\CAD\J9S3589 RTE Y Cape N0198\SHEETS\006_SS_01_J9S3589_I1.dgn 1:57:14 PM 3/1/2024



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TEMPORARY EROSION CONTROL LEGEND

- ALTERNATE DITCH CHECK
- CURB INLET CHECK
- ROCK DITCH CHECK
- SEDIMENT TRAP
- ENERGY DISSIPATOR
- TEMPORARY BERM TYPE B
- TEMPORARY BERM TYPE C
- SILT FENCE
- TEMPORARY SEDIMENT BASIN
- PERMANENT SEDIMENT BASIN

EROSION CONTROL
SHEET 1 OF 1

STATE OF MISSOURI

TRICIA M. BOHLER

NUMBER

PE-2000149999

PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED
3/1/2024

ROUTE
Y

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SHEET NO.
8

COUNTY
CAPE GIRARDEAU

JOB NO.
J9S3589

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9223

DESCRIPTION

DATE

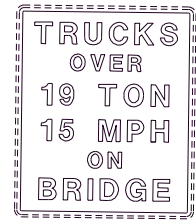
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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St. Louis, MO 63110
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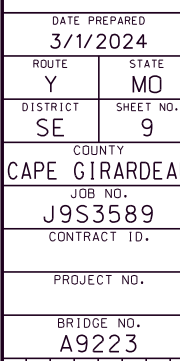


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SIGNING & PAVEMENT MARKING
SHEET 1 OF 1

[illegible]MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-276-6532)

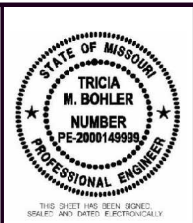
5220 Oakland Avenue
St. Louis, MO 63110
314.863.5570



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CULVERT SECTION SHEET
SHEET 1 OF 1



ROUTE Y	STATE MO
DISTRICT SE	SHEET NO. 10

JOB NO.
J9S3589
CONTRACT ID.

BRIDGE NO.
A9223

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MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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St. Louis, MO 63110
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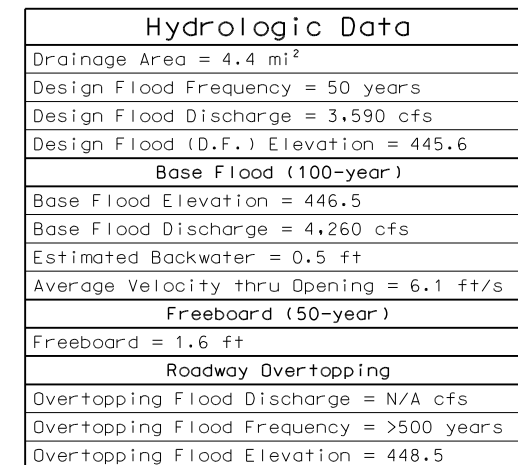
CDI

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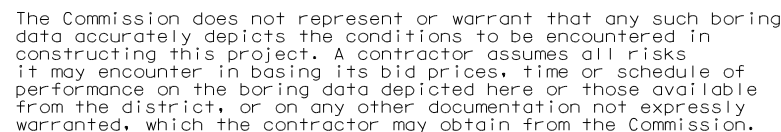
Missouri State Certificate
of Authority #2002006804

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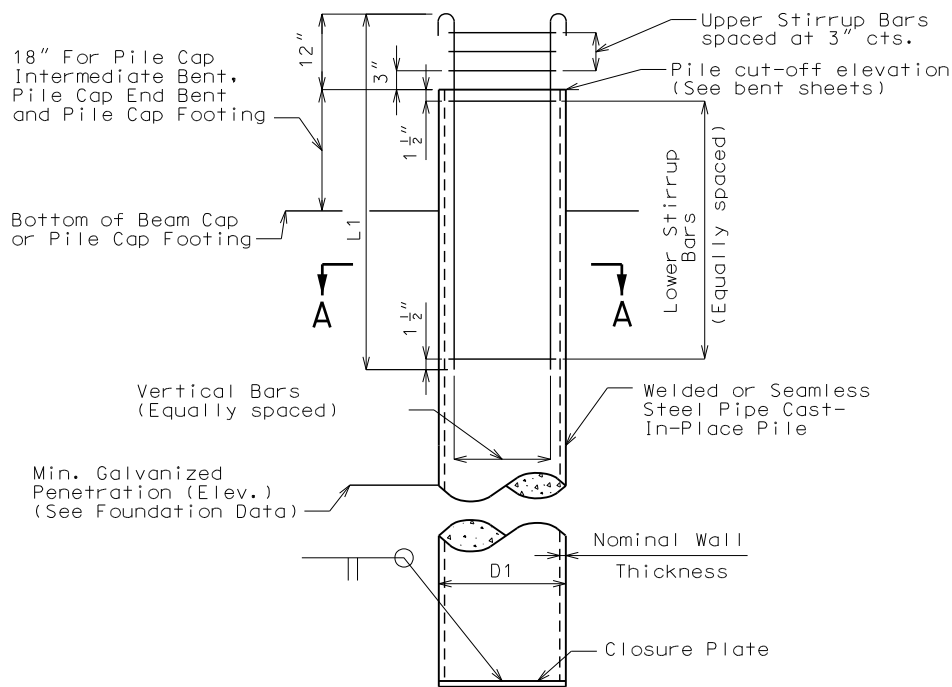
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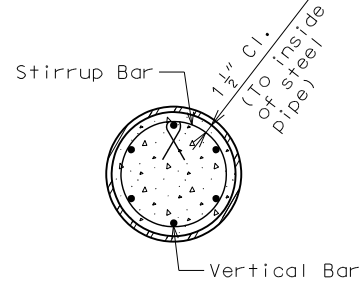
Roadway fill shall be completed to the final roadway section and up to the elevation of the bottom of the concrete beam within the limits of the structure for not less than 25 feet in back of the fill face of the end bents before any piles are driven for any bents falling within the embankment section.



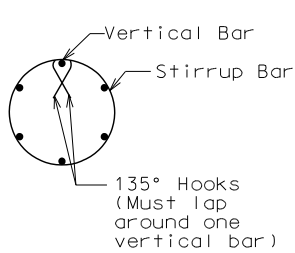
- BRIDGE: ROUTE Y OVER LITTLE INDIAN CREEK
ROUTE Y FROM 167+27.50 TO 168+72.50
ABOUT 1.3 MILES SW of Rte V
BEGINNING STATION 167+45.18



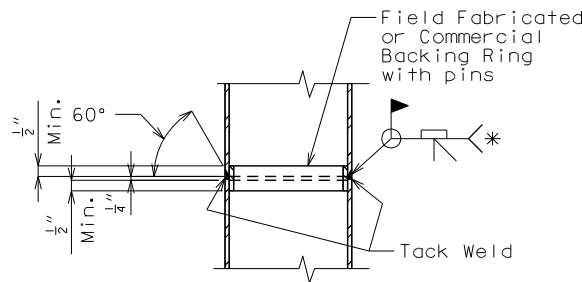
GALVANIZED CLOSED ENDED CAST-IN-PLACE (CECIP) CONCRETE PILE WITHOUT PILE POINT REINFORCEMENT



SECTION A-A

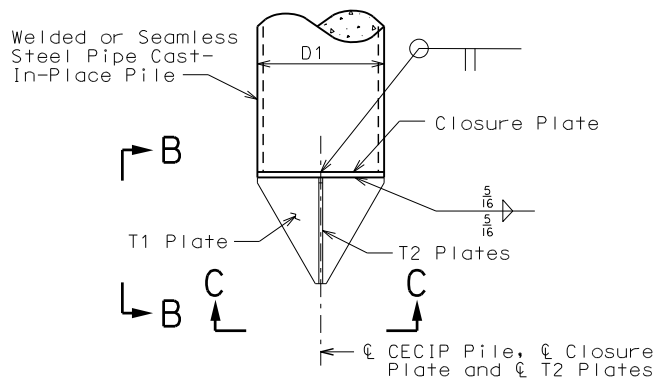


DETAIL OF SEISMIC STIRRUP BAR



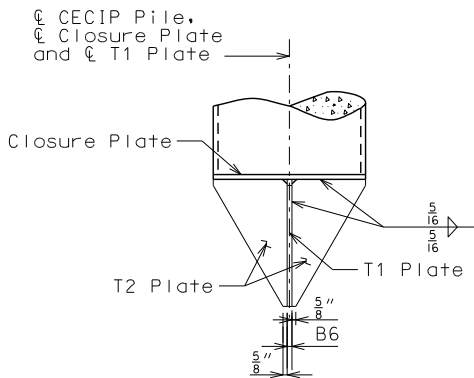
STEEL PIPE PILE SPLICE

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

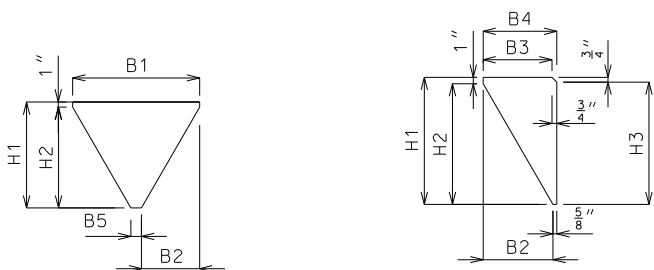


CRUCIFORM PILE POINT

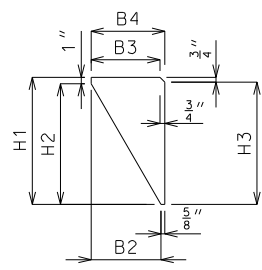
Note: Cost of closure plate is included with cast-in-place concrete pile.



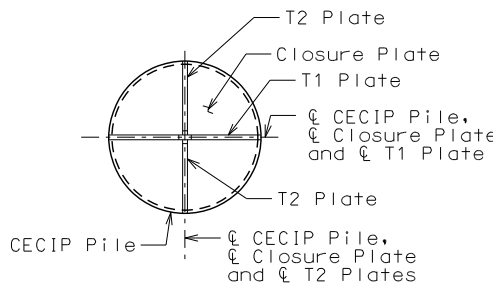
ELEVATION B-B



T1 PLATE DETAILS



T2 PLATE DETAILS (2 REQUIRED)



SECTION C-C

CRUCIFORM PILE POINT REINFORCEMENT

GALVANIZED CLOSED ENDED CAST-IN-PLACE (CECIP) CONCRETE PILE

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

Sheet No. 3 of 24

Cruciform Pile Point Reinforcement Data				
D1, CECIP Pile (O.D.)	14"	16"	20"	24"
B1	14"	16"	20"	24"
B2	6"	7"	8 7/8"	10 5/8"
B3	5 7/8"	6 7/8"	8 3/4"	10 1/2"
B4	6 5/8"	7 5/8"	9 1/2"	11 1/4"
B5	2"	2"	2 1/4"	2 3/4"
B6	3/4"	3/4"	1"	1 1/2"
H1	9 1/8"	10 1/2"	13"	15 3/8"
H2	8 1/8"	9 1/2"	12"	14 3/8"
H3	8 3/8"	9 3/4"	12 1/4"	14 5/8"
T1 and T2 Plate Thickness	3/4"	3/4"	1"	1 1/2"

Galvanized Closed Ended Cast-In-Place (CECIP) Concrete Pile Data				
Bent Number	1	2	3	4
D1, CECIP Pile (O.D.)	16"	16"		
Min. Nominal Wall Thickness	1/2"	1/2"		
Closure Plate Thickness	3/4"	3/4"		
Pile Point Reinforcement	Cruciform	Cruciform		
Vertical Bars	6-#6-V	6-#6-V		
L1, Length of Vertical Bars	5'-3"	5'-3"		
Upper Stirrup Bars	3-#4-P	3-#4-P		
Lower Stirrup Bars	5-#4-P	5-#4-P		

Notes:

Welded or seamless steel shell (pipe) shall be ASTM A252 Grade 3 (fy = 45,000 psi).

Concrete for cast-in-place pile shall be Class B-1.

Steel for closure plate shall be ASTM A709 Grade 50.

Steel for cruciform pile point reinforcement shall be ASTM A709 Grade 50.

The minimum wall thickness of any spot or local area of any type shall not be more than 12.5% under the specified nominal wall thickness.

The contractor shall determine the pile wall thickness required to avoid damage from all driving activities, but wall thickness shall not be less than the minimum specified. No additional payment will be made for furnishing a thicker pile wall than specified on the plans.

Closure plate shall not project beyond the outside diameter of the pipe pile. Satisfactory weldments may be made by beveling tip end of pipe or by use of inside backing rings. In either case, proper gaps shall be used to obtain weld penetration full thickness of pipe. Payment for furnishing and installing closure plate will be considered completely covered by the contract unit price for Galvanized Cast-In-Place Concrete Piles.

Splices of pipe for cast-in-place concrete pile shall be made watertight and to the full strength of the pipe above and below the splice to permit hard driving without damage. Pipe damaged during driving shall be replaced without cost to the state. Pipe sections used for splicing shall be at least 5 feet in length.

The hooks of vertical bars embedded in the beam cap should not be turned outward, away from the pile core.

The hook of vertical bars embedded in the pile cap footing should be oriented outward for all seismic categories.

Closure plate need not be galvanized.

Reinforcing steel for cast-in-place piles is included in the Bill of Reinforcing Steel.

All reinforcement for cast-in-place pile is included in the estimated quantities for bents.

For Foundation Data table, see Sheet No. 2.



DATE PREPARED
1/21/2024

ROUTE
Y

DISTRICT
BR

COUNTY
CAPE GIRARDEAU

JOB NO.
J9S3589

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9223

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MODOT

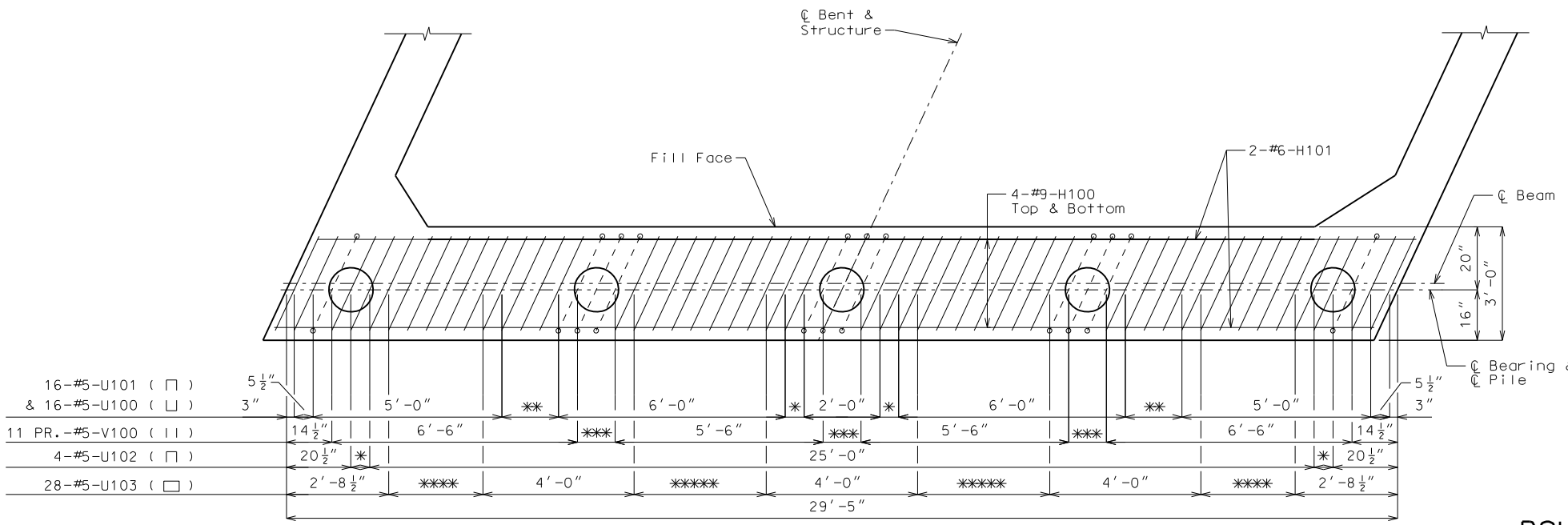
105 WEST CAPITAL

JEFFERSON CITY, MO 65102

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PLAN OF BEAM



PLAN OF BEAM SHOWING REINFORCEMENT

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

Sheet No. 4 of 24

NOTES:

Work this sheet with Sheets No. 5 and 6.

All concrete in the End Bent above top of beam and below top of slab shall be Class B-2.

For details of Vertical Drain, see Sheet No. 7.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2" clearance to fill face of end bent.

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

```
* 1 Spa. @ 6"
** 3 Spa. @ 6"
*** 2 Spa. @ 6"
**** 5 Spa. @ 6"
***** 7 Spa. @ 6"
```

16-#5-U101 (☐)
 & 16-#5-U100 (☐)
 11 PR.-#5-V100 (☐)
 4-#5-U102 (☐)
 28-#5-U103 (☐)

Detailed Jan. 2024
Checked Jan. 2024

ROUTE Y OVER LITTLE INDIAN CREEK
END BENT 1 DETAILS 01

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St. Louis, MO 63110
314.863.5570

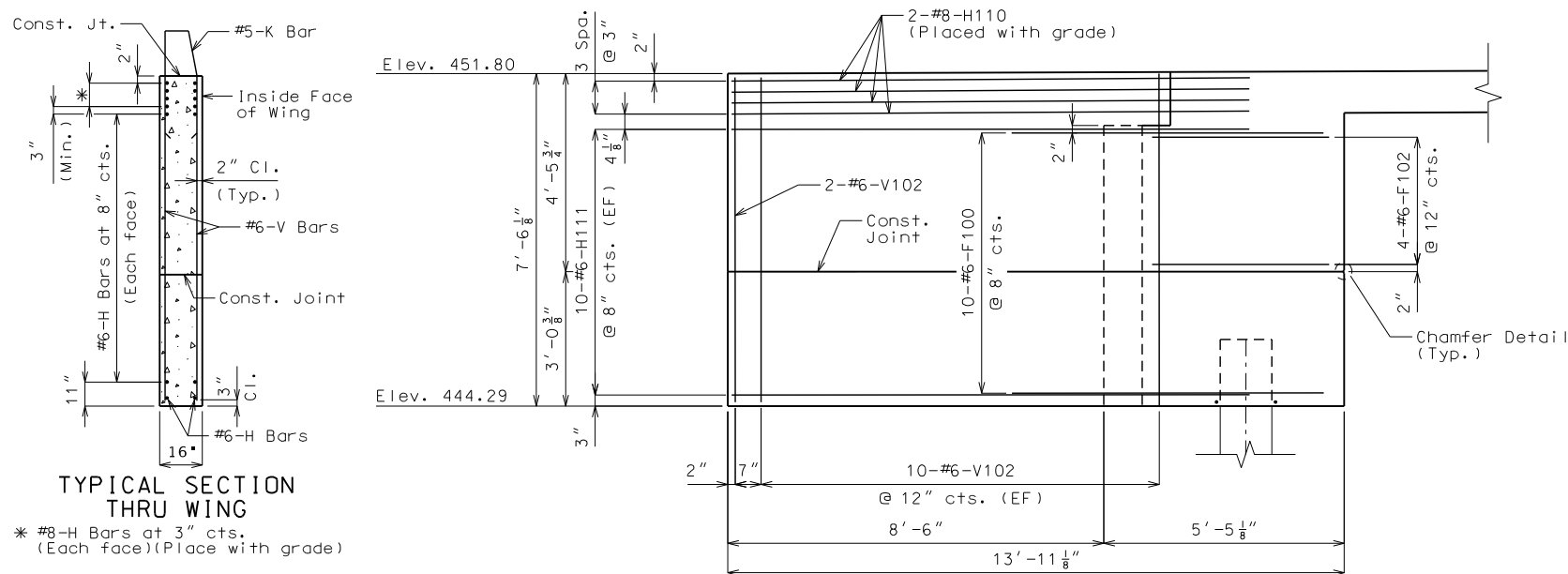


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CIVIL DESIGN, INC.
WBE | DBE

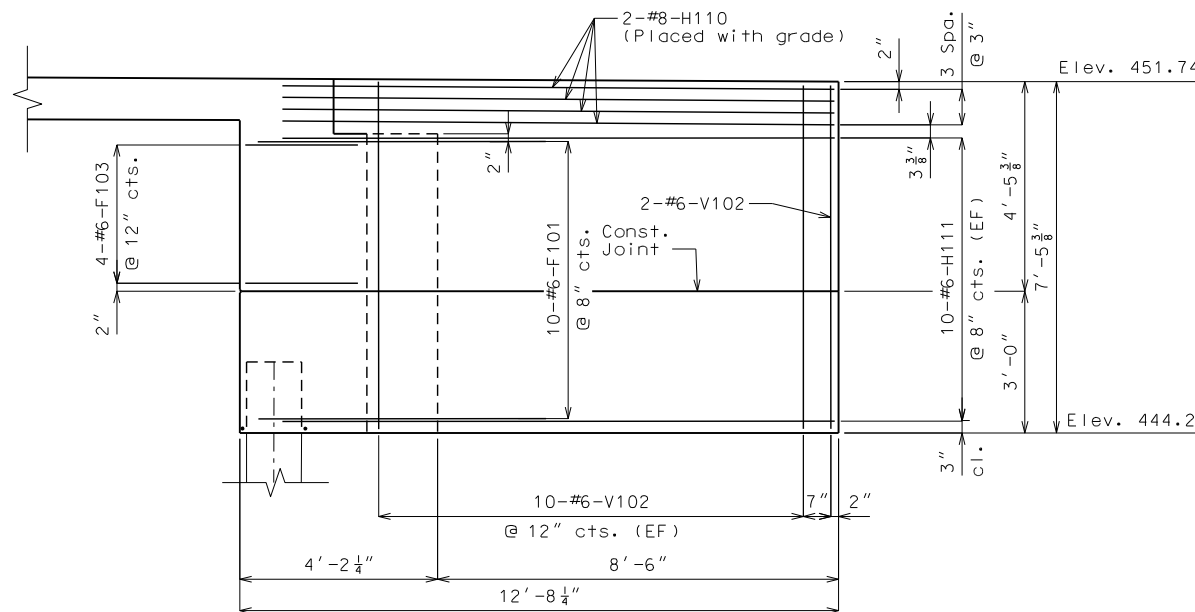
Missouri State Certificate
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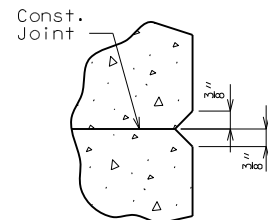
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SECTION E-E



SECTION F-F



CHAMFER DETAIL

NOTES:

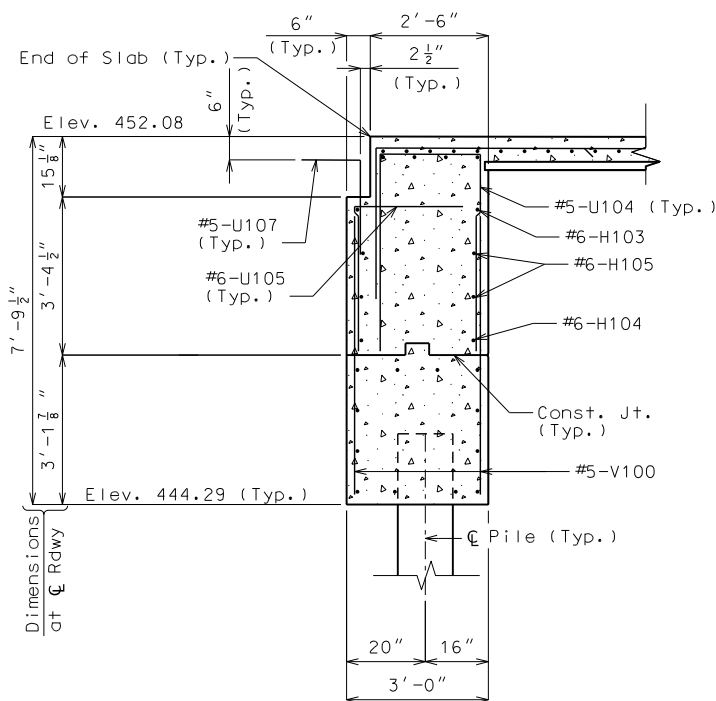
Work this sheet with Sheets No. 4 and 5.

All concrete in the End Bent above top of beam and below top of slab shall be Class B-2.

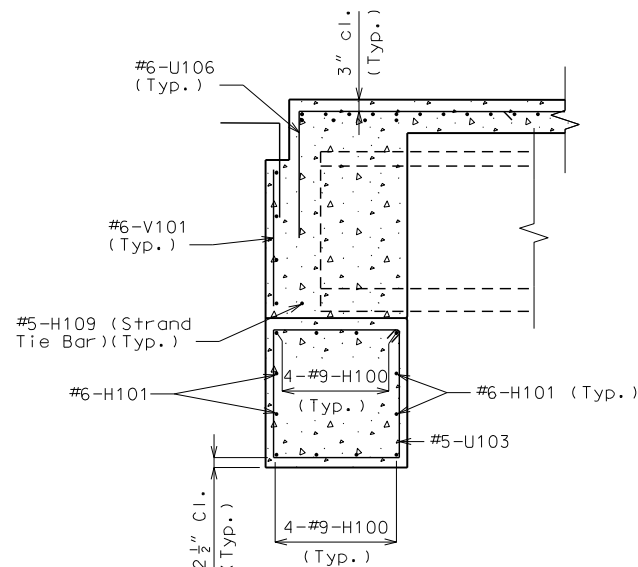
For details of Vertical Drain, see Sheet No. 7.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2" clearance to fill face of end bent.

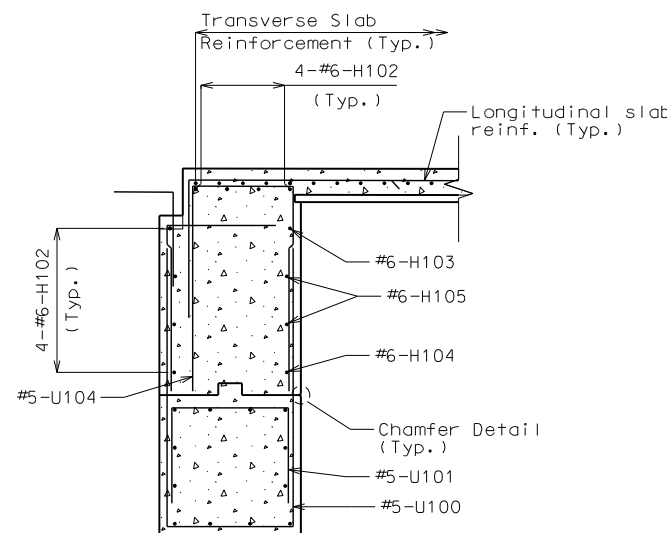
Reinforcing steel shall be shifted to clear piles, U-bars shall clear piles by at least 1 1/2".



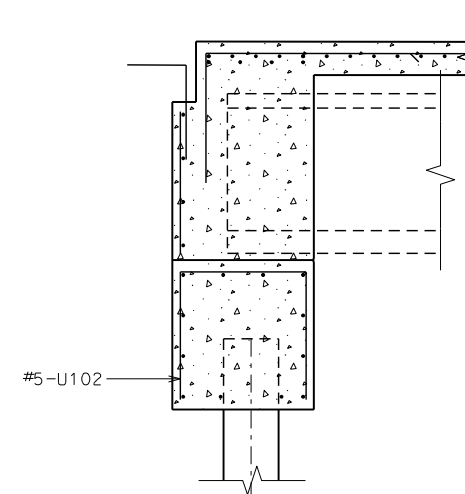
SECTION A-A



SECTION B-B

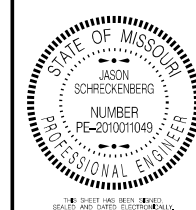


SECTION C-C



SECTION D-D

ROUTE Y OVER LITTLE INDIAN CREEK
END BENT 1 DETAILS 03



DATE PREPARED
1/21/2024

ROUTE Y STATE MO

DISTRICT BR SHEET NO. 6

COUNTY CAPE GIRARDEAU

JOB NO. J9S3589

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9223

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL

JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

MoDOT

5220 Oakland Avenue

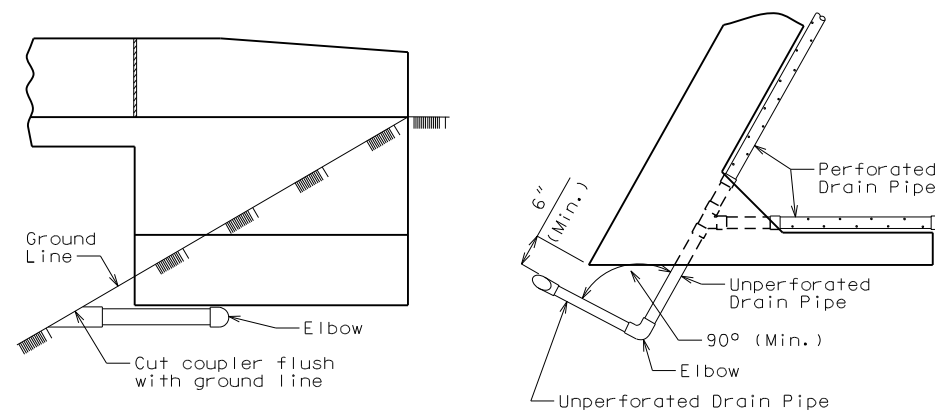
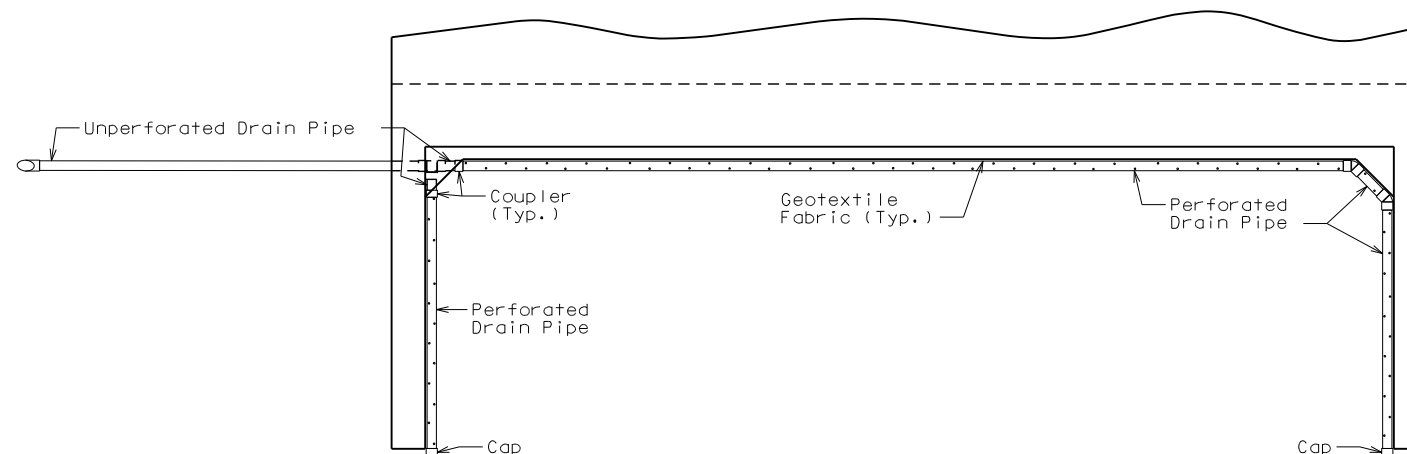
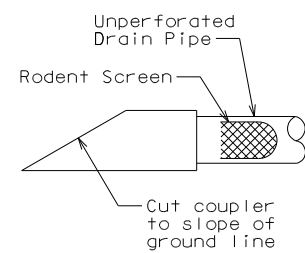
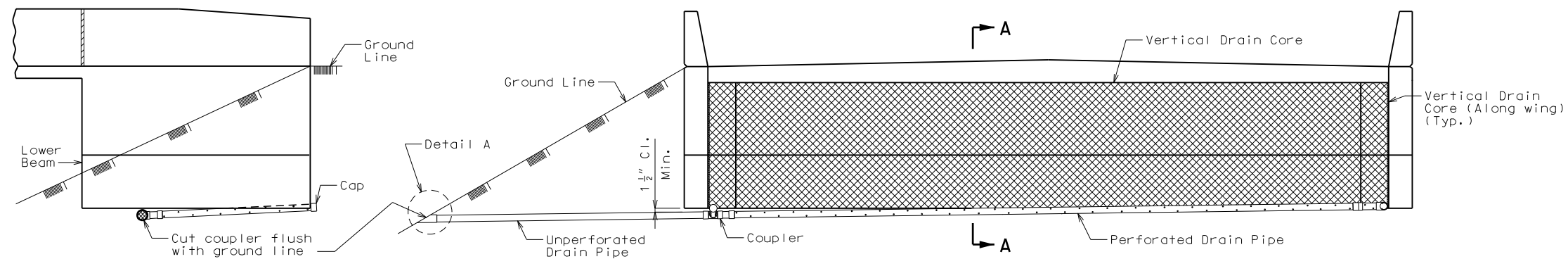
St. Louis, MO 63110

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Missouri State Certificate of Authority #202006804

REV.

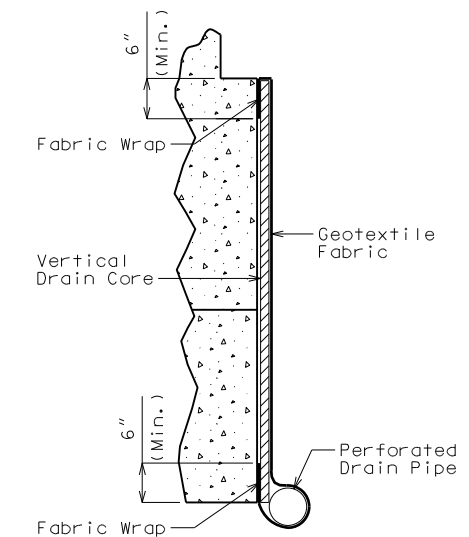


ELEVATION OF WING

PART PLAN

OPTIONAL TURNED DRAIN

(Use only when straight drain is not practical.)



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

1/21/2024

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

Y	MO
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TRICT	SHEET NO.
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3R	7
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COUNTY _____

E GIRARDEAU

JOB NO.

J9S3589

CONTRACT ID.

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MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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

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2200 Louisa Avenue
St. Louis, MO 63110
314.863.5570

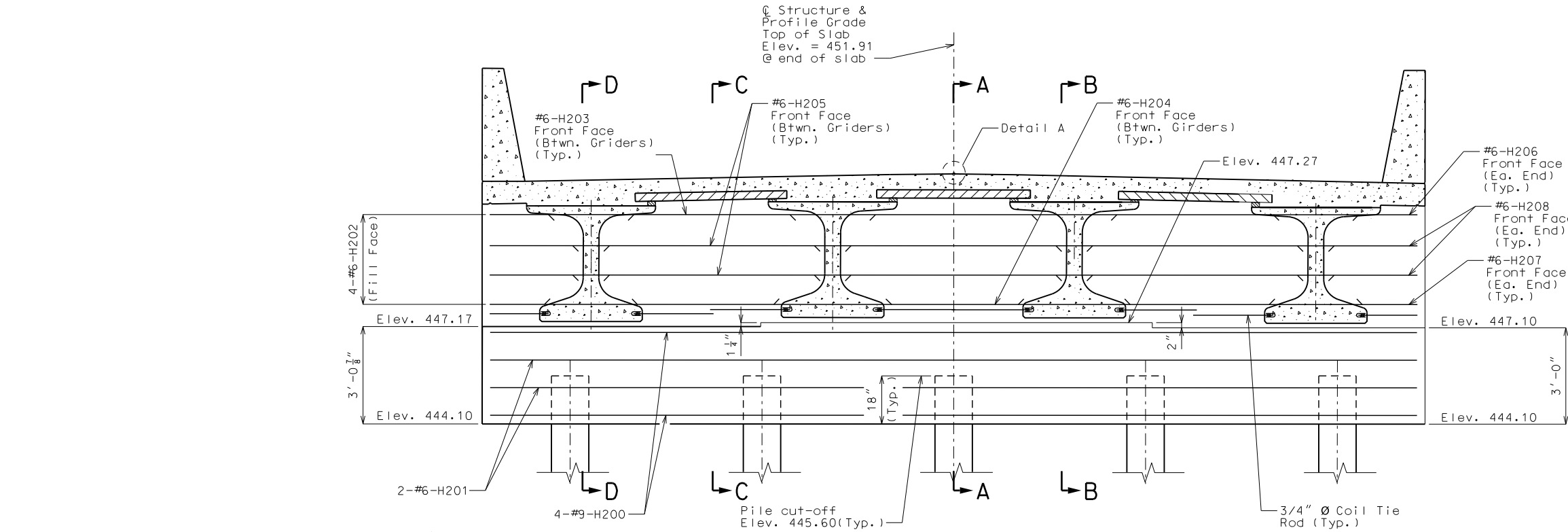
Detailed	Jan.	2024
Checked	Jan.	2024

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

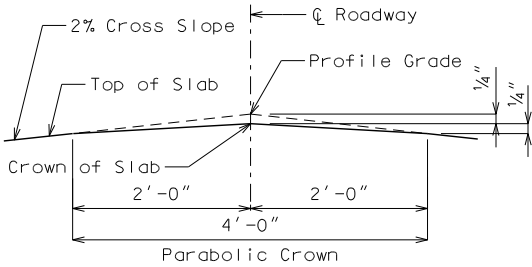
Sheet No. 7 of 24

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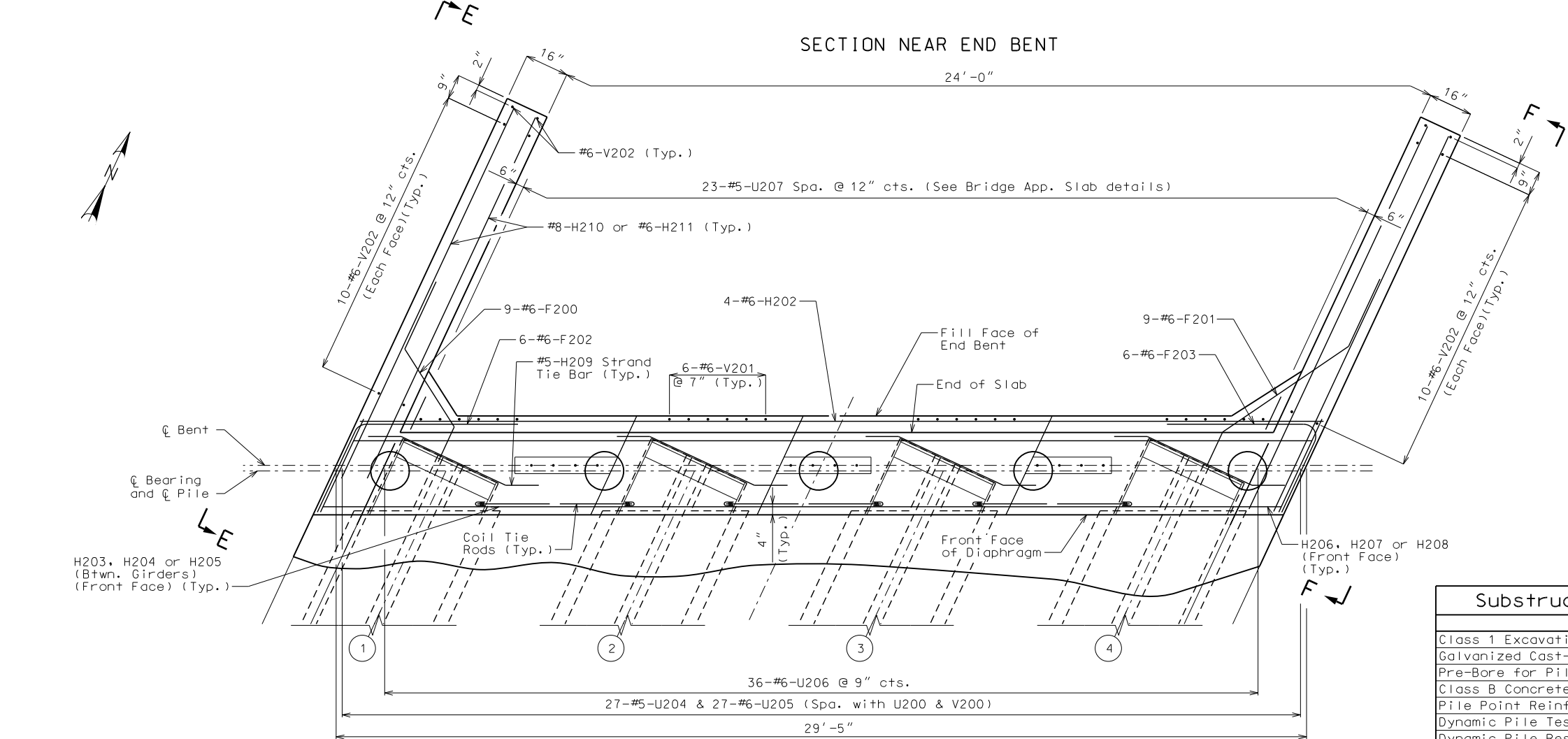
ROUTE Y OVER LITTLE INDIAN CREEK
VERTICAL DRAIN AT END BENTS



SECTION NEAR END BENT



DETAIL



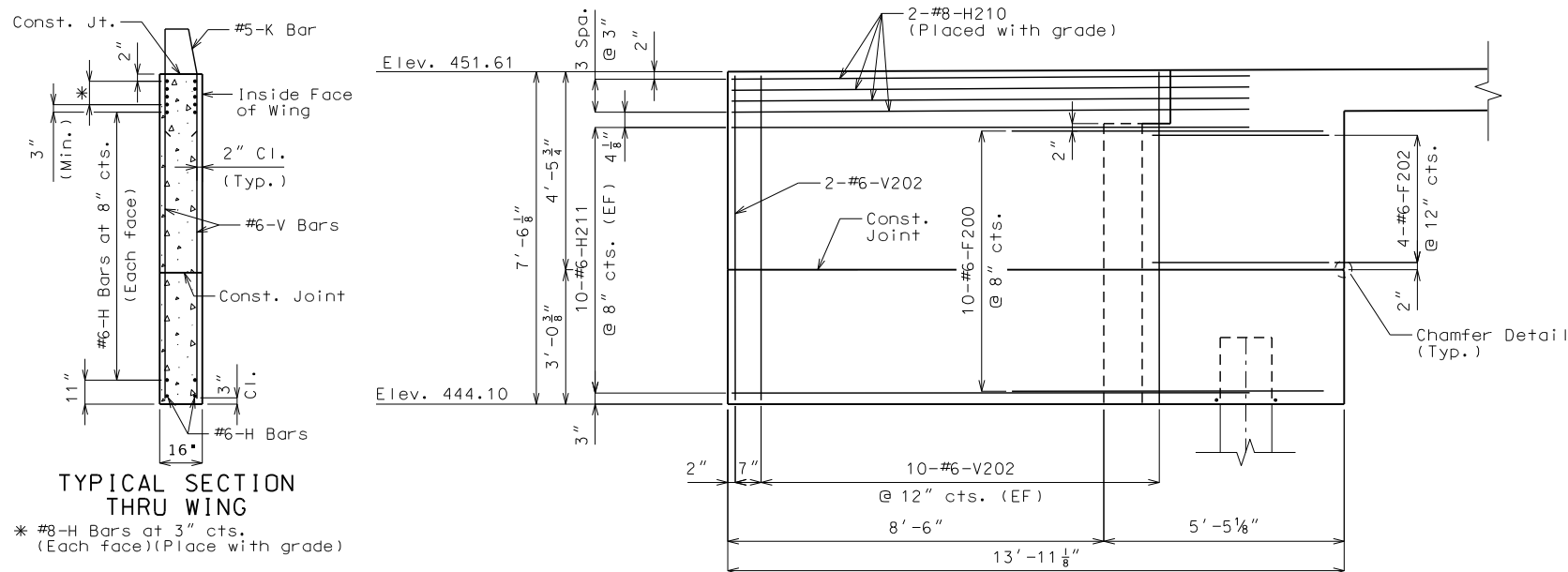
PART PLAN SHOWING REINFORCEMENT

NOTES:

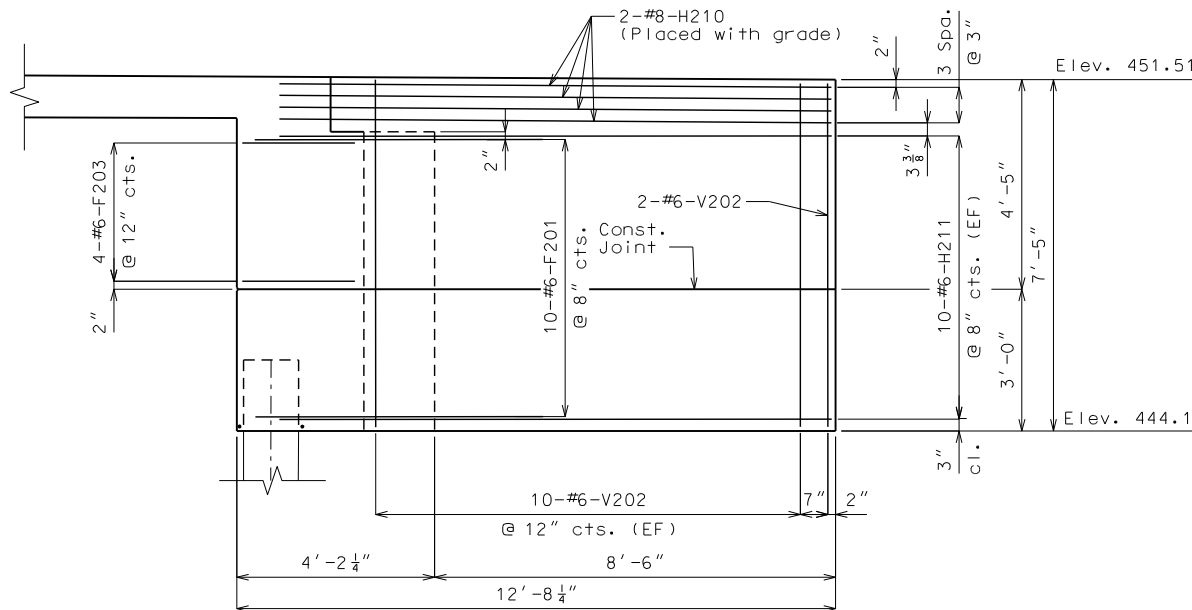
- Work this sheet with Sheets 8 and 10.
- All concrete in the End Bent above top of beam and below top of slab shall be Class B-2.
- For details of Vertical Drain, see Sheet No. 7.
- Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2" clearance to fill face of end bent.
- Reinforcing steel shall be shifted to clear piles. U-bars shall clear piles by at least 1 1/2".

Substructure Quantity Table-End Bent No. 2		
Item		Quantity
Class 1 Excavation	cu. yard	83
Galvanized Cast-in-Place Concrete Piles (16 in.)	linear foot	330
Pre-Bore for Piling	linear foot	25
Class B Concrete (Substructure)	cu. yard	14.2
Pile Point Reinforcement	each	5
Dynamic Pile Testing	each	1
Dynamic Pile Restrike Testing	each	1
Vertical Drains at End Bents	each	1

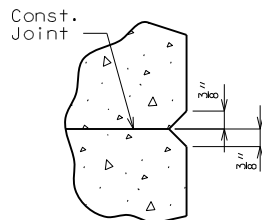
ROUTE Y OVER LITTLE INDIAN CREEK
END BENT 2 DETAILS 02



SECTION E-E



SECTION F-F



CHAMFER DETAIL

NOTES:

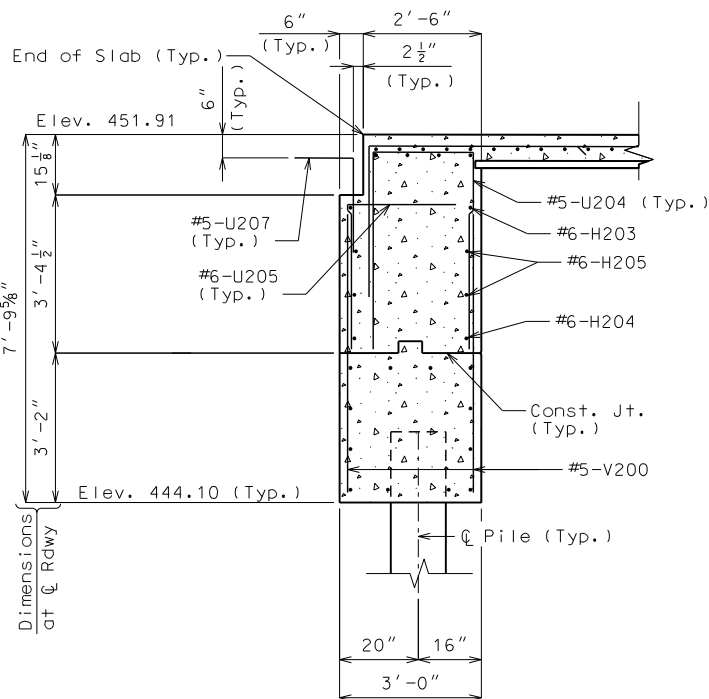
Work this sheet with Sheets No. 8 and 9.

All concrete in the End Bent above top of beam and below top of slab shall be Class B-2.

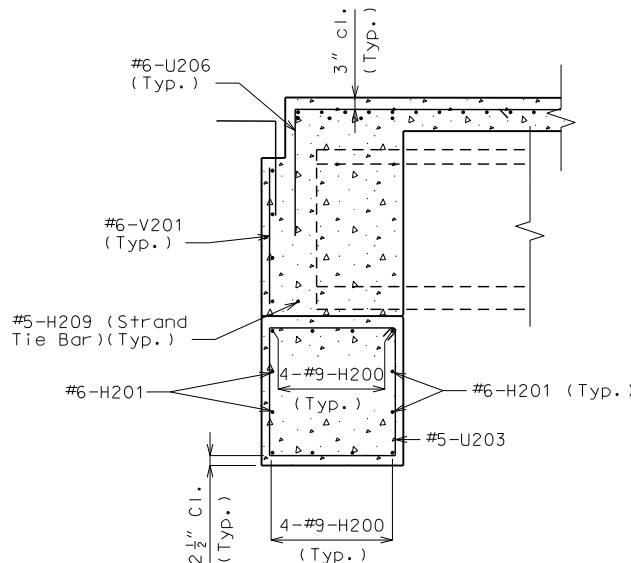
For details of Vertical Drain, see Sheet No. 7.

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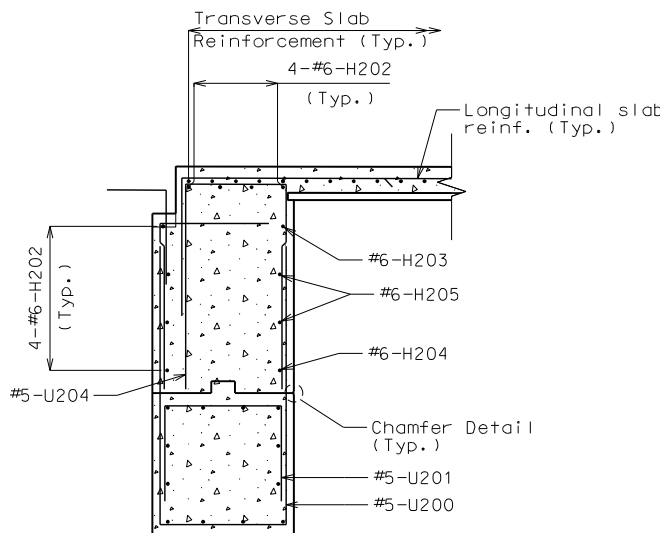
Reinforcing steel shall be shifted to clear piles, U-bars shall clear piles by at least 1 1/2".



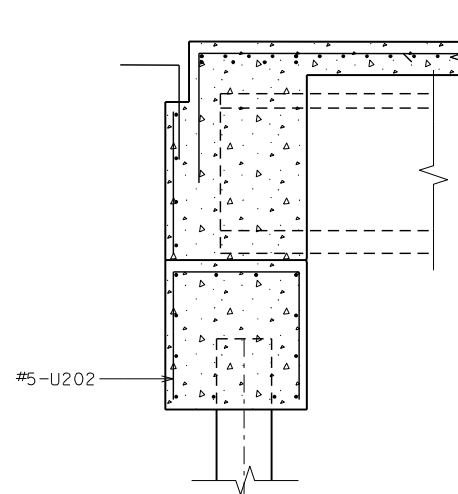
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

ROUTE Y OVER LITTLE INDIAN CREEK
END BENT 2 DETAILS 03

Detailed Jan. 2024
Checked Jan. 2024

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

Sheet No. 10 of 24

P:\5XXX\50XX-51XX\5155 - MoDOT SE Bridge Bundles\24-Structures\CAD\ORD\B-A9223_010-J9S3589_EB2_Details_03.dgn 11:52:35 AM 1/21/2024



DATE PREPARED
1/21/2024

ROUTE
Y

DISTRICT
BR

COUNTY
CAPE GIRARDEAU

JOB NO.
J9S3589

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9223

DESCRIPTION

DATE

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DIMENSIONS

+ Indicates prestressing strand. o Indicates cut & shop bend with 3'-0" projection.

STRANDS AT GIRDER ENDS

S = Vertical wire spacing

L = Length of WWR mats

J = Distance between WWR mats

Bill of Reinforcing Steel

Bars Each Girder				
No.	Size/Mark	Length	Shape	
130	3 G1	2'-10"	8	
2	4 G3	4'-3"	20	
6	4 G6	Varies	20	

Shape 8

Shape 20

Welded Wire Each Girder					
Mark	Size	S	W	L	J
WWR1	D31	4"	W12	5'-6"	8"
WWR2	D31	8"	W12	15'-0"	10"
WWR3	D31	12"	W12	30'-0"	12"
WWR6	D31	2"	W12	12"	2"

WWR1, WWR2,
WWR3 & WWR6

WWR4

WWR5

All dimensions are out to out.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

Actual bar lengths are measured along centerline of bar to the nearest inch.

Minimum clearance to reinforcing shall be 1", unless otherwise shown.

All bar reinforcement shall be Grade 60.

WWR shall not be epoxy coated.

G4 and G5 not required for interior
girders. Half no. of G3, G4, G5 and G6
not required for ext. girders.

General Notes:

Concrete for prestressed beams shall be Class A-1 with $f'_c = 9500$ psi and $f'_{ci} = 6500$ psi.

Use 44 - 0.6"Ø Grade 270 strands with an initial prestress force of 2049.3 kips.

Pretensioned members shall be in accordance with Sec 1029.

Fabricator shall be responsible for location and design of lifting devices.

Exterior and interior girders are the same except: coil ties, top flange blockout, application of bond breaker, coil inserts for slab drains, holes for steel intermediate diaphragms.

The contractor shall provide bracing necessary for lateral and torsional stability of the girders during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not drill holes in the girders.

For Girder Camber Diagram, see Sheet No. 14.

For location of coil ties at integral bents, see Sheets No. 5 and 9.

Alternate bar reinforcing steel details are provided and may be used. The same type of reinforcing steel shall be used for all girders in all spans.

SECTION A-A

Strands not shown
for clarity.

Reinforcement support strands not shown for clarity.

SECTION B-B

Strands not shown
for clarity.

BEARING PLATE

PART ELEVATION

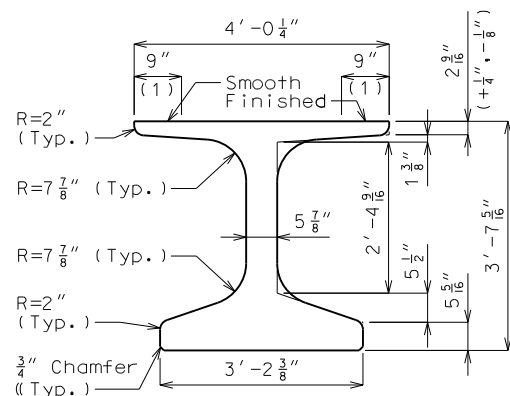
CLOSED DIAPHRAGMS

Place vent holes at or near upgrade 1/3 point
of girders and clear reinforcing steel or
strands by 1 1/2" minimum

4 Eq. Spa. — Skew

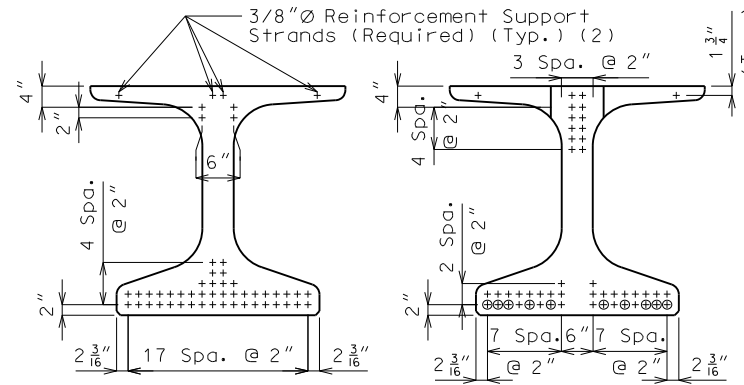
INTERIOR GIRDER
& EXTERIOR GIRDER AT END BENT
TOP FLANGE BLOCKOUT

(1) Fabricator shall apply a bond breaker to this region excluding where joint filler will be applied.



DIMENSIONS

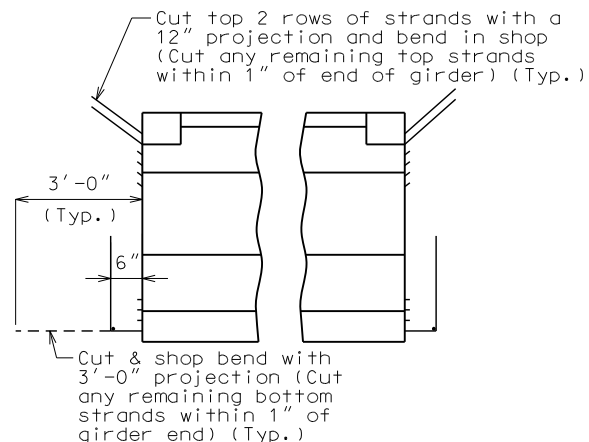
(2) Outer strands tensioned to 2.02 kips/strand and inner strands to 8 kips/strand. Placed symmetrical about $\bar{C}$ Girder. May be moved laterally in pairs.



$\bar{C}$ GIRDER
STRAND ARRANGEMENT

+ Indicates prestressing strand.

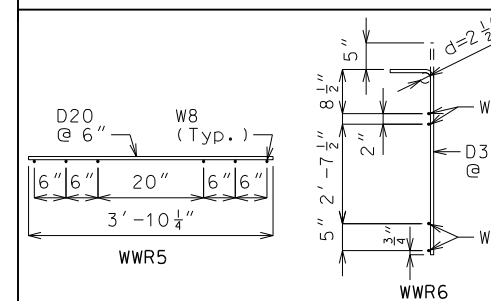
o Indicates cut & shop bend with 3'-0" projection.



END BENT
STRANDS AT GIRDER ENDS

Bill of Reinforcing Steel - Each Girder					Bending Diagrams
No.	Size/Mark	Length	Shape		
276	5 B1	5'-0"	11		Shape 20 16 1/4" 3 1/4" 5 1/2" 4" 2'-2" 3" 9 1/2"
296	4 D1	4'-0"	9		
2	4 G3	4'-3"	20		
3	4 G6	Varies	20		Shape 9 Shape 11

Welded Wire Reinforcement - Each Girder



All dimensions are out to out.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

Actual bar lengths are measured along centerline of bar to the nearest inch.

Minimum clearance to reinforcing shall be 1".

All bar reinforcement shall be Grade 60.

The two D1 bars may be furnished as one bar at the fabricator's option.

All B1 bars shall be epoxy coated.

G4 and G5 not required for interior girders. Half no. of G3, G4, G5 and G6 not required for ext. girders.

General Notes:

Concrete for prestressed girders shall be Class A-1 with $f'c = 9500$ psi and $f'ci = 6500$ psi.

Use 44 - 0.6" $\bar{O}$ Grade 270 strands with an initial prestress force of 1933.5 kips.

Pretensioned members shall be in accordance with Sec 1029.

Fabricator shall be responsible for location and design of lifting devices.

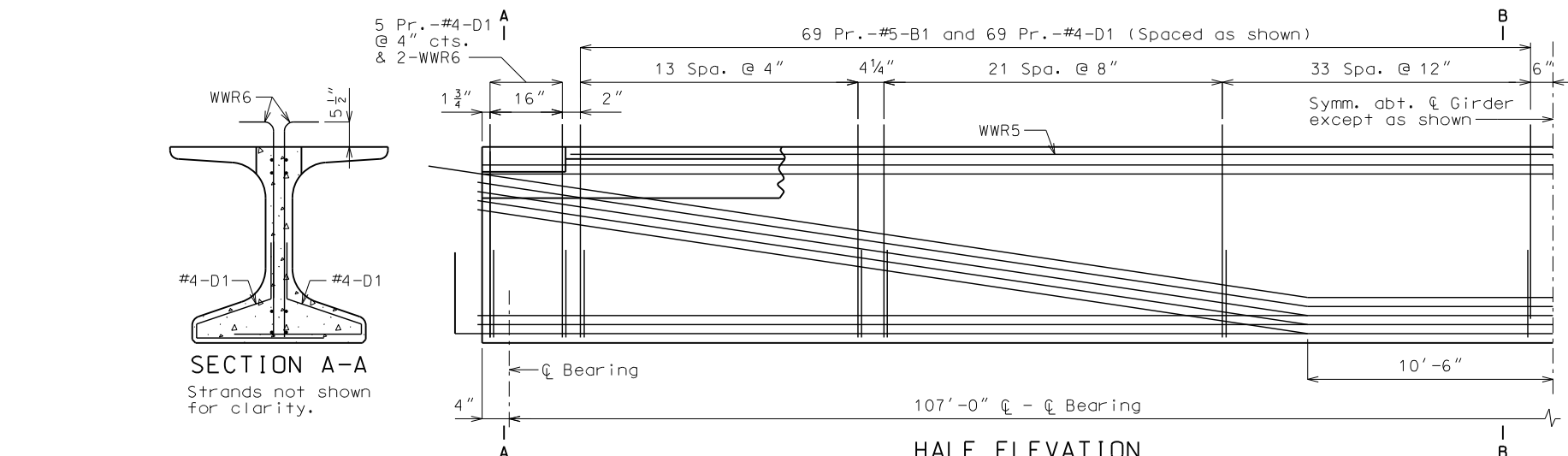
Exterior and interior girders are the same except: coil ties, top flange blackout, application of bond breaker, and holes for steel intermediate diaphragms.

The contractor shall provide bracing necessary for lateral and torsional stability of the girders during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not drill holes in the girders.

For Girder Camber Diagram, see Sheet No. 14.

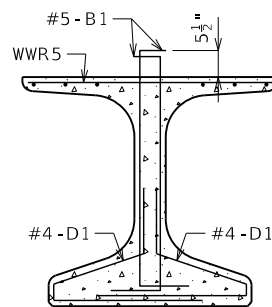
For location of coil ties at integral bents, see Sheets No. 5 and 9.

Alternate bar reinforcing steel details are provided and may be used. The same type of reinforcing steel shall be used for all girders in all spans.



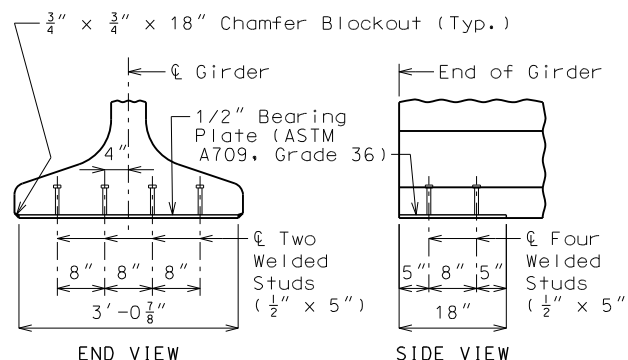
HALF ELEVATION

Reinforcement support strands not shown for clarity.

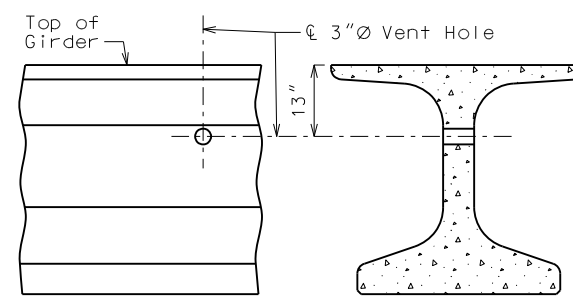


SECTION B-B

Strands not shown for clarity.



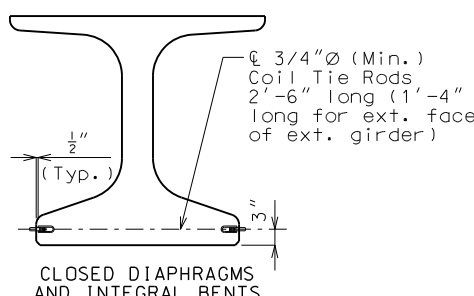
BEARING PLATE



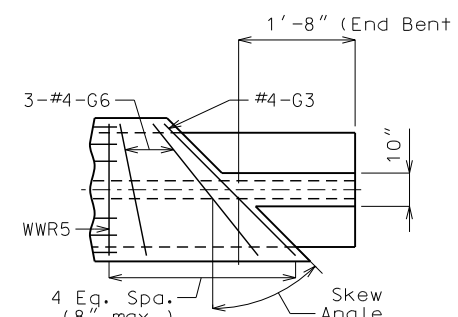
PART ELEVATION
PART SECTION

VENT HOLE

Place vent holes at or near upgrade 1/3 point of girders and clear reinforcing steel or strands by 1 1/2" minimum.



CLOSED DIAPHRAGMS
AND INTEGRAL BENTS
COIL TIES



INTERIOR GIRDER
& EXTERIOR GIRDER AT END BENT
TOP FLANGE BLOCKOUT

NU-GIRDERS (ALTERNATE REINFORCEMENT) - SPANS (1-2)

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

Sheet No. 12 of 24

Detailed Jan. 2024
Checked Jan. 2024



DATE PREPARED
1/21/2024

ROUTE Y STATE MO

DISTRICT BR SHEET NO. 12

COUNTY CAPE GIRARDEAU

JOB NO. J9S3589

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9223

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MODOT

105 WEST CAPITAL

JEFFERSON CITY, MO 65102

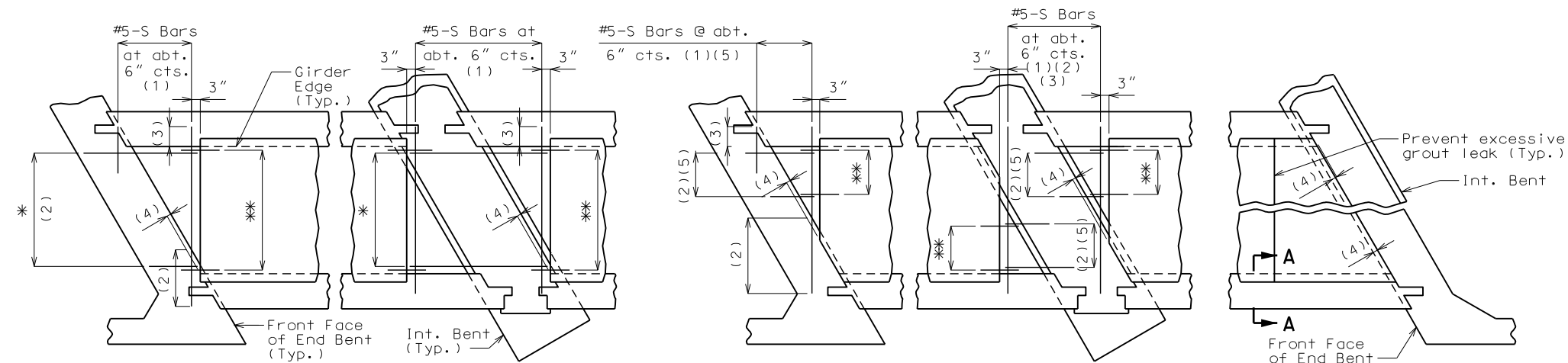
1-888-ASK-MODOT (1-888-275-6636)

Civil Engineer, Inc.

St. Louis, MO 63110

Missouri State Certificate of Authority #202006804

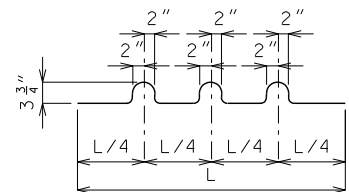
REV.



SQUARED END PANELS OR TRUNCATED END PANELS

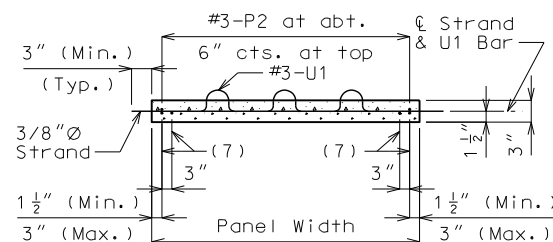
PLAN SHOWING PANEL PLACEMENT

- * #5-S Bars at abt. 9" cts. (1)
 ** #3-P1 at 12" cts. (End panels only)

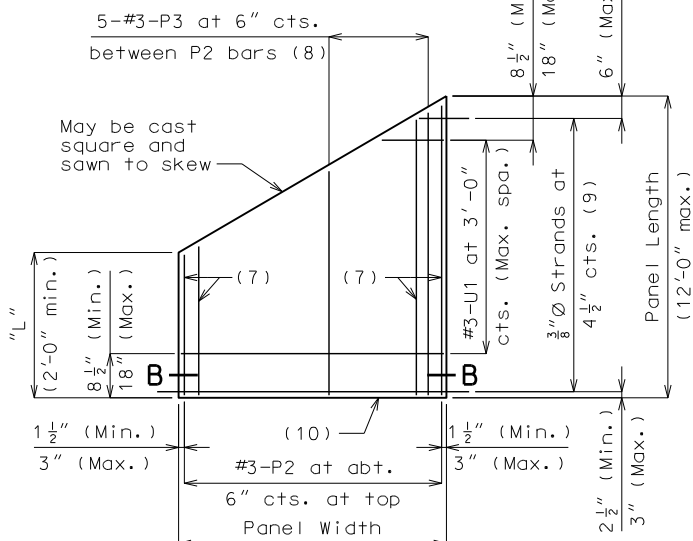


BENDING DIAGRAM FOR U1 BAR

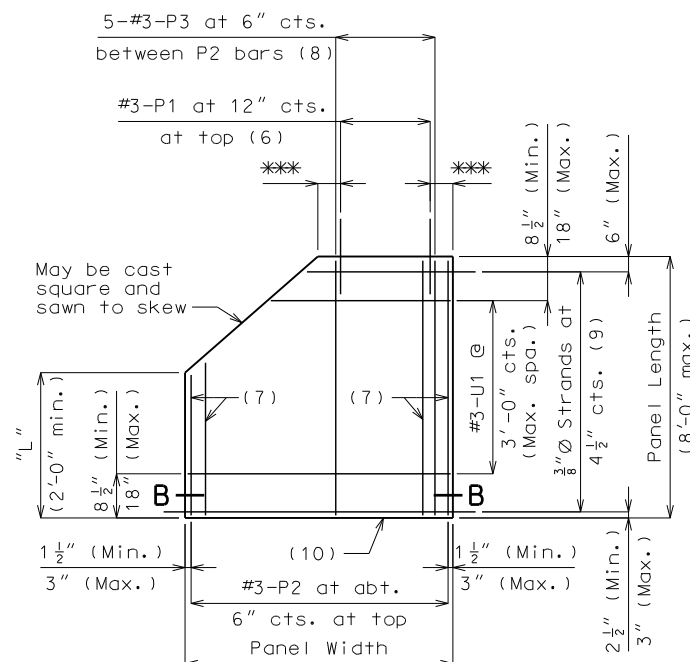
U1 Bars may be oriented at right angles to location and spacing shown. U1 Bars shall be placed between P1 bars.



SECTION B-B

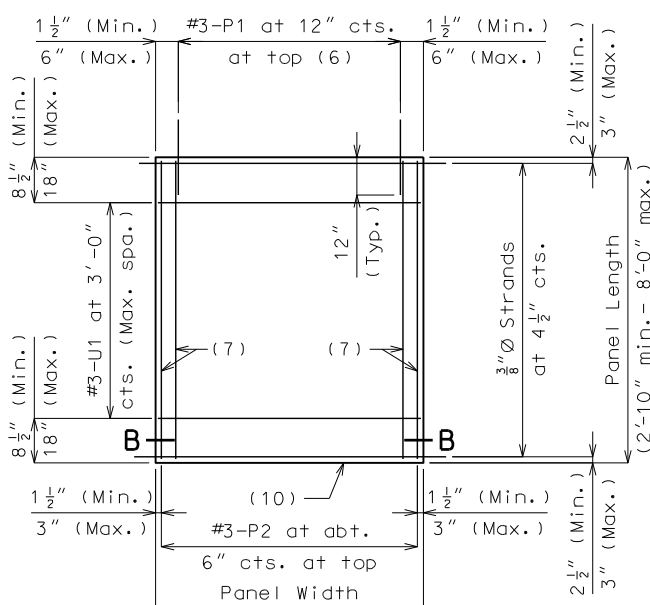


PLAN OF OPTIONAL SKEWED END PANEL



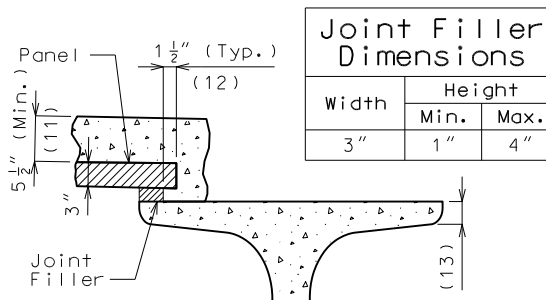
PLAN OF OPTIONAL TRUNCATED END PANEL

*** 3" (Min.), 6" (Max.)



PLAN OF SQUARED PANEL

SKEWED END PANELS



SECTION A-A

Joint Filler Dimensions

Width	Height	
	Min.	Max.
3"	1"	4"

Reference Notes:

Plan of Panel Placement:

(1) S-bars shown are bottom steel in slab between panels and used with squared and truncated end panels only.

(2) Extend S-bars 18 inches beyond the front face of end bents and int. bents for squared and truncated end panels only.

(3) Extend S-bars 9 inches beyond edge of girder (Typ.).

(4) End panels shall be dimensioned 1/2" min. to 1 1/2" max. from the inside face of diaphragm.

(5) For truncated end panels, use a min. of #5-S bars at 6" crossings in openings, or min. 4x4-W7xW7.

Plans of Panels:

(6) For end panels only, P1 bars shall be 2'-0" in length and embedded 12". P1 bars will not be required for panels at squared integral end bents.

(7) #3-P2 bars near edge of panel at bottom (under strands).

(8) Use #3-P3 bars if panel is skewed 45° or greater.

(9) Any strand 2'-0" or shorter shall have a #4 reinforcing bar on each side of it, centered between strands. Strands 2'-0" or shorter may then be debonded at the fabricator's option.

(10) Optional 1/2" x 45° Chamfer one or both sides at bottom.

Section A-A:

(11) Slab thickness over prestressed panels varies due to girder camber. In order to maintain minimum slab thickness, it may be necessary to raise the grade uniformly throughout the structure. No payment will be made for additional labor or materials required for necessary grade adjustment.

(12) Contractor shall ensure proper consolidation under and between panels.

(13) At the contractor's option, the variation in slab thickness over prestressed panels may be eliminated or reduced by increasing and varying the girder top flange thickness. Dimensions shall be shown on the shop drawings.

General Notes:

Prestressed Panels:

Concrete for prestressed panels shall be Class A-1 with $f'c = 6,000$ psi, $f'ci = 4,000$ psi.

The top surface of all panels shall receive a scored finish with a depth of scoring of 1/8" perpendicular to the prestressing strands in the panels.

Prestressing tendons shall be high-tensile strength, uncoated, seven-wire, low-relaxation strands for prestressed concrete in accordance with AASHTO M 203 Grade 270, with nominal diameter of strand = 3/8" and nominal area = 0.085 sq. in. and minimum ultimate strength = 22.95 kips (270 ksi). Larger strands may be used with the same spacing and initial tension.

Initial prestressing force = 17.2 kips/strand.

The method and sequence of releasing the strands shall be shown on the shop drawings.

Suitable anchorage devices for lifting panels may be cast in panels, provided the devices are shown on the shop drawings and approved by the engineer. Panel lengths shall be determined by the contractor and shown on the shop drawings.

When squared end panels are used at skewed bents, the skewed portion shall be cast full depth. No separate payment will be made for additional concrete and reinforcing required.

Support from diaphragm forms is required under the optional skewed end until cast-in-place concrete has reached 3,000 psi compressive strength.

Prestressed panels shall be brought to saturated surface-dry (SSD) condition just prior to the deck pour. There shall be no free standing water on the panels or in the area to be cast.

The prestressed panel quantities are not included in the table of estimated quantities for the slab.

Reinforcing Steel:

All dimensions are out to out.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

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

If U1 bars interfere with placement of slab steel, U1 loops may be bent over, as necessary, to clear slab steel.

Deformed welded wire reinforcement (WWR) providing a minimum area of reinforcing perpendicular to strands of 0.22 sq in./ft. with spacing parallel to strands sufficient to ensure proper handling, may be used in lieu of the #3-P2 bars shown. Wire diameter shall not be larger than 0.375 inch. The above alternative reinforcement criteria may be used in lieu of the #3-P3 bars, when required, and placed over a width not less than 2 feet.

The following reinforcing steel shall be tied securely to the strands with the following maximum spacing in each direction:
 #3-P2 bars at 16 inches.
 WWR at 24 inches.

The #3-U1 bars shall be tied securely to #3-P2 bars, to WWR or to strands (when placed between P1 bars) at about 3-foot centers.

Minimum reinforcement steel length shall be 2'-0".

All reinforcement other than prestressing strands shall be epoxy coated.

Precast panels may be in contact with stirrup reinforcing in diaphragms.

S-bars are not listed in the bill of reinforcing.

Cost of S-bars will be considered completely covered by the contract unit price for the slab.

Joint Filler:

Joint filler shall be preformed fiber expansion joint material in accordance with Sec 1057 or expanded or extruded polystyrene bedding material in accordance with Sec 1073.

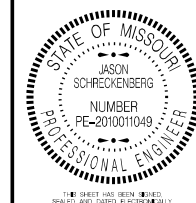
Use Slab Haunching Diagram on Sheet No. 14 for determining thickness of joint filler within the limits noted in the table of Joint Filler Dimensions.

Thicker material may be used on one or both sides of the girder to reduce cast-in-place concrete thickness to within tolerances.

The same thickness of preformed fiber expansion joint material shall be used under any one edge of any panel except at locations where top flange thickness may be stepped. The maximum change in thickness between adjacent panels shall be 1/2 inch. The polystyrene bedding material may be cut with a transition to match haunch height above top of flange.

Joint filler shall be glued to the girder. When thickness exceeds 1 1/2 inches, the joint filler shall be glued top and bottom. The glue used shall be the type recommended by the joint filler manufacturer.

Edges of panels shall be uniformly seated on the joint filler before slab reinforcement is placed.



DATE PREPARED

1/21/2024

ROUTE Y STATE MO

DISTRICT BR SHEET NO. 13

COUNTY

CAPE GIRARDEAU

JOB NO.

J9S3589

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

A9223

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITAL

JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

MODOT

CIVIL ENGINEER, INC.

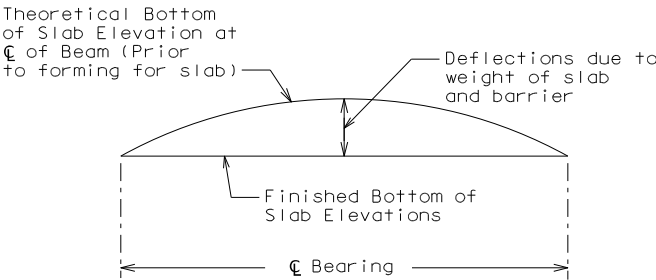
314.863.5570

Missouri State Certificate

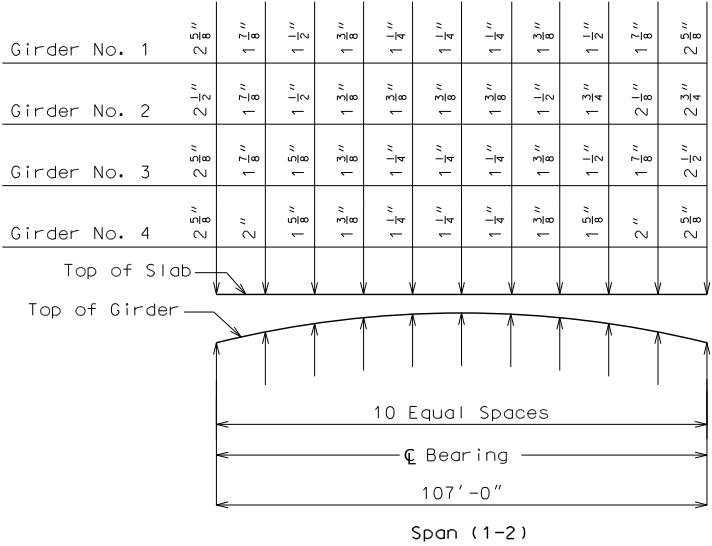
of Authority #202006804

Theoretical Bottom of Slab Elevations at Centerline of Girder (Prior to forming for slab) (Estimated at 90 days)											
Girder Number	Span (1-2) (107'-0" C Brg. - C Brg.)										
	C Brg.	.10	.20	.30	.40	.50	.60	.70	.80	.90	C Brg.
1	451.16	451.26	451.35	451.42	451.45	451.46	451.43	451.37	451.28	451.17	451.04
2	451.31	451.41	451.50	451.56	451.60	451.60	451.57	451.50	451.41	451.29	451.15
3	451.32	451.42	451.50	451.56	451.60	451.59	451.56	451.49	451.39	451.27	451.13
4	451.19	451.29	451.37	451.42	451.45	451.44	451.40	451.33	451.23	451.11	450.97

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.



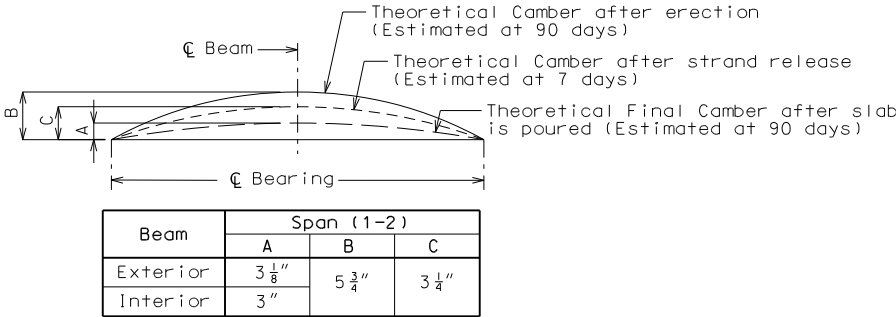
TYPICAL SLAB ELEVATIONS DIAGRAM



THEORETICAL SLAB HAUNCHING DIAGRAM

If girder camber is different from that shown in the camber diagram, in order to maintain minimum slab thickness, 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 slab thickness or grade adjustment.

Concrete in the slab is included in the Estimated Quantities for Slab On Concrete NU-Girder.



BEAM CAMBER DIAGRAM

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 slab haunches is included in the Estimated Quantities for Slab on Concrete NU Girders.

0.1 pt. = 0.314 x 0.5 pt.
0.2 pt. = 0.593 x 0.5 pt.
0.3 pt. = 0.813 x 0.5 pt.
0.4 pt. = 0.952 x 0.5 pt.

0.25 pt. = 0.7125 x 0.5 pt.

ROUTE Y OVER LITTLE INDIAN CREEK
CAMBER AND HAUNCH DETAILS

STATE OF MISSOURI
JASON SCHRECKENBERG
NUMBER PE-2010011049
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN REVIEWED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
1/21/2024

ROUTE
Y

STATE
MO

DISTRICT
BR

SHEET NO.
14

COUNTY
CAPE GIRARDEAU

JOB NO.
J9S3589

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9223

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

MoDOT

CIVIL DESIGN, INC.
1406 N. 1st St.
St. Louis, MO 63104
314.863.5570

5220 Oakland Avenue
St. Louis, MO 63110
314.863.5570

CPI

CIVIL DESIGN, INC.
1406 N. 1st St.
St. Louis, MO 63104
314.863.5570



DATE PREPARED
1/21/2024

ROUTE
Y

STATE
MO

DISTRICT
BR

SHEET NO.
15

COUNTY
CAPE GIRARDEAU

JOB NO.
J9S3589

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9223

DESCRIPTION

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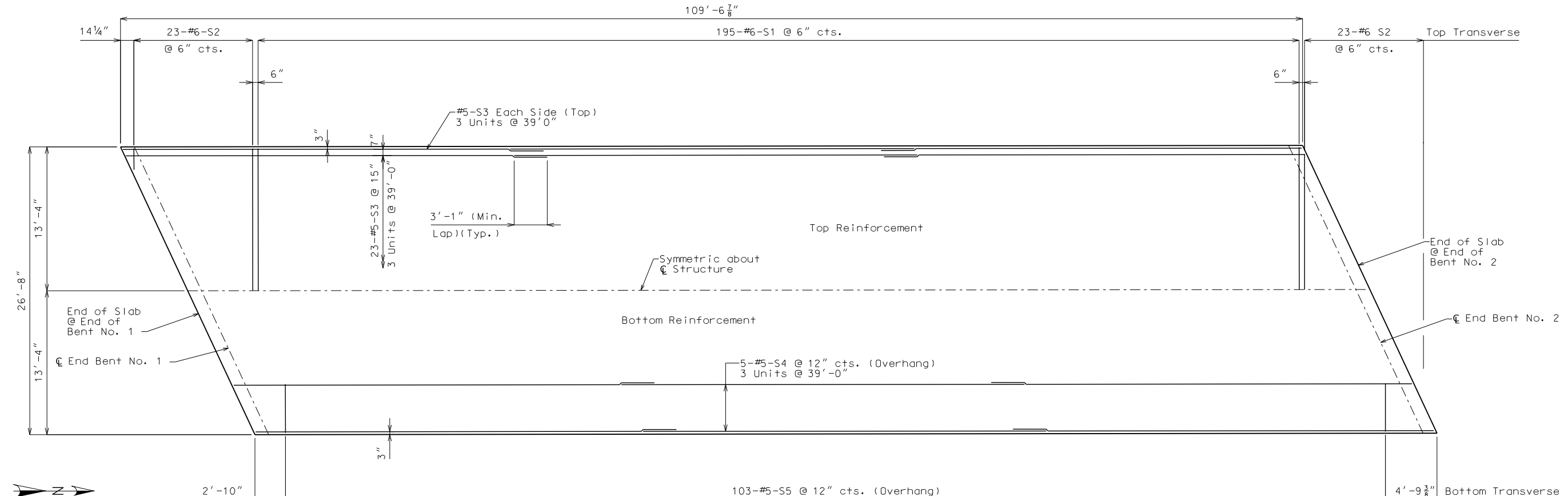
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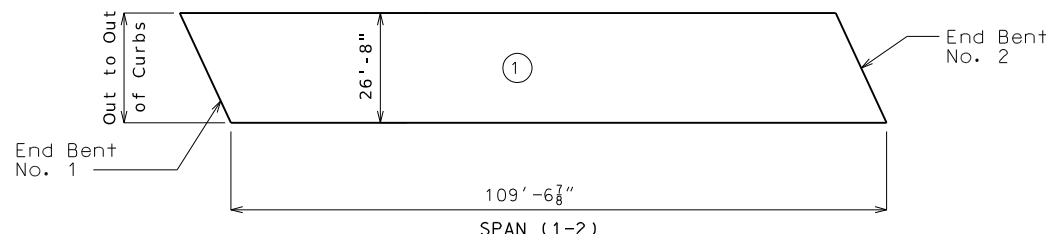
DATE

DESCRIPTION

109'-6⁷/₈"



PLAN OF SLAB SHOWING REINFORCEMENT



	Sequence of Pours	Min. Rate of Pour Cu. Yds./Hr.
	Direction	With Retarder
Basic Sequence	①	25
	Either Direction	

The contractor shall pour and satisfactorily finish the slab pours at the rate given. Retarder, if used, shall be an approved type and retard the set of concrete to 2.5 hours.

SLAB POURING SEQUENCE

NOTES:

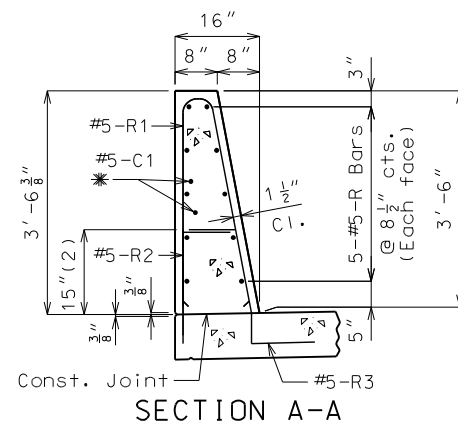
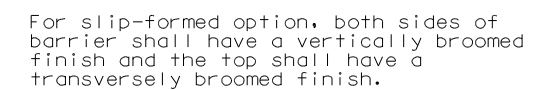
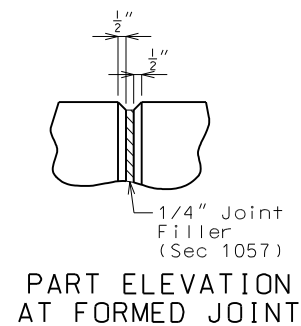
Longitudinal dimensions are measured horizontal.

For details and reinforcement in Barrier Curb see Sheet No. 17.

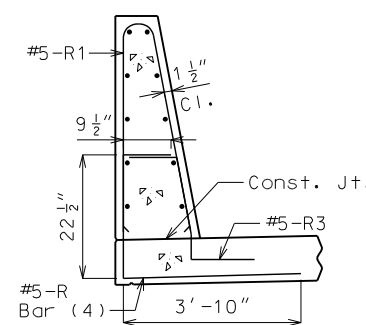
For Theoretical Bottom of Slab Elevations, Beam Camber Diagram and Dead Load Deflection Diagram, see Sheet No. 14.

For Section Thru Slab, see Sheet No. 16.

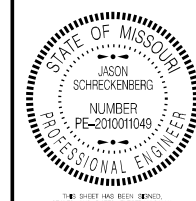
Longitudinal reinforcement shall be placed so that ends are not more than 1 1/2" from vertical face of ends of slab.



(4) The R2 bar and #5 bottom transverse slab bar in cantilever (prestressed panels only) combination may be furnished as one bar as shown, at the contractor's option.



19 PM 1/21/2024



DATE PREPARED 1/21/2024	
ROUTE Y	STATE MO
DISTRICT BR	SHEET NO. 18
COUNTY CAPE GIRARDEAU	
JOB NO. J9S3589	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. A9223	

DESCRIPTION	DATE

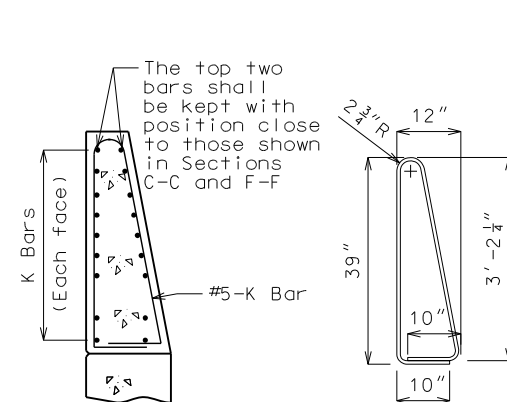
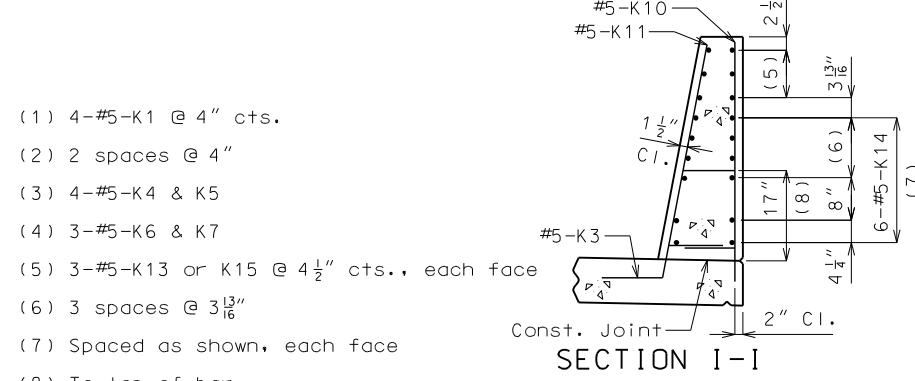
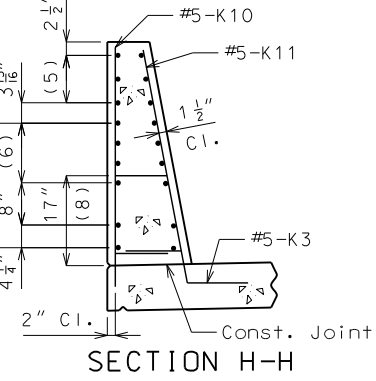
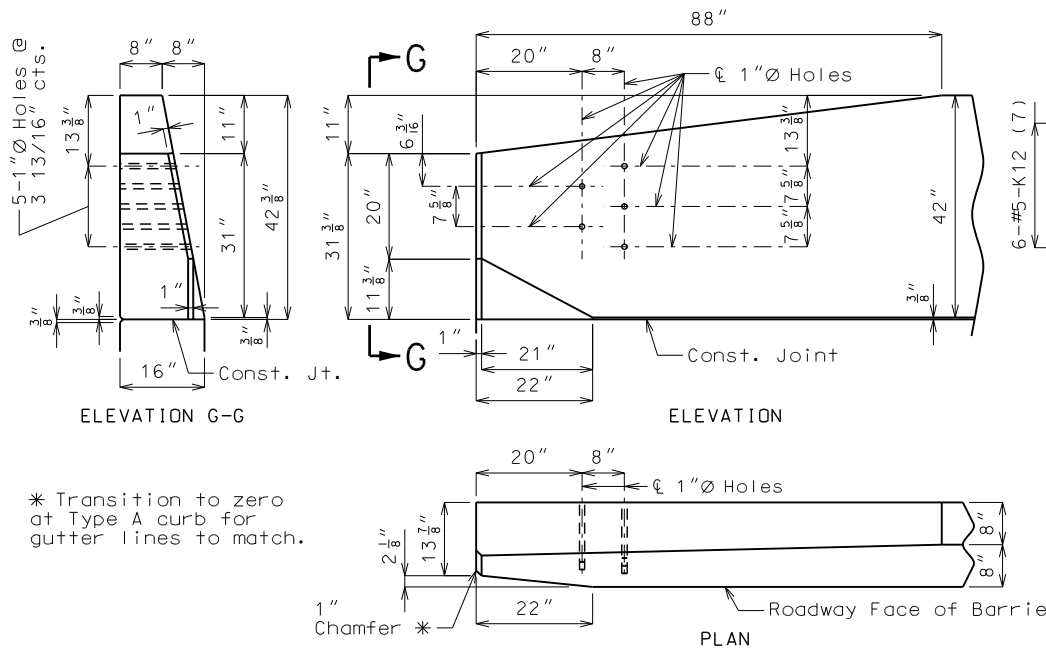
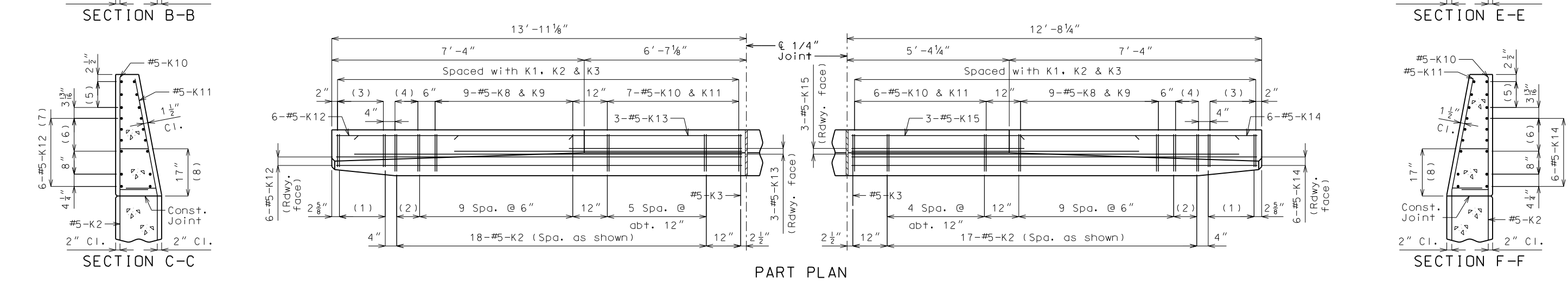
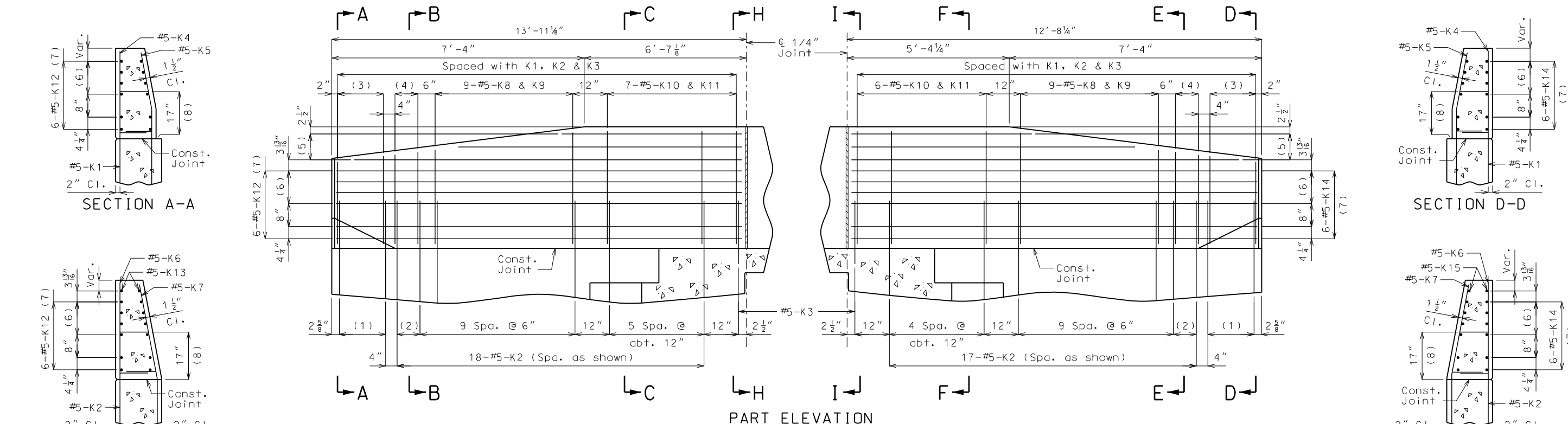
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

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

5220 Oakland Avenue
 St. Louis, MO 63110
 314.863.5570

CPI
 CIVIL DESIGN, INC.
 MISSOURI STATE CERTIFICATE
 of Authority #202006804



General Notes:
 Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Type D Barrier.

Reinforcing Steel:
 Minimum clearance to reinforcing steel shall be 1 1/2" except as shown for bars embedded into end bent.

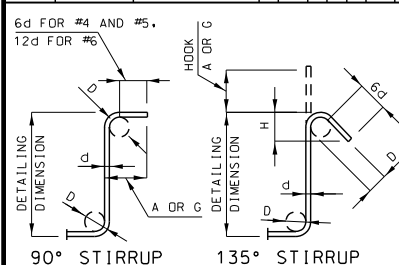
K10-K11 BAR PERMISSIBLE ALTERNATE SHAPE
 (Other K bars not shown for clarity)
 The K10-K11 bar combination may be furnished as one bar as shown, at the contractor's option.

All dimensions are out to out.

ROUTE Y OVER LITTLE INDIAN CREEK TYPE D BARRIER AT END BENTS

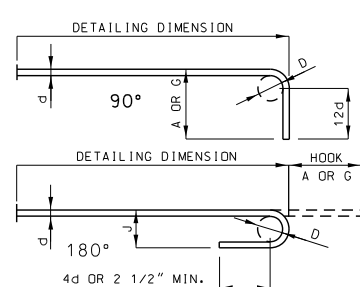


BILL OF REINFORCING STEEL																										
NO.	REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS												NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT		
										B		C		D		E		F		H					K	
										FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.				FT.	IN.
			END BENT 1																							
12	7	D100	CAP	E	20					2	6.000							2	6	2	6	61				
10	6	F100	WINGWALL	E	23					2	3.000	3	0.500	14.000	11.750	7.500	22.750	14.500	6	6	6	4	95			
10	6	F101	WINGWALL	E	23						14.000	4	9.750	2	3.000	14.500	22.750	7.500	11.750	8	3	8	2	123		
4	6	F102	DIAPHRAGM	E	14						6	0.000	2	11.000			2	7.750	14.625	8	11	8	10	53		
4	6	F103	DIAPHRAGM	E	21					2	11.000	6	0.000				2	7.750	14.625	8	11	8	7	52		
8	9	H100	CAP	E	20					29	1.000								29	1	29	1	791			
4	6	H101	CAP	E	20					29	1.000								29	1	29	1	175			
8	6	H102	DIAPHRAGM	E	20					29	1.000								29	1	29	1	349			
3	6	H103	DIAPHRAGM	E	20					6	2.000								6	2	6	2	28			
3	6	H104	DIAPHRAGM	E	20					3	10.000								3	10	3	10	17			
6	6	H105	DIAPHRAGM	E	20					6	6.000								6	6	6	6	59			
2	6	H106	DIAPHRAGM	E	20					2	8.000								2	8	2	8	8			
2	6	H107	DIAPHRAGM	E	20						18.000								1	6	1	6	5			
4	6	H108	DIAPHRAGM	E	20					2	10.000								2	10	2	10	17			
4	5	H109	DIAPHRAGM	E	23						12.000	3	6.000	12.000	5.125	10.875	5.125	10.875	5	6	5	6	23			
16	8	H110	WINGWALL	E	19					11	8.000	16.000							13	0	12	11	552			
40	6	H111	WINGWALL	E	19					11	8.000	12.000							12	8	12	7	756			
16	5	U100	CAP	E	10						5	10.500	2	11.000					14	8	14	5	241			
16	5	U101	CAP	E	10						2	7.500	2	11.000					8	2	7	11	132			
4	5	U102	CAP	E	10						2	7.500	2	11.000					8	2	7	11	33			
28	5	U103	CAP	E	13	S				2	11.000	2	7.500	2	11.000	2	7.500			12	0	11	8	341		
27	5	U104	DIAPHRAGM	E	10						4	0.000	2	4.500					10	5	10	1	284			
27	6	U105	DIAPHRAGM	E	19					2	11.000	2	11.000						5	10	5	8	230			
36	6	U106	SLAB	E	19					3	5.000	5	0.000						8	5	8	3	446			
23	5	U107	DIAPHRAGM	E	19					2	0.000	15.000							3	3	3	1	74			
22	6	V100	CAP	E	20					5	0.000								5	0	5	0	165			
24	6	V101	DIAPHRAGM	E	20					2	11.000								2	11	2	11	105			
44	6	V102	WINGWALL	E	20					7	1.000								7	1	7	1	468			
			END BENT 2																							
12	7	D200	CAP	E	20					2	6.000								2	6	2	6	61			
10	6	F200	WINGWALL	E	23					2	3.000	3	0.500	14.000	11.750	7.500	22.750	14.500	6	6	6	4	95			
10	6	F201	WINGWALL	E	23						14.000	4	9.750	2	3.000	14.500	22.750	7.500	11.750	8	3	8	2	123		
4	6	F202	DIAPHRAGM	E	14						6	0.000	2	11.000			2	7.750	14.625	8	11	8	10	53		
4	6	F203	DIAPHRAGM	E	21					2	11.000	6	0.000				2	7.750	14.625	8	11	8	7	52		
8	9	H200	CAP	E	20					29	1.000								29	1	29	1	791			
4	6	H201	CAP	E	20					29	1.000								29	1	29	1	175			
8	6	H202	DIAPHRAGM	E	20					29	1.000								29	1	29	1	349			
3	6	H203	DIAPHRAGM	E	20					6	2.000								6	2	6	2	28			
3	6	H204	DIAPHRAGM	E	20					3	10.000								3	10	3	10	17			
6	6	H205	DIAPHRAGM	E	20					6	6.000								6	6	6	6	59			
2	6	H206	DIAPHRAGM	E	20					2	8.000								2	8	2	8	8			
2	6	H207	DIAPHRAGM	E	20						18.000								1	6	1	6	5			
4	6	H208	DIAPHRAGM	E	20					2	10.000								2	10	2	10	17			
4	5	H209	DIAPHRAGM	E	23						12.000	3	6.000	12.000	5.125	10.875	5.125	10.875	5	6	5	6	23			
16	8	H210	WINGWALL	E	19					11	8.000	16.000							13	0	12	11	552			
40	6	H211	WINGWALL	E	19					11	8.000	12.000							12	8	12	7	756			
16	5	U200	CAP	E	10						5	10.500	2	11.000					14	8	14	5	241			
16	5	U201	CAP	E	10						2	7.500	2	11.000					8	2	7	11	132			
4	5	U202	CAP	E	10						2	7.500	2	11.000					8	2	7	11	33			
28	5	U203	CAP	E	13	S				2	11.000	2	7.500	2	11.000	2	7.500			12	0	11	8	341		
27	5	U204	DIAPHRAGM	E	10						4	0.000	2	4.500					10	5	10	1	284			
27	6	U205	DIAPHRAGM	E	19					2	11.000	2	11.000						5	10	5	8	230			
36	6	U206	SLAB	E	19					3	5.000	5	0.000						8	5	8	3	446			
23	5	U207	DIAPHRAGM	E	19					2	0.000	15.000							3	3	3	1	74			
22	6	V200	CAP	E	20					5	0.000								5	0	5	0	165			
24	6	V201	DIAPHRAGM	E	20					2	11.000								2	11	2	11	105			
44	6	V202	WINGWALL	E	20					7	1.000								7	1	7	1	468			



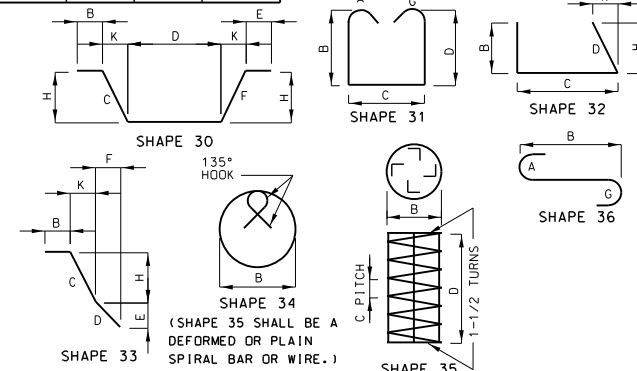
STIRRUP HOOK DIMENSIONS				
GRADES 40 - 50 - 60 KSI				
BAR SIZE	D (IN.)	90° HOOK A OR G	135° HOOK A OR G	APPROX. H
#4	2"	4 1/2"	4 1/2"	3"
#5	2 1/2"	6"	5 1/2"	3 3/4"
#6	4 1/2"	12"	8"	4 1/2"

NOTE: UNLESS OTHERWISE NOTED, DIAMETER "D" IS THE SAME FOR ALL BENDS AND HOOKS ON A BAR.



END HOOK DIMENSIONS				
ALL GRADES				
BAR SIZE	D (IN.)	180° HOOKS A OR G	90° HOOKS J	A OR G
#3	2 1/4"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3 3/4"	7"	5"	10"
#6	4 1/2"	8"	6"	12"
#7	5 1/4"	10"	7"	14"
#8	6"	11"	8"	16"
#9	9 1/2"	15"	11 3/4"	19"
#10	10 3/4"	17"	13 1/4"	22"
#11	12"	19"	14 3/4"	2'-0"
#14	18 1/4"	2'-3"	21 3/4"	2'-7"

NOTE:
ALL STANDARD HOOKS AND BENDS OTHER THAN 180 DEGREE ARE TO BE BENT WITH SAME PROCEDURE AS FOR 90 DEGREE STANDARD HOOKS.
HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE PROCEDURES AS SHOWN ON THIS SHEET.
E = EPOXY COATED REINFORCEMENT.
S = STIRRUP.
X = BAR IS INCLUDED IN SUBSTRUCTURE QUANTITIES.
V = BAR DIMENSIONS VARY IN EQUAL INCREMENTS BETWEEN DIMENSIONS SHOWN ON THIS LINE AND THE FOLLOWING LINE.
NO. EA. = NUMBER OF BARS OF EACH LENGTH.
NOMINAL LENGTHS ARE BASED ON OUT TO OUT DIMENSIONS SHOWN IN BENDING DIAGRAMS AND ARE LISTED FOR FABRICATORS USE. (NEAREST INCH)
ACTUAL LENGTHS ARE MEASURED ALONG CENTERLINE BAR TO THE NEAREST INCH.
PAYWEIGHTS ARE BASED ON ACTUAL LENGTHS.
FOUR ANGLE OR CHANNEL SPACERS ARE REQUIRED FOR EACH COLUMN SPIRAL. SPACERS ARE TO BE PLACED ON INSIDE OF SPIRALS. LENGTH AND WEIGHT OF COLUMN SPIRALS DO NOT INCLUDE SPLICES OR SPACERS.
REINFORCING STEEL (GRADE 60) FY = 60,000 PSI.



[illegible]

This sheet to be completed by MoDOT construction personnel.

BORING NO. V-22-41 (102)
Page 2 of 3

Route: Y

Location: Over Little Indian Creek

Operator: Gary Degraffenreid

Date of Work: 07/12/22-07/12/22

Depth to Water: 14.9

Depth Hole Open: 16.5

Time Change: 0 hours

mpler

Drilling Method: Hollow Stem Auger

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

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri East **Coordinate Proj. Factor:** _____
Coordinate Datum: NAD 83 (CONUS) **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.

Route: Y

Location: Over Little Indian Creek

Operator: Gary Degraffenreid

Date of Work: 07/12/22-07/12/22

Depth to Water: 14.9

Depth Hole Open: 16.5

Time Change: 0 hours

amplifier

Drilling Method: Hollow Stem Auger

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

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri East **Coordinate Proj. Factor:** _____

Coordinate Datum: NAD 83 (CONUS) **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.

ROUTE Y OVER LITTLE INDIAN CREEK
BORING DATA 01

BORING NO. V-22-42 (401)
Page 3 of 3

Route: Y

Location: Over Little Indian Creek

Operator: Gary Degraffenreid

Date of Work: 07/13/22-07/13/22

Depth to Water: 13.5

Depth Hole Open: 20

Time Change: 0 hours

ampler

ent slope

Drilling Method: Hollow Stem Auger

* 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.

Route: Y

Location: Over Little Indian Creek

Operator: Gary Degraffenreid

Date of Work: 07/13/22-07/13/22

Depth to Water: 13.5

Depth Hole Open: 20

Time Change: 0 hours

amplifier

ment slope

Drilling Method: Hollow Stem Auger

* 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.