DESIGN DESIGNATION

A.A.D.T. - 2027 = 3,051
A.A.D.T. - 2047 = 4,800
D.H.V. = 7.2%
T = 11.12%
V = 40 M.P.H.

FUNCTIONAL CLASSIFICATION - MAJOR COLLECTOR

NO RIGHT OF WAY ACQUISITIONS

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	SAN	
FIRE HYDRANT	HYD	
WATER VALVE	WV	
WATER METER	WM	
DROP INLET	DI	
DITCH BLOCK		
GROUND MOUNTED SIGN	SIGN	
LIGHT POLE		
H-FRAME POWER POLE		
TELEPHONE PEDESTAL	PED	
FENCE		
CHAIN LINK	-V-	
WOVEN WIRE	-X-	
GATE POST		
BENCHMARK	BM	

NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES

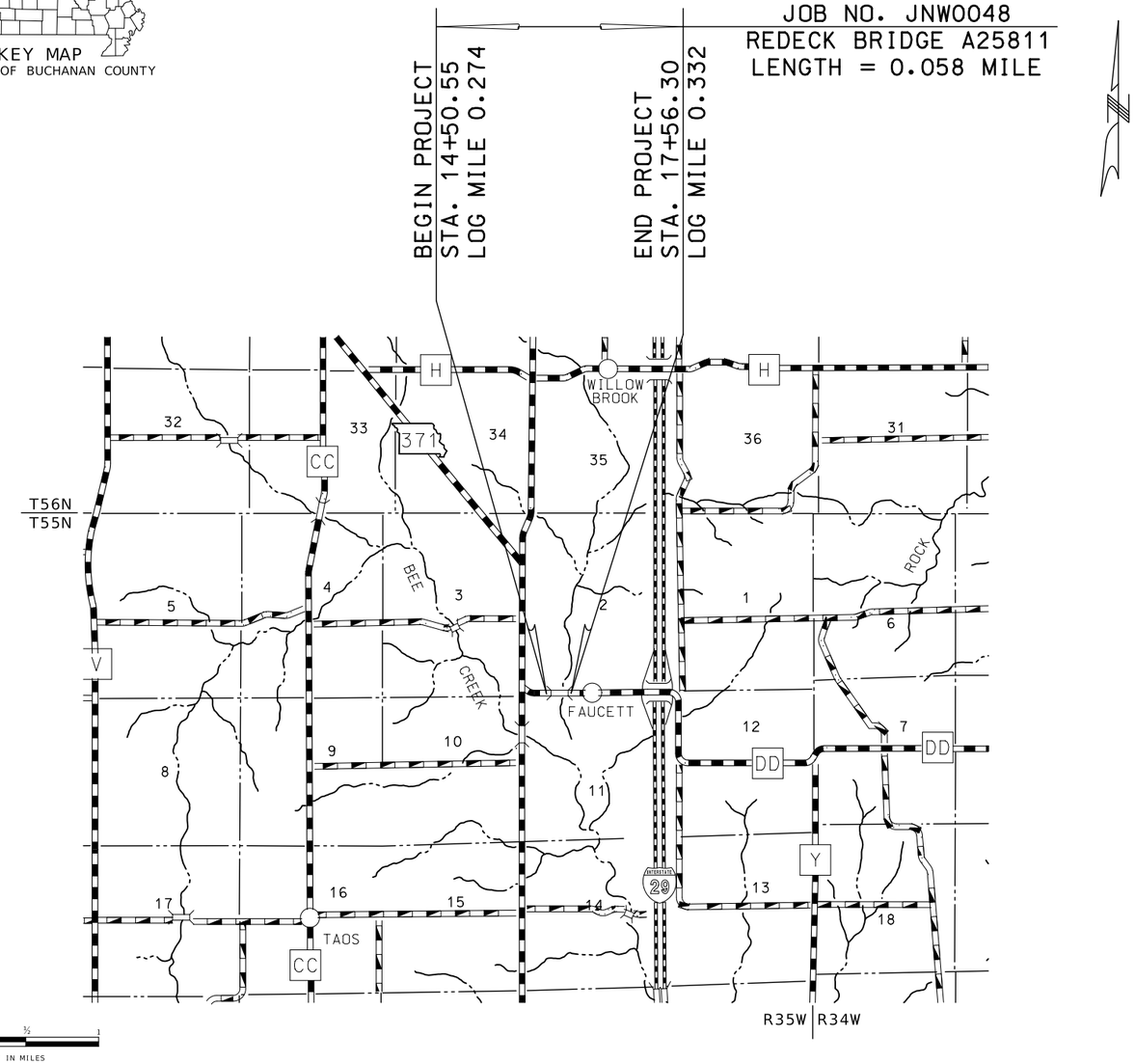
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

PLANS FOR PROPOSED STATE HIGHWAY

BUCHANAN COUNTY



KEY MAP
LOCATION OF BUCHANAN COUNTY



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.

INDEX OF SHEETS

DESCRIPTION	SHEET NUMBER
TITLE SHEET	1
TYPICAL SECTIONS (TS) (1 SHEET)	2
QUANTITIES (QU) (2 SHEETS)	3
PLAN-PROFILE (PP)	4
COORDINATE POINTS (CP)	5
SPECIAL SHEETS (SS)	6-7
TRAFFIC CONTROL SHEETS (TC)	8-9
EROSION CONTROL (EC)	10
BRIDGE DRAWING (B)	
A25811	1-11

LENGTH OF PROJECT

BEGINNING OF PROJECT	14+50.55	
END OF PROJECT	17+56.30	
APPARENT LENGTH	305.75	FEET
EQUATIONS AND EXCEPTIONS:	NONE	
TOTAL CORRECTIONS	0.00	FEET
NET LENGTH OF PROJECT	305.75	FEET
STATE LENGTH	0.058	MILE
FOR INFORMATION ONLY ESTIMATED DISTURBED ACRES	0.07	ACRES

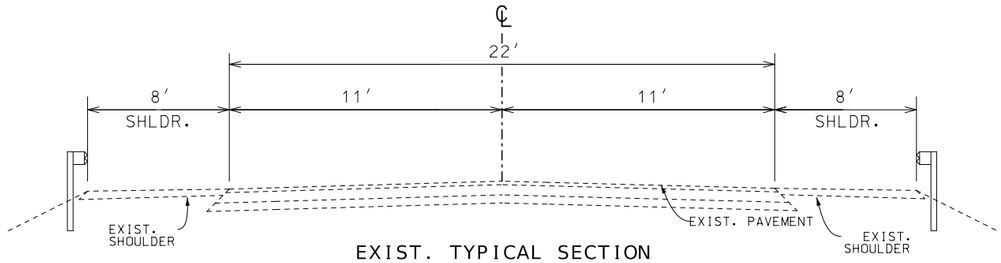
STATE OF MISSOURI
BRIAN M. ROSENTHAL
NUMBER PE-2005022151
PROFESSIONAL ENGINEER
10/14/2026 10:46:51 AM
BRIAN M. ROSENTHAL - CIVIL
MO-PE-2005022151

DATE PREPARED: 10/9/2026
ROUTE: DD | STATE: MO
DISTRICT: NW | SHEET NO.: 1
COUNTY: BUCHANAN
JOB NO.: JNW0048
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION	DATE

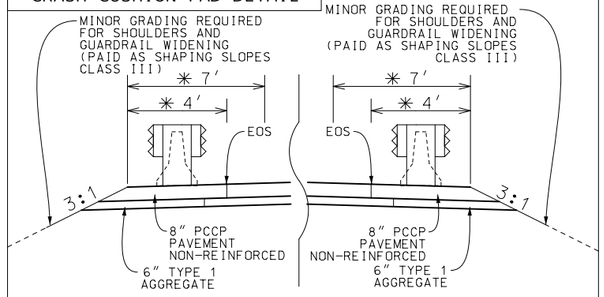
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

PAVEMENT HISTORY	
SCRUB SEAL	2019
1" PG64-22 SURFACE LEVELING	2009
3" ASPHALTIC CONCRETE 8" BIT. STABLIZED BASE 4" TYPE 1 AGG. BASE	1971



EXIST. TYPICAL SECTION
STA. 14+50.55 TO STA. 15+55.55
STA. 17+11.30 TO STA. 17+56.30

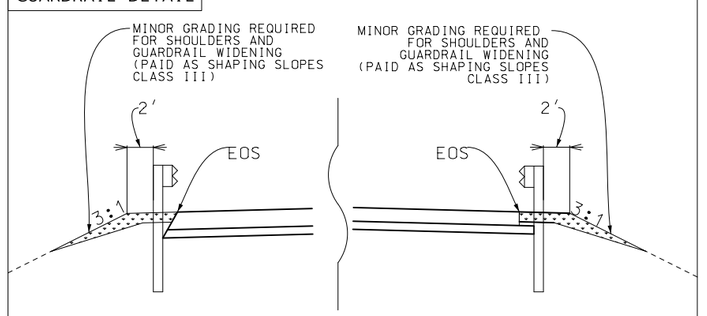
CRASH CUSHION PAD DETAIL



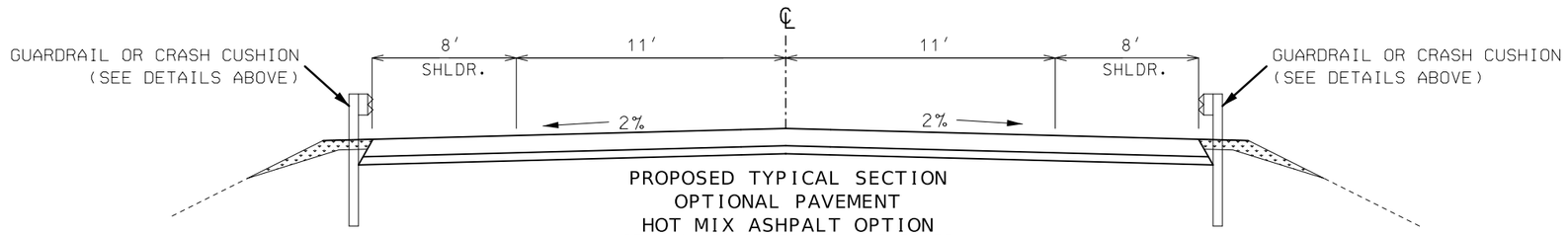
STA. 15+40.68 LT. TO STA. 15+67.68 LT.
STA. 16+99.18 RT. TO STA. 17+26.18 RT.

* CRASH CUSHION CONCRETE PAD WIDTH IS 4' & 7'
SEE SPECIAL SHEET 1 & 2.

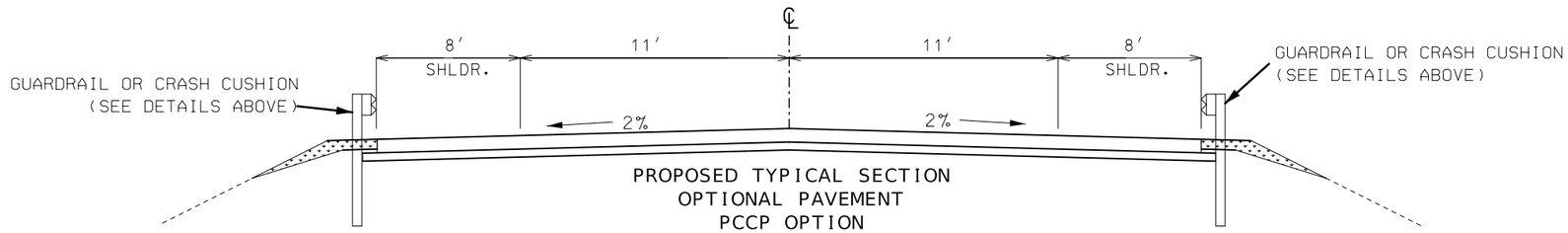
GUARDRAIL DETAIL



STA. 14+67.67 RT. TO STA. 15+67.67 RT.
STA. 16+99.18 LT. TO STA. 17+99.18 LT.



PROPOSED TYPICAL SECTION
OPTIONAL PAVEMENT
HOT MIX ASHPALT OPTION
STA. 14+50.55 TO STA. 15+55.55
STA. 17+11.30 TO STA. 17+56.30



PROPOSED TYPICAL SECTION
OPTIONAL PAVEMENT
PCCP OPTION
STA. 14+50.55 TO STA. 15+55.55
STA. 17+11.30 TO STA. 17+56.30

ESTIMATE FACTORS	
DESCRIPTION	TONS/C.Y.
GRAVEL (A) OR CRUSHED STONE (B)	1.40 TONS

OPTIONAL PAVEMENT			
BASE TYPE	HMA DESIGN		PCCP DESIGN
	10″ ASPHALT		8″ PCCP
6″ TYPE 1 AGGREGATE	2″ PMBP (BP-1)	PG58-28H	15 FOOT JOINTS
	8″ PMBP (BASE)	PG64-22	1.25″ DOWELS

NOT TO SCALE

NOTE:
FOR INFORMATION PURPOSES ONLY.

TYPICAL SECTIONS
SHEET 1 OF 1

STATE OF MISSOURI
BRIAN M. ROSENTHAL
NUMBER PE-2005022151
PROFESSIONAL ENGINEER
Brian M. Rosenthal
10/14/2026 10:47:25 AM
BRIAN M. ROSENTHAL - CIVIL
MO-PE-2005022151

DATE PREPARED
10/13/2026

ROUTE	STATE
DD	MO
DISTRICT	SHEET NO.
NW	2

COUNTY
BUCHANAN

JOB NO.
JNW0048

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)

TREE AND LIMB TRIMMING (LUMP SUM)
LUMP SUM - 1

MOBILIZATION
LUMP SUM = 1

CONTRACTOR FURNISHED SURVEYING AND STAKING
LUMP SUM - 1

REMOVAL OF IMPROVEMENTS

STA.	STA.	LOCATION	L.F.	TONS	REMARKS
14+20.10		RTE. DD LT.		11	REMOVAL OF TEMP. DRIVEWAY ROCK
14+43.40	15+68.40	RTE. DD RT.	125.00		GUARDRAIL
15+05.90	15+68.40	RTE. DD LT.	62.50		GUARDRAIL
14+50.55		RTE. DD			26' SAWCUT
17+56.30		RTE. DD			26' SAWCUT
16+99.40	17+61.90	RTE. DD RT.	62.50		GUARDRAIL
16+99.40	17+61.90	RTE. DD LT.	62.50		GUARDRAIL
		TOTALS	312.50	11.00	
		PAY TOTAL = 1 LUMP SUM			

GRAVEL (A) OR CRUSHED STONE (B)

STA.	LENGTH FT.	WIDTH FT.	DEPTH IN.	TONS	REMARKS
14+20.10 LT.	VAR.	VAR.	6	10.94	For Temp. Driveway access
			PAY TOTAL	11	

ROADWAY PAVEMENT

STATION	STATION	LOCATION	LENGTH	OPTIONAL PAVEMENT S.Y.	6" TYPE 1 AGGREGATE BASE S.Y.
14+50.55	15+55.55	ROUTE DD	105.00	438.4	438.4
17+11.30	17+56.30	ROUTE DD	45.00	185.0	185.0
			PAY TOTALS	623.4	623

CRASH CUSHION PAD

STATION	STATION	LOCATION	LENGTH	CONCRETE PAVEMENT 8 IN. NON-REINF S.Y.	6" TYPE 1 AGGREGATE BASE S.Y.
15+40.68	15+67.68	ROUTE DD	27.00	17.0	17.0
16+99.18	17+26.18	ROUTE DD	27.00	17.0	17.0
			PAY TOTAL	34.0	34

*** GUARDRAIL & CRASH CUSHION**

STATION	STATION	LOCATION	LENGTH	MGS GUARDRAIL L.F.	MGS BRIDGE APPROACH TRANSITION SECTION (REGULAR/NO CURB) EACH	TYPE A CRASHWORTHY END TERMINAL (MASH) EACH	TYPE C CRASH CUSHION (MASH) EACH
14+67.67	15+67.67	ROUTE DD RT.	100.0	12.5	1	1	
15+40.68	15+67.68	ROUTE DD LT.	27.0				1
16+99.18	17+26.18	ROUTE DD RT.	27.0				1
16+99.18	17+99.18	ROUTE DD LT.	100.0	12.5	1	1	
			PAY TOTAL	25	2	2	2

* ALL COST FOR SEEDING, MULCHING, AND EROSION CONTROL SHALL BE INCIDENTAL TO THE COST OF SHAPING SLOPES, CLASS III

SHAPING SLOPES CLASS III

STATION	STATION	LOCATION	LENGTH	100 FT
14+43.71	15+68.40	RTE. DD RT.	124.7	1.25
15+16.54	15+75.80	RTE. DD LT.	59.3	0.6
16+91.30	17+48.48	RTE. DD RT.	57.2	0.6
16+91.30	18+30.00	RTE. DD LT.	138.7	1.4
			PAY TOTAL	4

TEMPORARY EROSION CONTROL

STATION	STATION	LOCATION	SILT FENCE L.F.	SEDIMENT REMOVAL C.Y.
14+43.71	15+85.80	RTE. DD RT.	159.99	1.6
14+90.13	15+85.80	RTE. DD LT.	113.86	1.1
16+81.30	17+65.64	RTE. DD RT.	100.82	1.0
16+81.30	17+69.84	RTE. DD LT.	109.76	1.1
		TOTALS	484.4	4.8
		PAY TOTALS	484	5

ASPHALT PAVEMENT REMOVAL

STA.	STA.	LOCATION	LENGTH L.F.	WIDTH FT.	DEPTH IN.	CLASS A EXCAVATION C.Y.
14+50.55	15+75.55	RTE. DD	125.00	38.00	16.00	234.57
16+91.30	17+56.30	RTE. DD	65.00	38.00	16.00	121.98
					PAY TOTAL	357

PAVEMENT MARKING

STATION	STATION	LENGTH	4 IN. CLASS 1 PAVEMENT MARKING PAINT TYPE P BEADS WHITE L.F.	4 IN. CLASS 1 PAVEMENT MARKING PAINT TYPE P BEADS YELLOW L.F.	REMARKS
13+50.55	18+56.30	505.8	1011.6		EDGE LINE
13+50.55	18+56.30	505.8		285.9	CENTERLINE
		PAY TOTALS	1012	286	

SEED & EROSION CONTROL

STATION	LOCATION	WIDTH FT.	SEEDING COOL SEASON ACRE	MODIFIED TYPE 2D EROSION CONTROL BLANKET S.Y.	REMARKS
1420.1 LT.	RTE. DD LT.	VAR.	0.01	46.87	PLACE AFTER REMOVING TEMP. DRIVEWAY ACCESS
		PAY TOTALS	1	46.9	

SUMMARY OF QUANTITIES

SHEET 1 OF 2

STATE OF MISSOURI
BRIAN M. ROSENTHAL
NUMBER PE-2005022151
PROFESSIONAL ENGINEER
Brian M. Rosenthal
11/02/2026 11:15:07 AM
BRIAN M. ROSENTHAL - CIVIL
MO-PE-2005022151

DATE PREPARED: 11/2/2026

ROUTE	STATE
DD	MO
DISTRICT	SHEET NO.
NW	3

COUNTY: BUCHANAN

JOB NO.: JNW0048

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)

SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL AREA SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NO.	DESCRIPTION
WARNING SIGNS								
WO1-1L	48X48	16.00						TURN (SYMBOL LEFT)
WO1-1R	48X48	16.00						TURN (SYMBOL RIGHT)
WO1-2L	48X48	16.00						CURVE (SYMBOL LEFT)
WO1-2R	48X48	16.00						CURVE (SYMBOL RIGHT)
WO1-3L	48X48	16.00						REVERSE TURN (SYMBOL LEFT)
WO1-3R	48X48	16.00						REVERSE TURN (SYMBOL RIGHT)
WO1-4L	48X48	16.00						REVERSE CURVE (SYMBOL LEFT)
WO1-4R	48X48	16.00						REVERSE CURVE (SYMBOL RIGHT)
WO1-4bL	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL LEFT)
WO1-4bR	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL RIGHT)
WO1-4cL	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL LEFT)
WO1-4cR	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL RIGHT)
WO1-6	60X30	12.50						HORIZONTAL ARROW (SYMBOL)
WO1-6a	72X36	18.00						HORIZ. ARROW (SYMBOL ON PERMANENT BARRICADE)
WO1-7	60X30	12.50						DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)
WO1-7a	72X36	18.00						DOUBLE HEAD HORIZ. ARROW (SYMBOL ON PERM. BARR.)
WO1-8	18X24	3.00						CHEVRON (SYMBOL)
WO1-8a	30X36	7.50						CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)
WO3-1	48X48	16.00						STOP AHEAD (SYMBOL)
WO3-2	48X48	16.00						YIELD AHEAD (SYMBOL)
WO3-3	48X48	16.00						SIGNAL AHEAD (SYMBOL)
WO3-4	48X48	16.00						BE PREPARED TO STOP
WO3-5	48X48	16.00						SPEED LIMIT AHEAD
WO4-1L	48X48	16.00						MERGE (SYMBOL FROM LEFT)
WO4-1R	48X48	16.00						MERGE (SYMBOL FROM RIGHT)
WO4-1aL	48X48	16.00						MERGE (LEFT)
WO4-1aR	48X48	16.00						MERGE (RIGHT)
WO5-1	48X48	16.00						ROAD/BRIDGE/RAMP NARROWS
WO5-3	48X48	16.00						ONE LANE BRIDGE
WO5-5	48X48	16.00						NARROW LANES
WO6-1	48X48	16.00						DIVIDED HIGHWAY (SYMBOL)
WO6-2	48X48	16.00						DIVIDED HIGHWAY END (SYMBOL)
WO6-3	48X48	16.00						TWO WAY TRAFFIC (SYMBOL)
WO7-3a	30X24	5.00						NEXT XX MILES (PLAQUE)
WO8-1	48X48	16.00						BUMP
WO8-2	48X48	16.00						DIP
WO8-3	48X48	16.00						PAVEMENT ENDS
WO8-4	48X48	16.00						SOFT SHOULDER
WO8-5	48X48	16.00						SLIPPERY WHEN WET (SYMBOL)
WO8-6	48X48	16.00						TRUCK CROSSING
WO8-6c	48X48	16.00						TRUCK ENTRANCE
WO8-7	36X36	9.00						LOOSE GRAVEL
WO8-7a	36X36	9.00						FRESH OIL / LOOSE GRAVEL
WO8-9	48X48	16.00						LOW SHOULDER
WO8-11	48X48	16.00						UNEVEN LANES
WO8-12	48X48	16.00						NO CENTER LINE
WO8-15	48X48	16.00						GROOVED PAVEMENT
WO8-15P	30X24	5.00						MOTORCYCLE (PLAQUE)
WO8-17L	48X48	16.00						SHOULDER DROP-OFF (SYMBOL LEFT)
WO8-17R	48X48	16.00						SHOULDER DROP-OFF (SYMBOL RIGHT)
WO8-17P	30X24	5.00						SHOULDER DROP-OFF (PLAQUE)
W10-1	42RND.	9.62						RAILROAD CROSSING
WO12-1	24X24	4.00						DOUBLE DOWN ARROW (SYMBOL)
WO12-2	48X48	16.00						LOW CLEARANCE (SYMBOL)
W012-2x	24X18	3.00						LOW CLEARANCE (PLAQUE)
WO12-2a	84X24	14.00						OVERHEAD LOW CLEARANCE (FEET AND INCHES)
WO12-4	120X60	50.00						LOW CLEARANCE XX FT XX IN XX MILES AHEAD
WO12-5	120X60	50.00						WIDTH RESTRICTION XX FT XX IN XX MILES AHEAD
WO13-1	30X30	6.25						ADVISORY SPEED (PLAQUE)
WO16-2	30X24	5.00						XXX FEET (PLAQUE)
WO16-3	30X24	5.00						X MILE (PLAQUE)
WO20-1	48X48	16.00	11	176.00			2	ROAD/BRIDGE/RAMP WORK AHEAD
WO20-2	48X48	16.00	24	384.00			18	DETOUR AHEAD
WO20-3	48X48	16.00	3	48.00			20	ROAD CLOSED AHEAD
WO20-4	48X48	16.00	2	32.00			7	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	2	32.00			8	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)

SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NO.	DESCRIPTION
GUIDE SIGNS								
E05-1	36X48	12.00						GORE EXIT
E05-2	48X36	12.00						EXIT OPEN
E05-2a	48X36	12.00						EXIT CLOSED
GO20-1	60X24	10.00						ROAD WORK NEXT XX MILES
GO20-2	48X24	8.00						END ROAD WORK
GO20-4	36X18	4.50						PILOT CAR FOLLOW ME
GO20-4a	42X30	8.75						PILOT CAR IN USE WAIT & FOLLOW
GO20-4a	18X12	1.50						PILOT CAR IN USE WAIT & FOLLOW
GO20-5aP	36X24	6.00						WORK ZONE (PLAQUE)
MO4-8a	24X18	3.00	2	6.00			52	END DETOUR
MO4-9L	48X36	12.00						DETOUR (LEFT)
MO4-9R	48X36	12.00						DETOUR (RIGHT)
MO4-9P	48X12	4.00						STREET NAME (PLAQUE)
MO4-10L	48X18	6.00						DETOUR ARROW (LEFT)
MO4-10R	48X18	6.00						DETOUR ARROW (RIGHT)
REGULATORY SIGNS								
R1-1	48X48	13.25						STOP
R1-2	48TRI.	6.93						YIELD
R1-2a	36X36	9.00						TO ONCOMING TRAFFIC (PLAQUE)
R1-3P	30X12	2.50						ALL WAY (PLAQUE)
R2-1	36X48	12.00						SPEED LIMIT XX
R3-1	48X48	16.00						NO RIGHT TURN (SYMBOL)
R3-2	48X48	16.00						NO LEFT TURN (SYMBOL)
R3-3	36X36	9.00						NO TURNS
R3-4	48X48	16.00						NO U-TURN (SYMBOL)
R3-7L	30X30	6.25						LEFT LANE MUST TURN LEFT
R3-7R	30X30	6.25						RIGHT LANE MUST TURN RIGHT
R4-1	36X48	12.00						DO NOT PASS
R4-2	36X48	12.00						PASS WITH CARE
R4-7a	36X48	12.00						KEEP RIGHT (HORIZONTAL ARROW)
R4-8a	36X48	12.00						KEEP LEFT (HORIZONTAL ARROW)
R5-1	30X30	6.25						DO NOT ENTER
R5-1a	36X24	6.00						WRONG WAY
R6-1L	54X18	6.75						ONE WAY ARROW (LEFT)
R6-1R	54X18	6.75						ONE WAY ARROW (RIGHT)
R6-2L	24X30	5.00						ONE WAY (LEFT)
R6-2R	24X30	5.00						ONE WAY (RIGHT)
R9-9	24X12	2.00						SIDEWALK CLOSED
R9-11L	24X18	3.00						SIDEWALK CLOSED AHEAD, (ARROW LEFT) CROSS HERE
R9-11R	24X18	3.00						SIDEWALK CLOSED AHEAD, (ARROW RIGHT) CROSS HERE
R10-6	24X36	6.00						STOP HERE ON RED (45^ ARROW)
R11-2	48X30	10.00	2	20.00			29	ROAD CLOSED
R11-3a	60X30	12.50						ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY
R11-4	60X30	12.50	14	175.00			56	ROAD CLOSED TO THRU TRAFFIC
CONST-3A	60X48	20.00						FINE SIGN
CONST-3X	56X12	4.67						SPEEDING/PASSING (PLATE)
MISCELLANEOUS SIGNS								
CONST-5	48X36	12.00						POINT OF PRESENCE
CONST-5	96X48	32.00						POINT OF PRESENCE
CONST-8	48X36	12.00						WORK ZONE NO PHONE ZONE
SPECIAL	36X78	19.50	7	136.50			55A	DETOUR EAST (STRAIGHT)
SPECIAL	36X78	19.50	9	175.50			55B	DETOUR EAST (LEFT)
SPECIAL	36X78	19.50	5	97.50			55C	DETOUR EAST (RIGHT)
SPECIAL	36X78	19.50	2	39.00			55D	DETOUR EAST (ADV. LEFT)
SPECIAL	36X78	19.50	11	214.50			55E	DETOUR WEST (STRAIGHT)
SPECIAL	36X78	19.50	3	58.50			55F	DETOUR WEST (RIGHT)
SPECIAL	36X78	19.50	2	39.00			55G	DETOUR WEST (DIAGONAL RIGHT)
SPECIAL	36X78	19.50	2	39.00			55H	DETOUR WEST (LEFT)
SPECIAL	36X78	19.50	1	19.50			55I	DETOUR EAST (DIAGONAL RIGHT)

616-10.05 CONSTRUCTION SIGNS	TOTAL
	1692

616-10.10 RELOCATED SIGNS	TOTAL

ITEM NUMBER	TOTAL QTY	EFFECTIVE: 07-01-2025 DESCRIPTION
6122008		IMPACT ATTENUATOR 40 MPH (SAND BARRELS)
6122009		IMPACT ATTENUATOR 45 MPH (SAND BARRELS)
6122010		IMPACT ATTENUATOR 50 MPH (SAND BARRELS)
6122012		IMPACT ATTENUATOR 55 MPH (SAND BARRELS)
6122014		IMPACT ATTENUATOR 60 MPH (SAND BARRELS)
6122017		IMPACT ATTENUATOR 65 MPH (SAND BARRELS)
6122019		IMPACT ATTENUATOR 70 MPH (SAND BARRELS)
6122020		REPLACEMENT SAND BARREL
6122030		IMPACT ATTENUATOR (RELOCATION)
6122040		WORK ZONE CRASH CUSHION (NARROW)
6122041		WORK ZONE CRASH CUSHION (RELOCATION)
6123001		TRUCK MOUNTED ATTENUATOR (TMA)
6161012		BUOYS (BOATS KEEP OUT)
6161013		BUOYS (NO WAKE)
6161014		SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)
6161020		CHANNELIZER (DRUM-LIKE)
6161022		CHANNELIZER (CONE)
6161025	10	CHANNELIZER (TRIM-LINE)
6161026		CHANNELIZER (VERTICAL PANEL)
6161030	20	TYPE 3 MOVEABLE BARRICADE
6161033		DIRECTION INDICATOR BARRICADE
6161040		FLASHING ARROW PANEL
6161047		TYPE 3 OBJECT MARKER
6161055		SEQUENTIAL FLASHING WARNING LIGHT
6161070		TUBULAR MARKER
6161095		RADAR SPEED ADVISORY SYSTEM
6161096		CHANGEABLE MESSAGE SIGN, COMMISSION FURNISHED/RETAINED
6161098A	6	CHANGEABLE MESSAGE SIGN WITHOUT COMM. INTERFACE, CONTRACTOR FURNISHED/RETAINED
6161099		CHANGEABLE MESSAGE SIGN WITH COMM. INTERFACE, CONTRACTOR FURNISHED/RETAINED
6162000A		WORK ZONE TRAFFIC SIGNAL SYSTEM
6162002		TEMPORARY LONG-TERM RUMBLE STRIPS
6173600D		TEMPORARY TRAFFIC BARRIER, CONTRACTOR FURNISHED/RETAINED
6173700B		TEMP. TRAFFIC BARRIER ANCHORED, CONTRACTOR FURNISHED/RETAINED
6173706		TEMP. TRAFFIC BARRIER STIFFNESS TRANSITION CONTRACTOR FURNISHED/RETAINED
6174000A		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION, CONTRACTOR FURNISHED/RETAINED
6175010A		RELOCATING TEMPORARY TRAFFIC BARRIER
6175011B		RELOCATING TEMP. TRAFFIC BARRIER ANCHORED
6175013		RELOCATING TEMP. TRAFFIC BARRIER STIFFNESS
6175020A		RELOCATING TEMP. TRAFFIC BARRIER HEIGHT
6208064A		TEMPORARY RAISED PAVEMENT MARKER
9029400		TEMPORARY TRAFFIC SIGNALS
9029401		TEMPORARY TRAFFIC SIGNALS AND LIGHTING

FOR TREE AND LIMB TRIMMING, USE FLAGGER CONTROL ONE LANE ROAD AHEAD SETUP. REFER TO STANDARD PLAN 616.20 TEMPORARY TRAFFIC CONTROL PLANS FOR PAVEMENT TREATMENTS FOR TWO-LANE ROADWAYS

SUMMARY OF QUANTITIES
SHEET 2 OF 2

STATE OF MISSOURI
BRIAN M. ROSENTHAL
NUMBER PE-2005022151
PROFESSIONAL ENGINEER
Brian M. Rosenthal
10/14/2026 10:48:18 AM
BRIAN M. ROSENTHAL - CIVIL
MO-PE-2005022151

DATE PREPARED
10/14/2026

ROUTE	STATE
DD	MO

DISTRICT	SHEET NO.
NW	3

COUNTY
BUCHANAN

JOB NO.
JNW0048

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)

SW⁴ SW⁴
SEC 2 T55N R35W

SE⁴ SW⁴
SEC 2 T55N R35W

¼ SECTION LINE

ANY WORK INDICATED ON THE PLANS THAT EXTENDS BEYOND THE PROJECT LIMITS IS CONSIDERED INCIDENTAL TO AND A PART OF THE CONSTRUCTION OF THIS PROJECT

ASH ST.

STEVEN MICHAEL WEESE

JOSHUA BRANSTETTER &
JANICE BRYAN

STATE OF MISSOURI

EUGENE P STURNER

JUNE DARLYNE &
CHARLES GEILER

MARTY ROSEVAR

SMOKEY ACRES LLC

B

H

+09.84
28.00'

+90.01
28.00'

+42.00
28.00'

+42.00
55.00'

+81.10
55.00'

+34.80
55.00'

+34.80
35.00'

+51.83
60.00'

+59.70
60.00'

+55.00
40.00'

+89.03
40.00'

EXIST. R/W

EXIST. GUARDRAIL (R)

S.L.

UT

UTV

UTV

CREEK

BEE

(U.I.P)

P RISER

P&T

OE

SIGN

SECTION LINE

℄ ROUTE DD

N88°22'09"E

(DND)

POT

STA 15+75.80

STA 17+89.65

CP#2

CP#1

BEGIN PROJECT JNW0048
STA 14+50.55

END PROJECT JNW0048
STA 17+56.30

STA. 15+75.55
UIP AND REDECK EXISTING BRIDGE 25811 (34'-45'-34')
CONTINUOUS COMPOSITE WIDE FLANGE BEAM SPANS
38' 0" ROADWAY

— CRASH CUSHION CONCRETE PAD

— GRAVEL (A) OR CRUSHED STONE (B)

— CONCRETE BRIDGE APPROACH SLAB (MINOR)

— OPTIONAL PAVEMENT

— NEW GUARDRAIL

— CRASH CUSHION

SCALE
0 20 40 60

UTILITY COMPANIES	
AT&T DISTRIBUTION 320 NORTH 10TH STREET SAINT JOSEPH, MO 64501 (314)275-0020	MISSOURI AMERICAN WATER COMPANY 800 NORTHEAST COUNTY LINE ROAD SAINT JOSEPH, MO 64505 (816) 344-8161
EVERGY 613 ATCHISON ST SAINT JOSEPH, MO 64501 (816) 471-5275	UNITED FIBER 401 NORTH US HIGHWAY 71 SAVANNAH, MO 64485 (800) 748-1488

NW⁴ NW⁴
SEC 2 T55N R35W

NE⁴ NW⁴
SEC 2 T55N R35W

PLAN
SHEET 1 OF 1

STATE OF MISSOURI
BRIAN M. ROSENTHAL
NUMBER PE-2005022151
PROFESSIONAL ENGINEER
Brian M. Rosenthal
10/14/2026 10:48:41 AM
BRIAN M. ROSENTHAL - CIVIL
MO-PE-2005022151

DATE PREPARED
10/9/2026

ROUTE	STATE
DD	MO
DISTRICT	SHEET NO.
NW	4

COUNTY
BUCHANAN

JOB NO.
JNW0048

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)

ALL PROJECT COORDINATES HAVE BEEN PROJECTED FROM THE MISSOURI STATE PLANE COORDINATE (SPC) SYSTEM OF 1983 USING AN AVERAGE PROJECT PROJECTION (GRID TO GROUND) FACTOR. TO GET BACK TO STATE PLANE COORDINATES MULTIPY THE PROJECT COORDINATES BY THE AVERAGE GRID FACTOR AS SHOWN IN THE "REFERENCE CONTROL INFORMATION" PORTION OF THIS TABLE.

PROJECT COORDINATE INFORMATION	
COORDINATE SYSTEM	MODIFIED STATE PLANE (GROUND)
HORIZONTAL DATUM	NAD 83/2011
VERTICAL DATUM	NAVD 88
GEOID MODEL	2018B
ELEVATIONS DETERMINED BY	DIFFERENTIAL LEVLING
PROJECT PROJECTION FACTOR	1.00009090

REFERENCE CONTROL INFORMATION	
COORDINATE SYSTEM	MODIFIED STATE PLANE (GROUND)
CONTROL STATION	MoDOT GNSS
DESIGNATION	MODOT PLATTE CITY CORS
CORS_ID	MOPL
PID	DN5836
LATITUDE	39d 23' 04.07"
LONGITUDE	094d 47' 00.04"
NORTHING (M)	-4919326.4970
EASTING (M)	-411647.3820
ZONE	2403 (MO-West)
PROJECT AVERAGE GRID FACTOR	0.99990910

EXAMPLE OF PROJECT COORDINATE TO S.P.C.

PROJECT NORTHING X AVERAGE GRID FACTOR
= STATE PLANE NORTHING
PROJECT EASTING X AVERAGE GRID FACTOR
= STATE PLANE EASTING

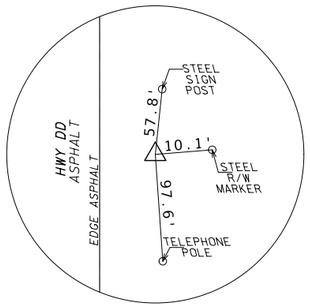
EXAMPLE: CONTROL POINT #1
N 1,611,782.59 X 0.99990910 = N 1611636.079
E 1,514,723.63 X 0.99990910 = E 1514585.942

LINEAR UNIT CONVERSION

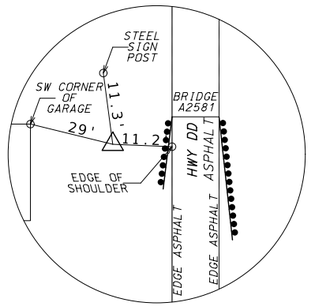
1 METER = 3.280833333 US SURVEY FEET (USFT)

COORDINATE POINT LISTING

SHEET NO	STATION	LOCATION	OFFSET (USFT)	MODIFIED STATE PLANE (GROUND) NORTHING (US SURVEY FT)	EASTING (US SURVEY FT)	ELEVATION (US SURVEY FT)	DESCRIPTION
PROJECT CONTROL POINTS							
4	14+64.71	RTE. DD	52.86' RT.	1,250,307.26	2,703,950.92	972.927	CONTROL POINT #1
4	15+63.97	RTE. DD	27.20' LT.	1,250,390.11	2,704,047.85	936.965	CONTROL POINT #2



CONTROL POINT NO.1
N: 1250307.26
E: 2703950.92
EL: 972.927'
STA. 14+64.71
52.86' RT.



CONTROL POINT NO.2
N: 1250390.11
E: 2704047.85
EL: 936.965'
STA. 15+63.97
27.20' LT.

NOT TO SCALE

CORDINATE POINTS
SHEET 1 OF 1

STATE OF MISSOURI
BRIAN M. ROSENTHAL
NUMBER PE-2005022151
PROFESSIONAL ENGINEER
Brian M. Rosenthal
10/14/2026 10:49:05 AM
BRIAN M. ROSENTHAL - CIVIL
MO-PE-2005022151

DATE PREPARED
10/13/2026

ROUTE	STATE
DD	MO
DISTRICT	SHEET NO.
NW	5

COUNTY
BUCHANAN

JOB NO.
JNW0048

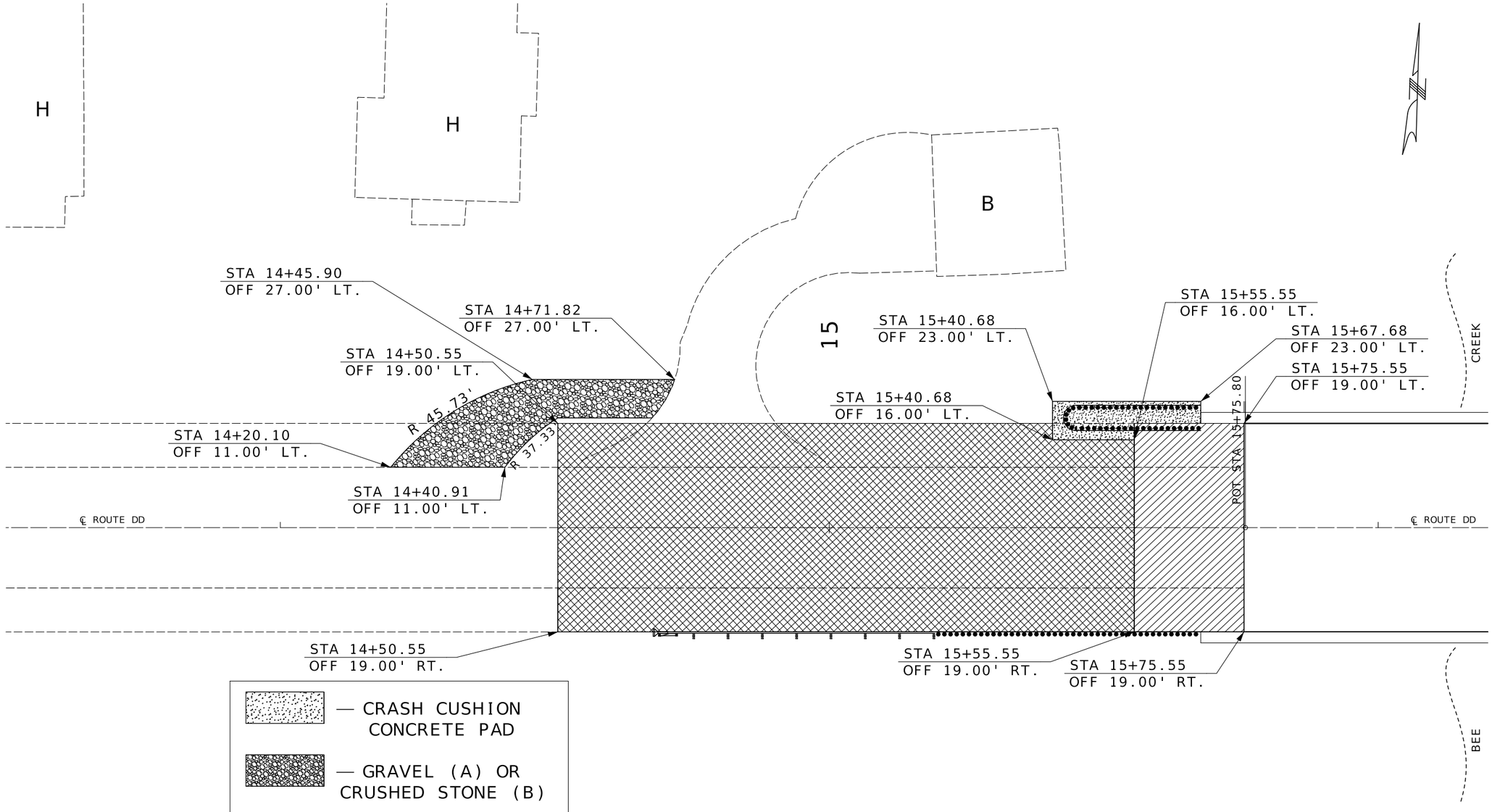
CONTRACT ID.

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)



— CRASH CUSHION CONCRETE PAD

— GRAVEL (A) OR CRUSHED STONE (B)

— CONCRETE BRIDGE APPROACH SLAB (MINOR)

— OPTIONAL PAVEMENT

— NEW GUARDRAIL

— CRASH CUSHION

SCALE

0 10 20 30

CONCRETE BRIDGE APPROACH SLAB (MINOR),
CRASH CUSHION CONCRETE PAD, OPTIONAL PAVEMENT, &
GRAVEL (A) OR CRUSHED STONE (B)

SPECIAL SHEET
1 OF 2

STATE OF MISSOURI
BRIAN M. ROSENTHAL
NUMBER PE-2005022151
PROFESSIONAL ENGINEER

Brian M. Rosenthal
10/14/2026 10:49:28 AM
BRIAN M. ROSENTHAL - CIVIL
MO-PE-2005022151

DATE PREPARED
10/9/2026

ROUTE	STATE
DD	MO
DISTRICT	SHEET NO.
NW	6

COUNTY
BUCHANAN

JOB NO.
JNW0048

CONTRACT ID.

PROJECT NO.

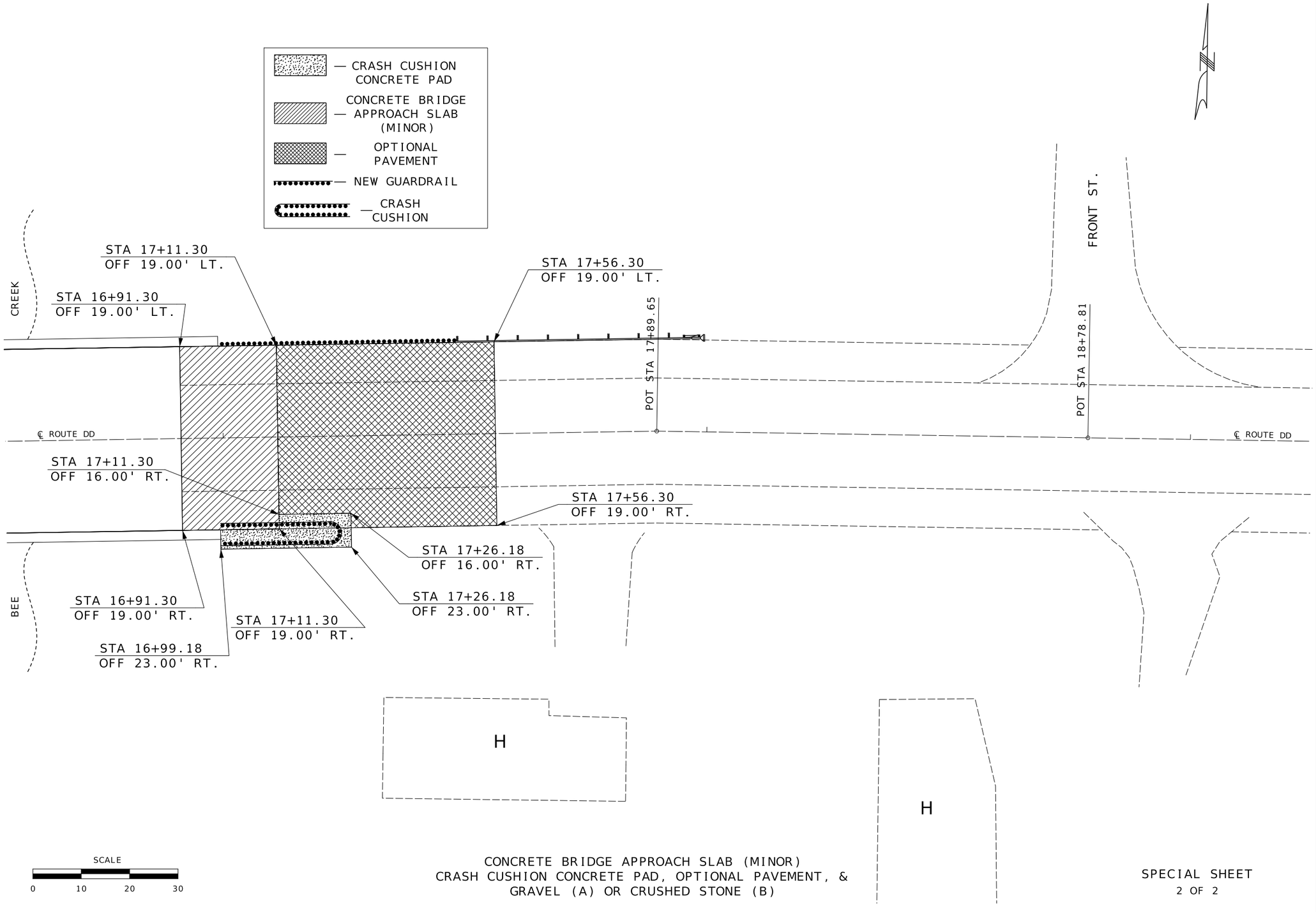
BRIDGE NO.

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



CONCRETE BRIDGE APPROACH SLAB (MINOR)
CRASH CUSHION CONCRETE PAD, OPTIONAL PAVEMENT, &
GRAVEL (A) OR CRUSHED STONE (B)

SPECIAL SHEET
2 OF 2

STATE OF MISSOURI
BRIAN M. ROSENTHAL
NUMBER PE-2005022151
PROFESSIONAL ENGINEER
Brian M. Rosenthal
10/14/2026 10:49:51 AM
BRIAN M. ROSENTHAL - CIVIL
MO-PE-2005022151

DATE PREPARED
10/9/2026

ROUTE	STATE
DD	MO
DISTRICT	SHEET NO.
NW	7

COUNTY
BUCHANAN

JOB NO.
JNW0048

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

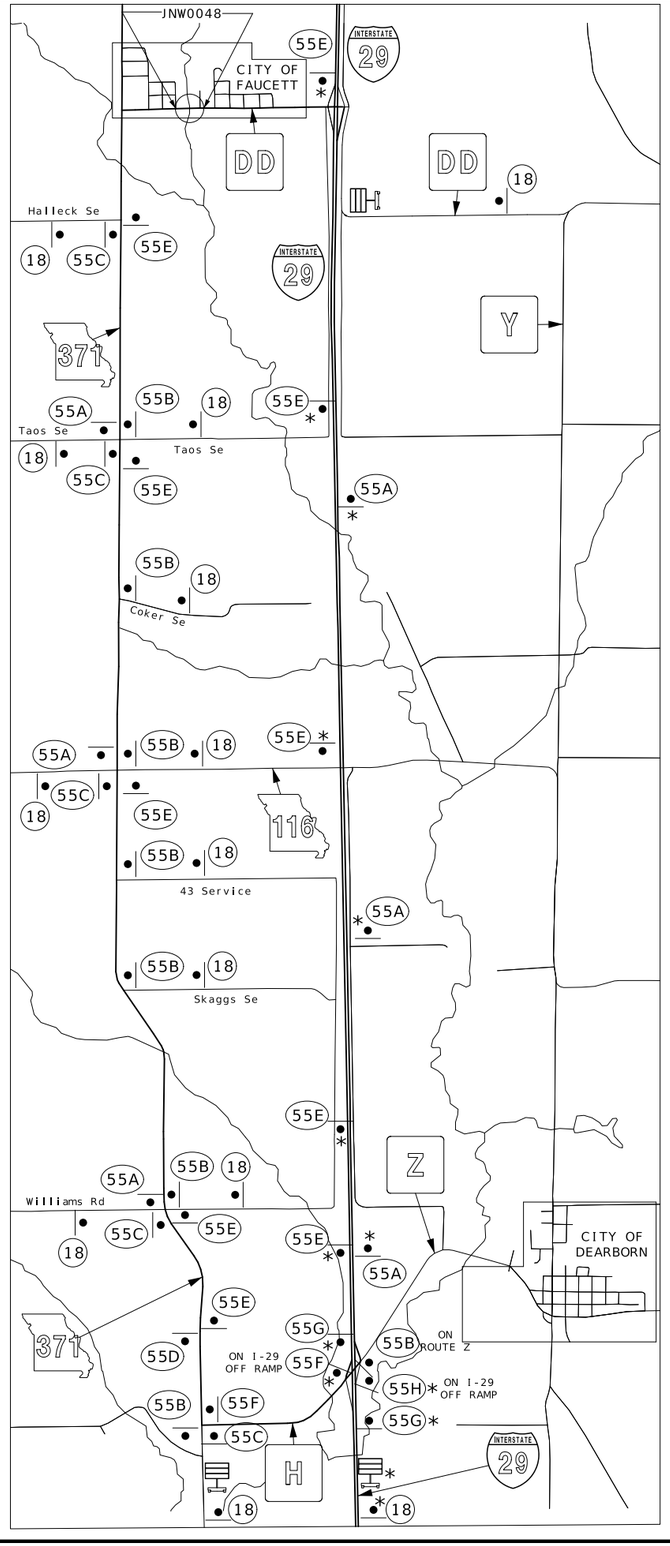
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

NOTES:

* - SIGNS TO BE PLACED ALONG I-29 EVERY 2 MILES AND AT ON/OFF RAMPS SIGNS MAY BE ADJUSTED AT ENGINEERS DISCRETION BASED ON SITE CONDITIONS.

- SIGNS ON COUNTY ROADS ARE TO BE SPACED 500FT APART. SIGNS MAY BE ADJUSTED AT ENGINEERS DISCRETION BASED ON SITE CONDITIONS.

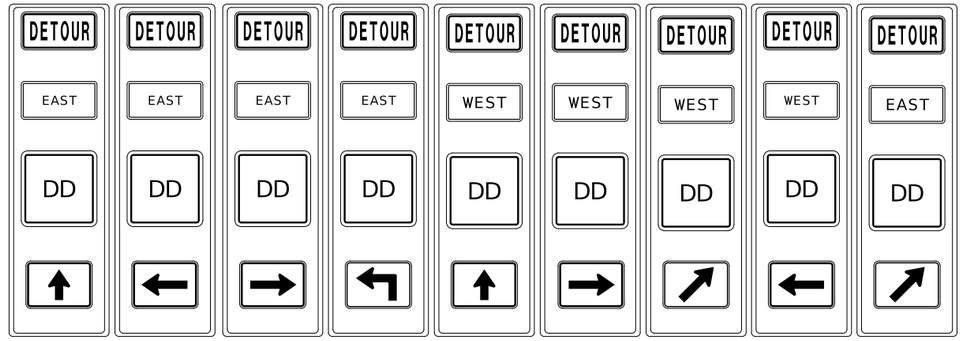


- CHANGEABLE MESSAGE SIGN



WO20-2

18



MO4-11	MO4-11	MO4-11	MO4-11	MO4-11	MO4-11	MO4-11	MO4-11	MO4-11
55A	55B	55C	55D	55E	55F	55G	55H	55I

NOT TO SCALE

BRIDGE CLOSURE DETOUR
DETOUR ON MO 371/I-29

TRAFFIC CONTROL
SHEET 1 OF 2

STATE OF MISSOURI
BRIAN M. ROSENTHAL
NUMBER PE-2005022151
PROFESSIONAL ENGINEER
10/14/2026 10:50:11 AM
BRIAN M. ROSENTHAL - CIVIL
MO-PE-2005022151

DATE PREPARED
10/9/2026

ROUTE	STATE
DD	MO
DISTRICT	SHEET NO.
NW	8

COUNTY
BUCHANAN

JOB NO.
JNW0048

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)



WO20-1

(2)





WO20-2

(18)



WO20-3

(20)



MO4-8a

(52)



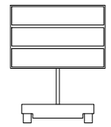
R11-2

(29)



R11-4

(56)

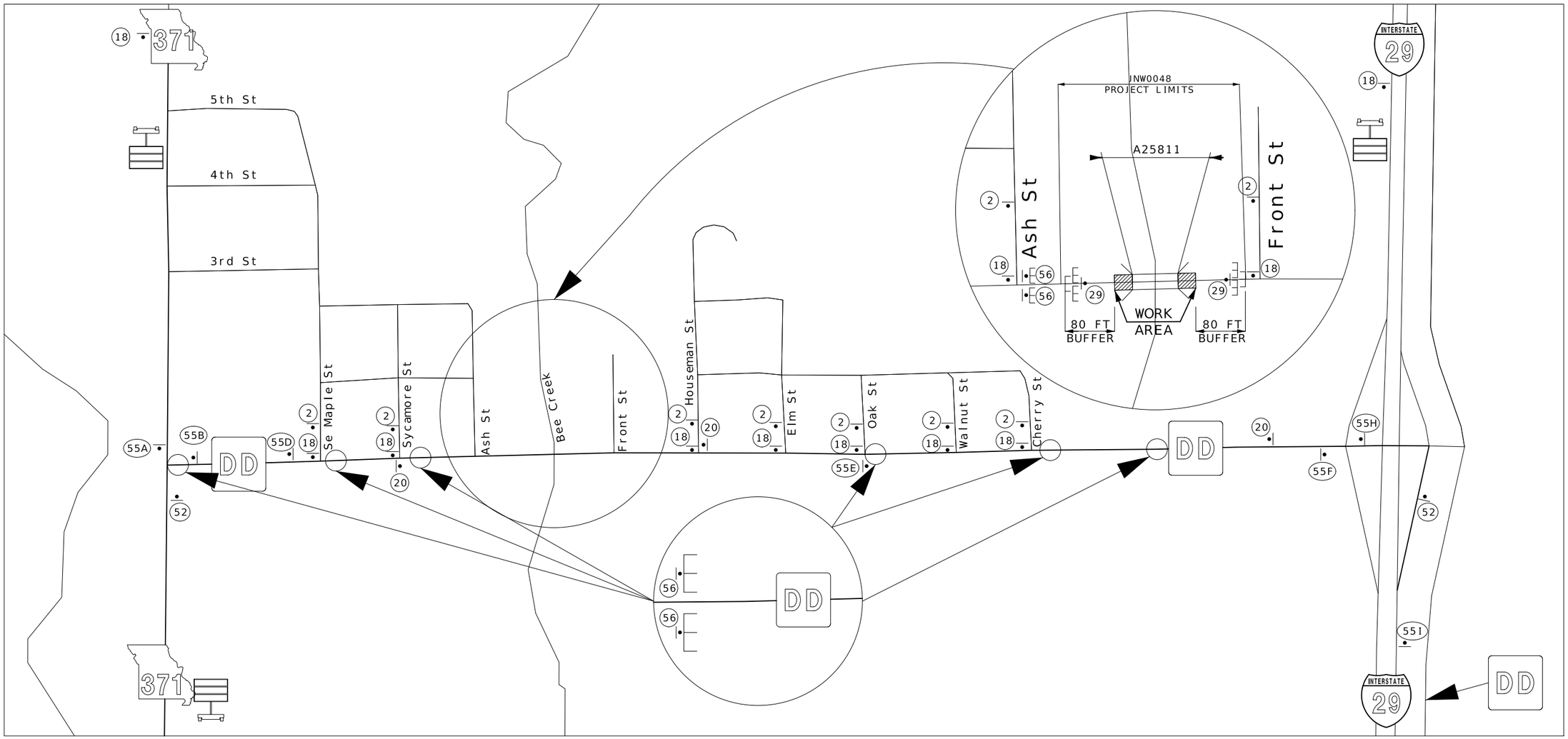


- CHANGEABLE MESSAGE SIGN



- TYPE 3 MOVEABLE BARRICADE





NOT TO SCALE

BR. A25811 CLOSURE
FAUCETT STREETS DETOUR

TRAFFIC CONTROL
SHEET 2 OF 2



DATE PREPARED
10/9/2026

ROUTE	STATE
DD	MO
DISTRICT	SHEET NO.
NW	9

COUNTY
BUCHANAN

JOB NO.
JNW0048

CONTRACT ID.

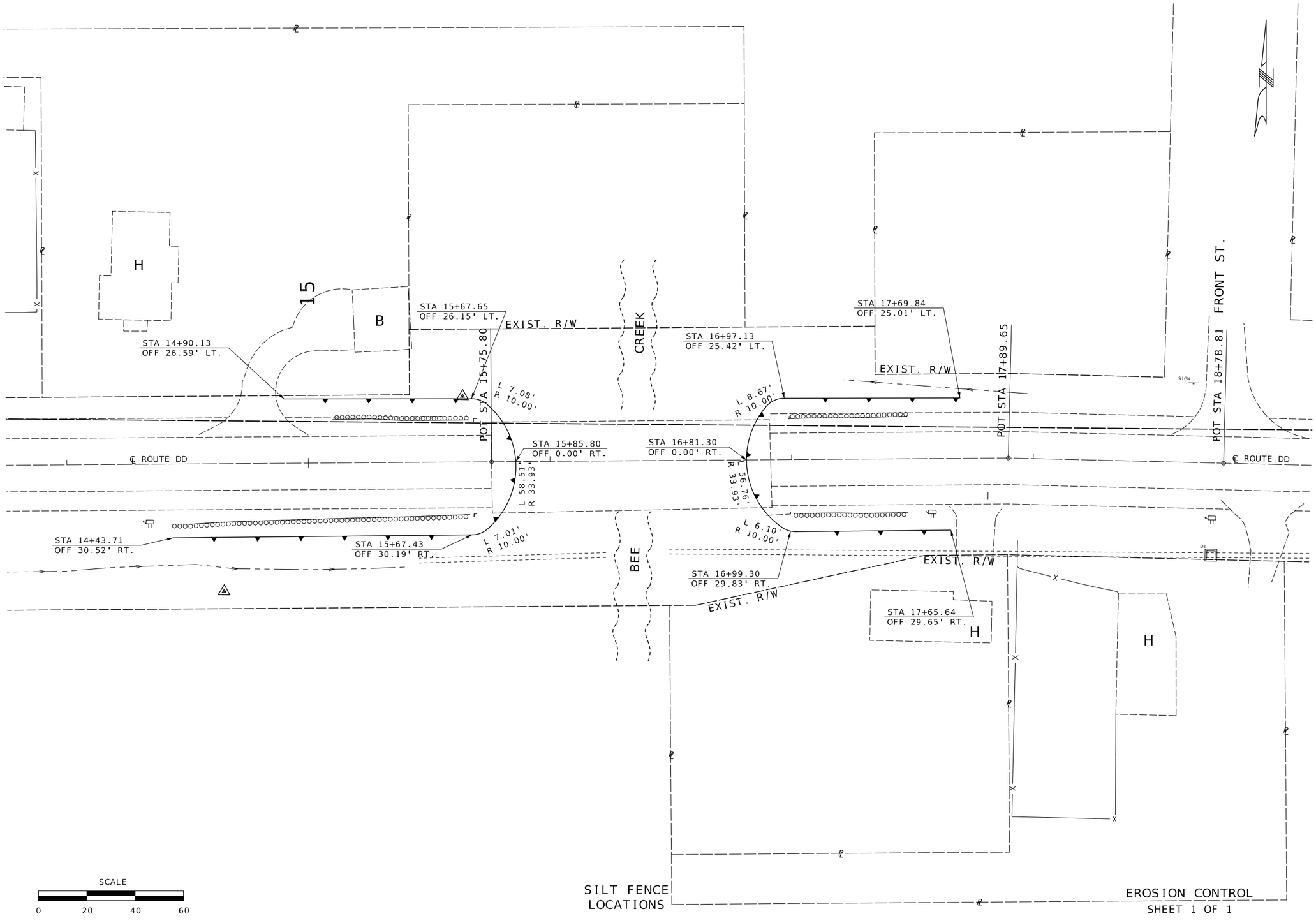
PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



STATE OF MISSOURI
BRIAN M. ROSENTHAL
NUMBER PE-2005022151
PROFESSIONAL ENGINEER

Brian M. Rosenthal
10/14/2026 10:51:04 AM
BRIAN M. ROSENTHAL - CIVIL
MO-PE-2005022151

DATE PREPARED	10/9/2026
ROUTE	DD
STATE	MO
DISTRICT	NW
SHEET NO.	10
COUNTY	BUCHANAN
JOB NO.	JNW0048
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)

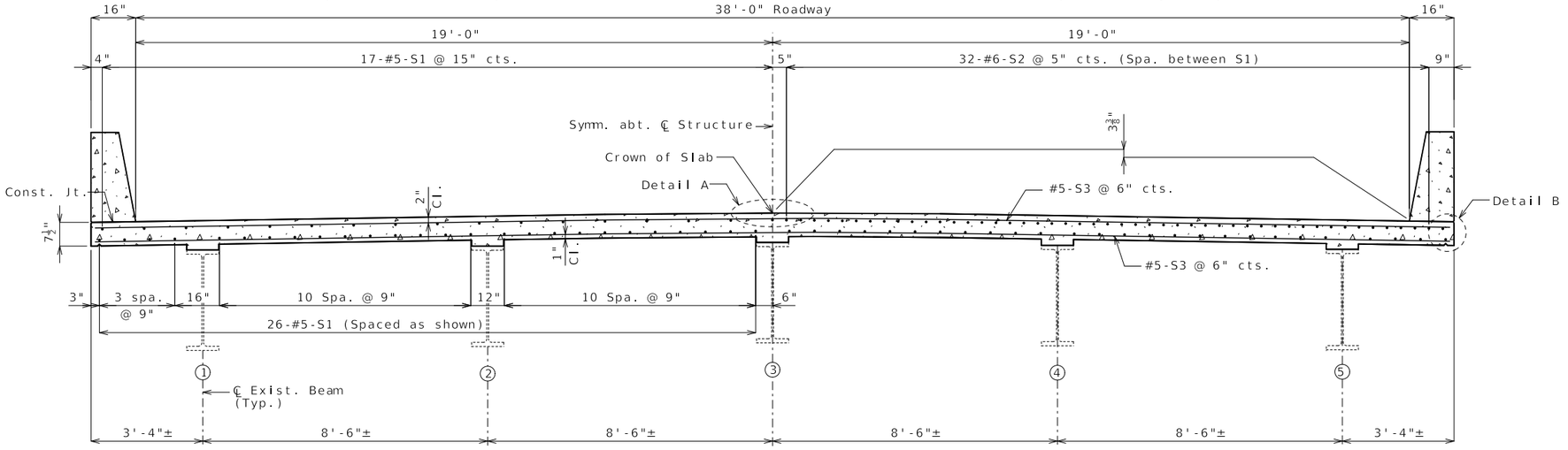
SEC/SUR 2 TWP 55 N RGE 35 W

Table Showing S2 Bar Lengths			
Int. Bent No. 2		Int. Bent No. 3	
Span 1	Span 2	Span 2	Span 3
14'-0"	13'-9"	13'-9"	14'-0"

Required Lap Length For Bar Splices **	
Bar Size	Splice Length
4	2'-7"
5	3'-3"
6	3'-10"
7	4'-11"

** Unless otherwise shown.

U.I.P. AND REDECK EXISTING (34'- 45'- 34') CONTINUOUS COMPOSITE WIDE FLANGE BEAM SPANS (SKEW: SQUARE)



HALF SECTION NEAR MIDSPAN HALF SECTION NEAR INT. BENT

TYPICAL SECTION THRU SLAB

General Notes:

Design Specifications:
2002 AASHTO LFD (17th Ed.) Standard Specifications
Seismic Performance Category A

Design Loading:
H20-44 (1965)
HS20-44 (New Construction)
35 lb/sf Future Wearing Surface
Earth - 120 lb/cf, Equivalent Fluid Pressure 45 lb/cf
Fatigue Stress - Case III

Design Unit Stresses:

Class B-1 Concrete (Barrier)	f'c = 4,000 psi
Class B-2 Concrete (End Bents & Superstructure, except Barrier)	f'c = 4,000 psi
Reinforcing Steel (ASTM A615 Grade 60)	fy = 60,000 psi

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.

Miscellaneous:
Protective coating for concrete bents and piers (Epoxy) shall be applied as shown on the bridge plans and in accordance with Sec 711.

Bars bonded in existing concrete not removed shall be cleanly stripped and embedded into new concrete where possible. If length is available, existing bars shall extend into new concrete at least 40 diameters for plain bars and 30 diameters for deformed bars, unless otherwise noted.

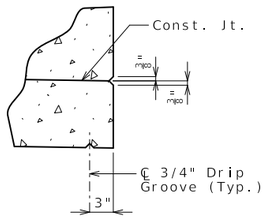
Roadway surfacing adjacent to bridge ends shall match new bridge slab surface. (Roadway item)

Outline of existing work is indicated by light dashed lines. Heavy lines indicate new work.

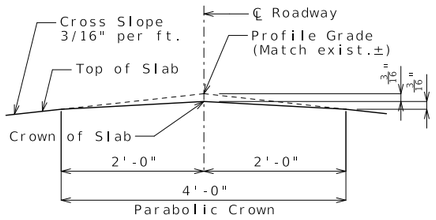
The area exposed by the removal of concrete and not covered with new concrete shall be coated with an approved qualified special mortar in accordance with Sec 704.

For adjusted girder deflection due to the weight of the new deck and barriers, see Bridge Electronic Deliverables.

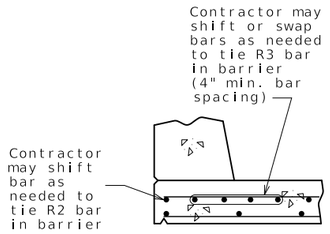
Traffic Handling:
Structure to be closed during construction. See roadway plans for traffic control.



DETAIL B



DETAIL A



OPTIONAL SHIFTING TOP BARS AT BARRIER

Estimated Quantities		
Item		Total
Removal of Miscellaneous ACM (Non-Friable)	sq. foot	11
Class 1 Excavation	cu. yard	70
Removal of Existing Bridge Deck	sq. foot	4686
Partial Removal of Substructure Concrete	lumb sum	1
Bridge Approach Slab (Minor)	sq. yard	172
Slab on Steel	sq. yard	517
Type H Barrier	linear foot	263
Protective Coating - Concrete Bents and Piers (Epoxy)	lump sum	1
Slab Drain	each	8
Surface Preparation for Applying Epoxy-Mastic Primer	lump sum	1
Aluminum Epoxy-Mastic Primer	lump sum	1
Gray Epoxy-Mastic Primer	lump sum	1
Non-Destructive Testing	linear foot	56
Vertical Drain at End Bents	each	2

Estimated Quantities for Slab on Steel		
Item		Total
Class B-2 Concrete	cu. yard	142
Reinforcing Steel (Epoxy Coated)	pound	41,685

The table of Estimated Quantities for Slab on Steel 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 stay-in-place corrugated steel forms, 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 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 I, II or III.

Slab shall be cast-in-place with conventional forming or stay-in-place corrugated steel forms. Precast prestressed panels will not be permitted.

For Optional Stay-In-Place Form Details, see Sheet No. 2.

REPAIRS TO BRIDGE: ROUTE DD OVER EAST FORK OF BEE CREEK

ROUTE DD FROM ROUTE 371 TO ROUTE I-29
ABOUT 0.3 MILES EAST OF ROUTE 371
BEGINNING STATION 15+75.55±

STATE OF MISSOURI
TRENTON B. CRAWFORD
NUMBER PE-2012018053
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

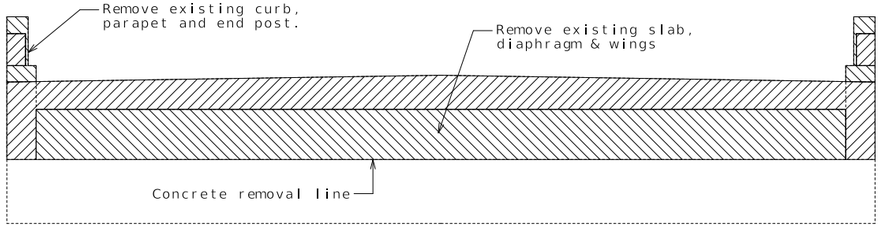
DATE PREPARED 9/30/2026
ROUTE DD | STATE MO
DISTRICT BR | SHEET NO. 1
COUNTY BUCHANAN
JOB NO. JNW0048
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A25811

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Detailed Aug. 2026
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Note: This drawing is not to scale. Follow dimensions.



DETAILS OF CONCRETE REMOVAL AT END BENTS

The cost of deck, curb and parapet, end post and concrete diaphragm removal as shown will be considered completely covered by the contract unit price for Removal of Existing Bridge Deck. The cost of wing wall removal as shown will be considered completely covered by the contract lump sum price for Partial Removal of Substructure Concrete.

A smooth, level surface shall be provided at Bents No. 1 & 4 removal lines.

General Notes:

Stay-In-Place Forms:

Corrugated steel forms, supports, closure elements and accessories shall be in accordance with grade requirement and coating designation G165 of ASTM A653. Complete shop drawings of the permanent steel deck forms shall be required in accordance with Sec 1080.

Corrugations of stay-in-place forms shall be filled with an expanded polystyrene material. The polystyrene material shall be placed in the forms with an adhesive in accordance with the manufacturer's recommendations.

Form sheets shall not rest directly on the top of beam flanges. Sheets shall be securely fastened to form supports with a minimum bearing length of one inch on each end. Form supports shall be placed in direct contact with the flange. Welding on or drilling holes in the beam flanges will not be permitted. All steel fabrication and construction shall be in accordance with Sec 1080 and 712. Certified field welders will not be required for welding of the form supports.

The design of stay-in-place corrugated steel forms is per manufacturer which shall be in accordance with Sec 703 for false work and forms. Maximum actual weight of corrugated steel forms allowed shall be 4 psf assumed for beam loading.

The contractor shall provide a method of preventing the direct contact of the stay-in-place forms and connection components with uncoated weathering steel members that is approved by the engineer.

Pouring and Finishing Slab:

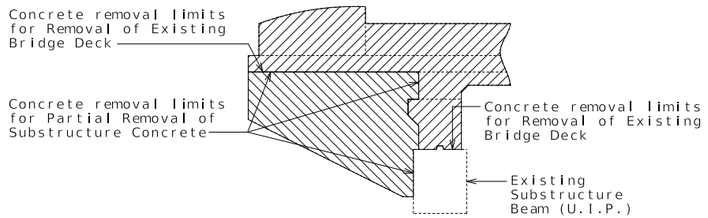
The contractor shall provide bracing necessary for lateral and torsional stability of the beams during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not weld on or drill holes in the beams. The cost for furnishing, installing, and removing bracing will be considered completely covered by the contract unit price for Slab on Steel.

Slab shall be poured upgrade from end to end at a minimum rate of 25 cubic yards per hour.

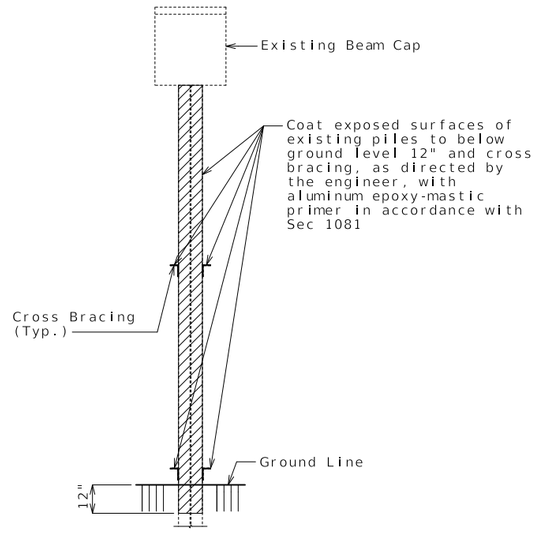
Alternate pour sequences may be submitted to the engineer for approval. Keyed construction joints shall be provided between pours.

Haunching:

(1) Slab is to be considered a uniform thickness as shown on the plans. Haunching will vary. See front sheet for slab thickness.

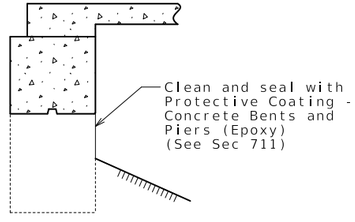


PART SECTION SHOWING CONCRETE REMOVAL AT END BENTS

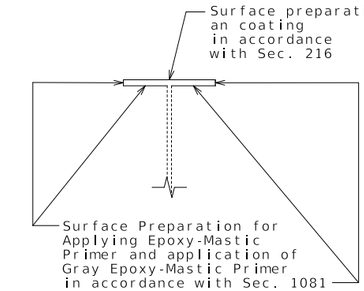


PART ELEVATION OF INT. BENTS NO. 2 & 3 SHOWING RECOATING OF STRUCTURAL STEEL

The cost of surface preparation will be considered completely covered by the contract lump sum price for Surface Preparation for Applying Epoxy-Mastic Primer. The cost of the aluminum epoxy-mastic primer and bituminous coating will be considered completely covered by the contract lump sum price for Aluminum Epoxy-Mastic Primer.



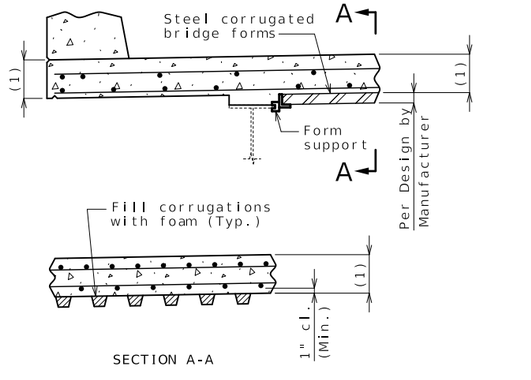
TYPICAL SECTION THRU END BENTS 1 & 4 SHOWING PROTECTIVE COATING



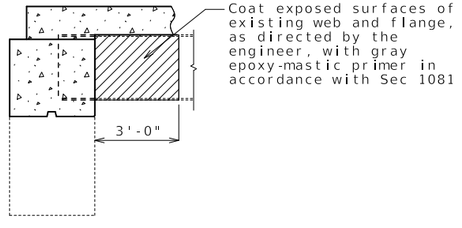
DETAILS SHOWING LIMITS OF TOP FLANGE COATING

The sides and bottom of the top flanges of the existing structural steel beams shall be coated with one 6-mil thickness of gray epoxy-mastic primer applied over an SSPC-SP3 surface preparation in accordance with Sec 1081 The cost of surface preparation will be considered completely covered by the contract lump sum price for Surface Preparation for Applying Epoxy-Mastic Primer. The cost of the gray epoxy mastic primer and bituminous coating will be considered completely covered by the contract lump sum price for Gray Epoxy-Mastic Primer.

Top flange surface preparation and gray epoxy-mastic primer. as defined in Sec 216.50.2.2, shall be completely covered by the contract unit price for Removal of Existing Bridge Deck.



OPTIONAL STAY-IN-PLACE FORM DETAILS



PART ELEVATION OF END BENTS NO. 1 & 4 SHOWING RECOATING OF STRUCTURAL STEEL

The cost of surface preparation will be considered completely covered by the contract lump sum price for Surface Preparation for Applying Epoxy-Mastic Primer. The cost of the gray epoxy-mastic primer and bituminous coating will be considered completely covered by the contract lump sum price for Gray Epox Mastic Primer.

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TRENTON B. CRAWFORD
NUMBER PE-2012018053
PROFESSIONAL ENGINEER
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ROUTE	STATE
DD	MO
DISTRICT	SHEET NO.
BR	2

COUNTY BUCHANAN

JOB NO. JNW0048

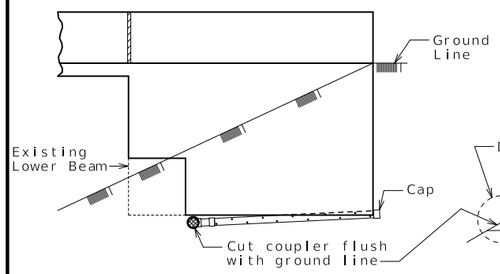
CONTRACT ID.

PROJECT NO.

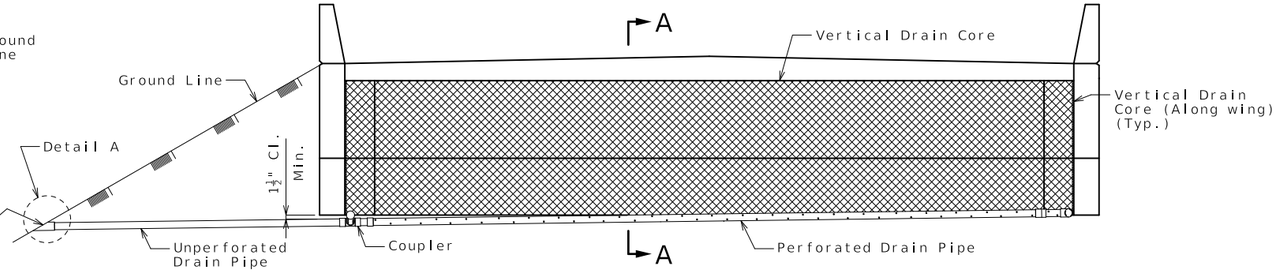
BRIDGE NO. A25811

DESCRIPTION | DATE

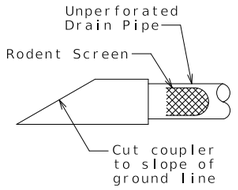
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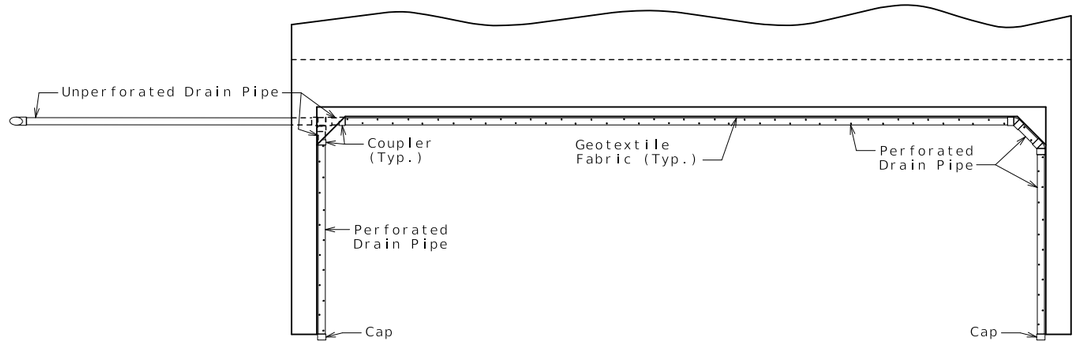
ELEVATION OF WING



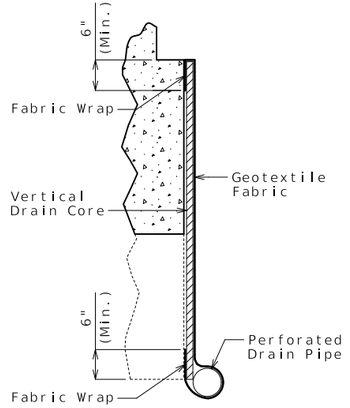
ELEVATION OF END BENT



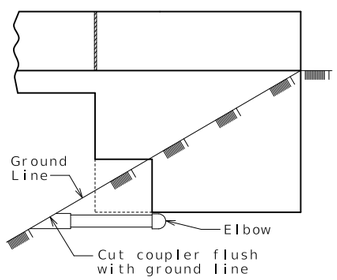
DETAIL A



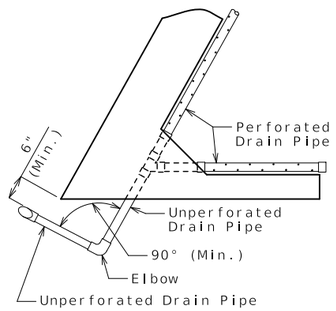
PLAN OF END BENT



PART SECTION A-A
(Section thru wing similar)



ELEVATION OF WING



PART PLAN

OPTIONAL TURNED DRAIN
(Use only when straight drain is not practical.)

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.

VERTICAL DRAIN AT END BENTS

(Squared end bent shown, skewed end bent similar)

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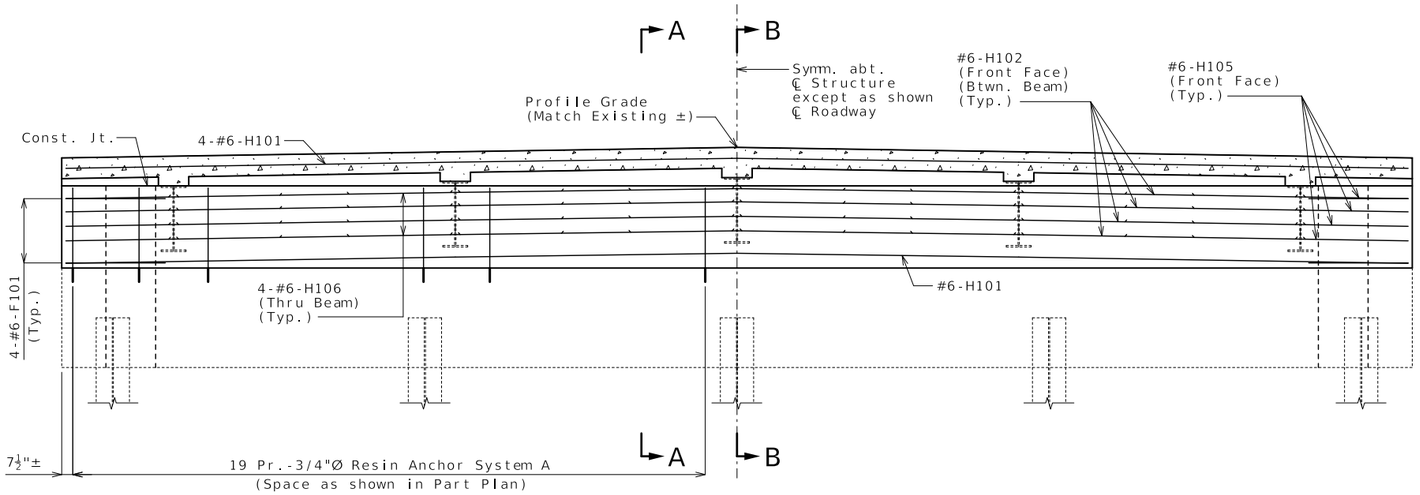
DATE PREPARED 9/30/2026
ROUTE DD | STATE MO
DISTRICT BR | SHEET NO. 3
COUNTY BUCHANAN
JOB NO. JNW0048
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A25811

DESCRIPTION | DATE

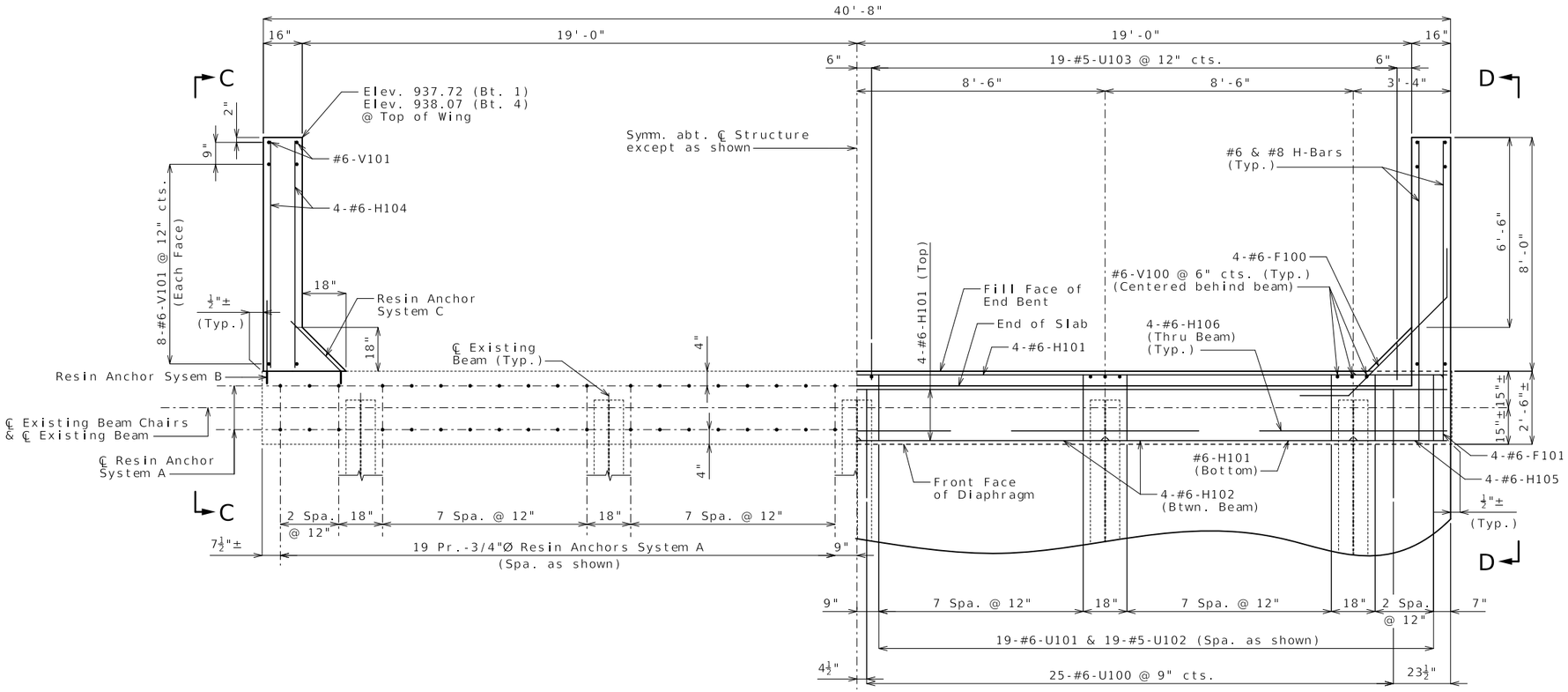
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
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1-888-ASK-MODOT (1-888-275-6636)

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



PART SECTION NEAR END BENT



PART PLAN OF BEAM

PART PLAN

END BENTS NO. 1 & 4

Notes:

The exposed and accessible surfaces of the existing structural steel and bearings that will be encased in concrete shall be cleaned with a minimum of SSPC-SP-3 surface preparation and coated with a minimum of one coat of gray epoxy-mastic primer (non-aluminum) in accordance with Sec 1081 to produce a dry film thickness of not less than 3 mils before concrete is poured. The surface preparation and coating for girders shall extend three outside the face of the girder encasement. Payment for cleaning and coating steel to be encased in concrete will be considered completely covered by the contract unit price for Slab on Steel.

The #6-H102 bars are segmented for ease of placement through girder web holes. The total bar length for #6-H102 bars shown in Bill of Reinforcing Steel allows for one lap splice with a length of 3'-10". Actual bar segment lengths to be determined by contractor for ease of installing bars. The contractor may use a mechanical bar splice in lieu of a lap splice. When a mechanical bar splice is used, the actual bar segment length will be determined by the contractor to accommodate manufacturer's recommendations for installation and ease of construction. The cost of furnishing and installing the bar splices will be considered completely covered by the contract unit price for Slab on Steel. No adjustment of the quantity of reinforcing steel will be allowed for the use of mechanical bar splices.

Work this sheet with Sheet No. 5.

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ROUTE	STATE
DD	MO
DISTRICT	SHEET NO.
BR	4

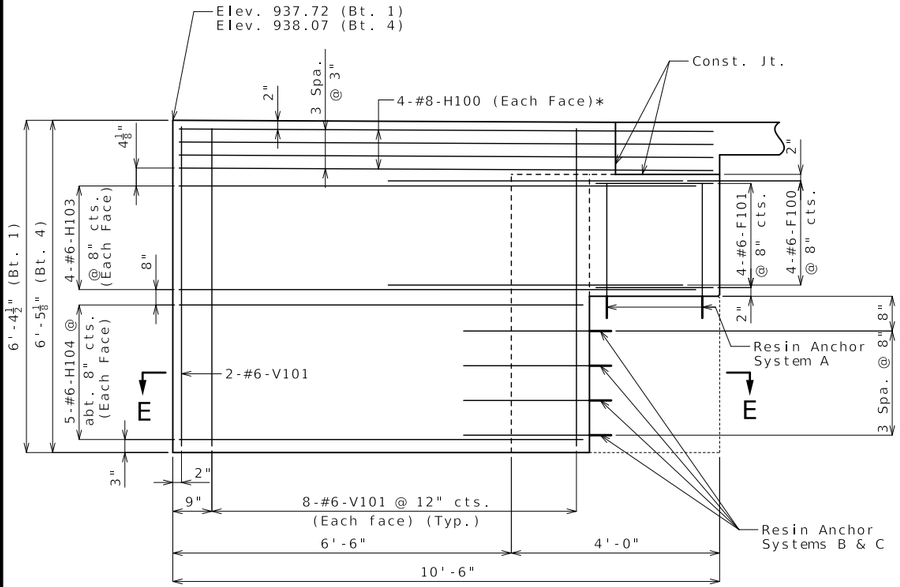
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JOB NO.: JNW0048
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A25811

DESCRIPTION | DATE

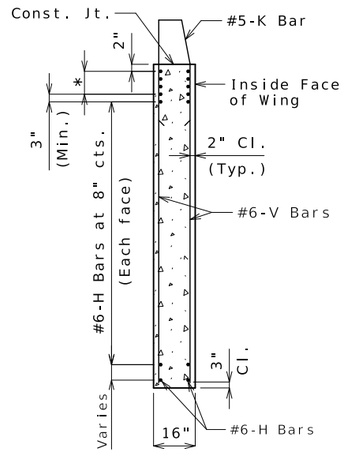
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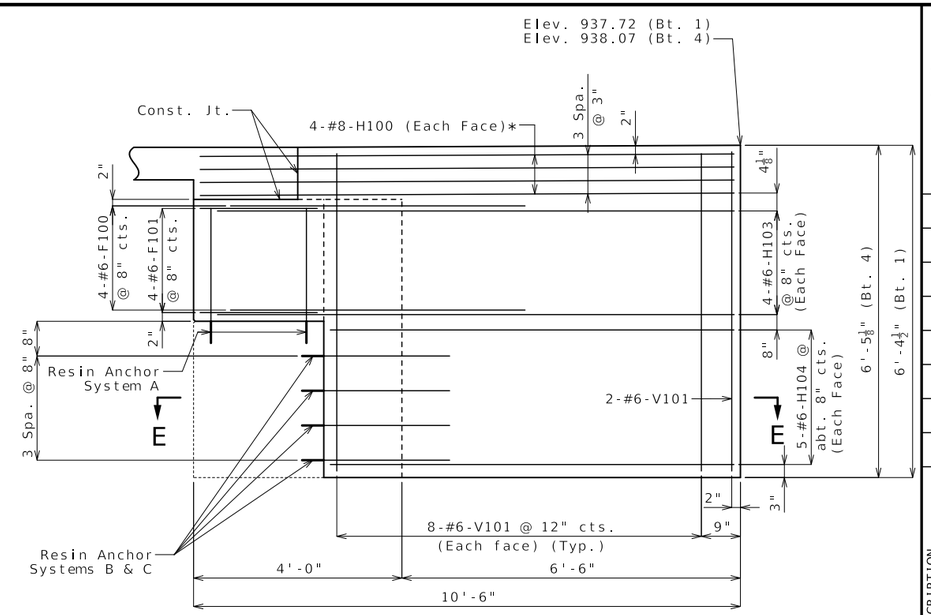


ELEVATION C-C

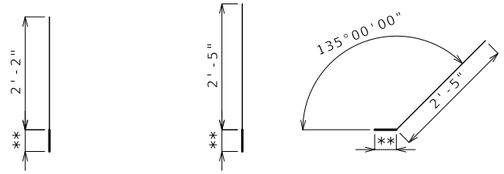


TYPICAL SECTION THRU WING

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

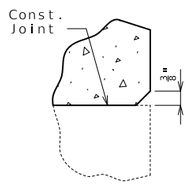


ELEVATION D-D

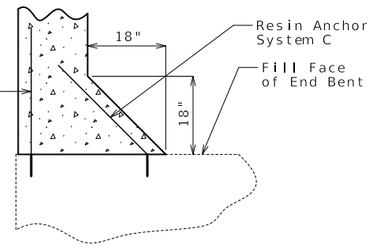


DETAILS OF RESIN ANCHORS

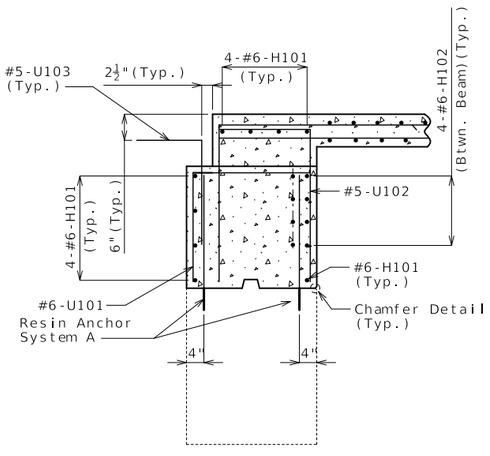
** Use manufacturer's embedment length. (5" minimum embedment length)



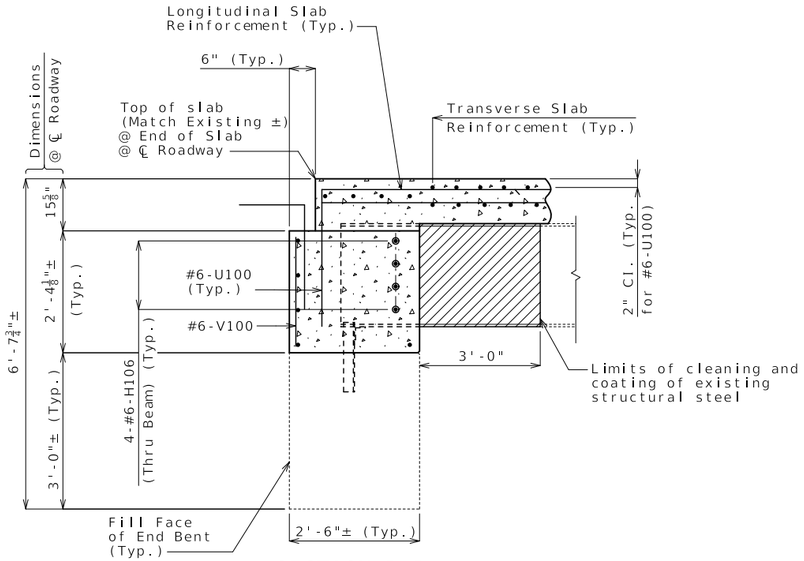
CHAMFER DETAIL



SECTION E-E



SECTION A-A



SECTION B-B

END BENTS NO. 1 & 4

Notes:

Work this sheet with Sheet No. 4.

For reinforcement of the barrier, see Sheets No. 7 & 8.

All concrete in the end bents including diaphragms and wings shall be Class B-2 concrete. All concrete and reinforcement is included in the Table of Estimated Quantities for Slab on Steel and will be considered completely covered by the contract unit price for Slab on Steel.

Concrete diaphragms at the integral end bents shall be poured a minimum of 12 hours before the slab is poured.

The contractor shall use one of the qualified resin anchor systems in accordance with Sec 1039.

Cost of furnishing and installing the resin anchor systems shown on this sheet, complete in place, will be considered completely covered by the contract unit price for Slab on Steel.

The minimum embedment depth in concrete with f'c = 4,000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5".

An epoxy coated #6 Grade 60 reinforcing bar of same length shall be substituted for the 3/4"Ø threaded rod for Resin Anchor Systems A, B & C.

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ROUTE DD | STATE MO

DISTRICT BR | SHEET NO. 5

COUNTY BUCHANAN

JOB NO. JNW0048

CONTRACT ID.

PROJECT NO.

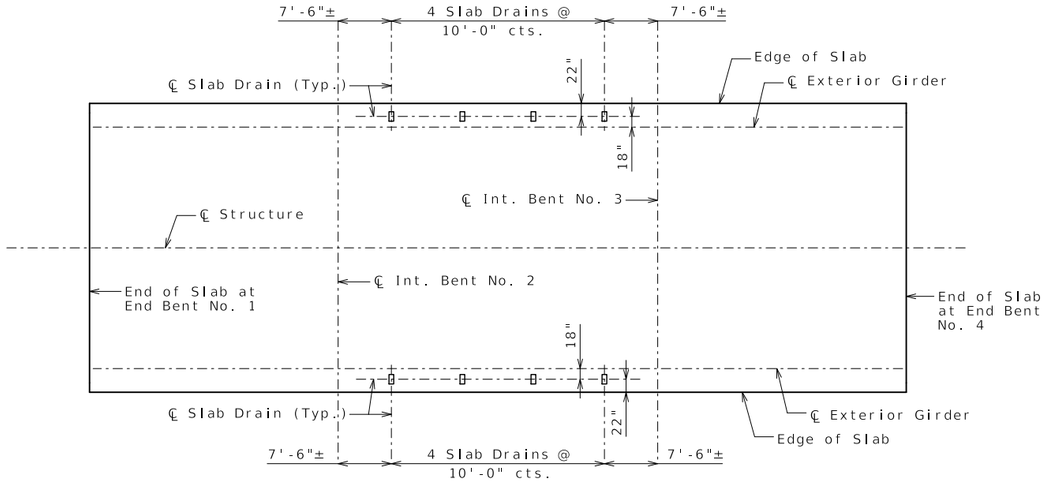
BRIDGE NO. A25811

DESCRIPTION | DATE

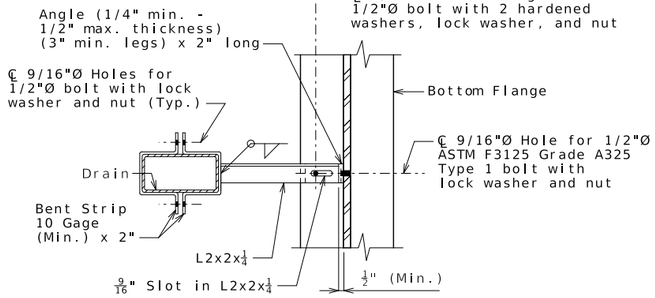
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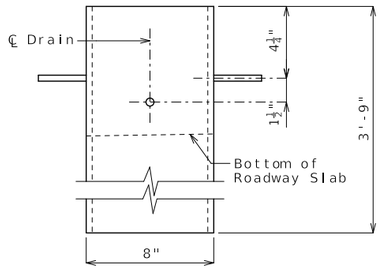
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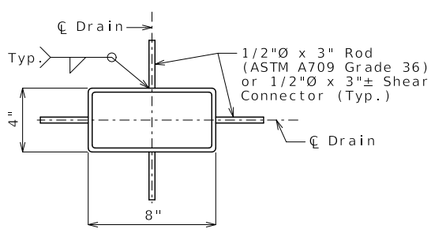
PLAN OF SLAB SHOWING SLAB DRAIN LOCATIONS



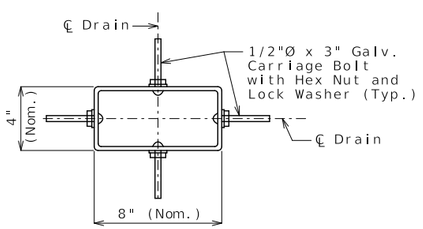
PART SECTION SHOWING BRACKET ASSEMBLY



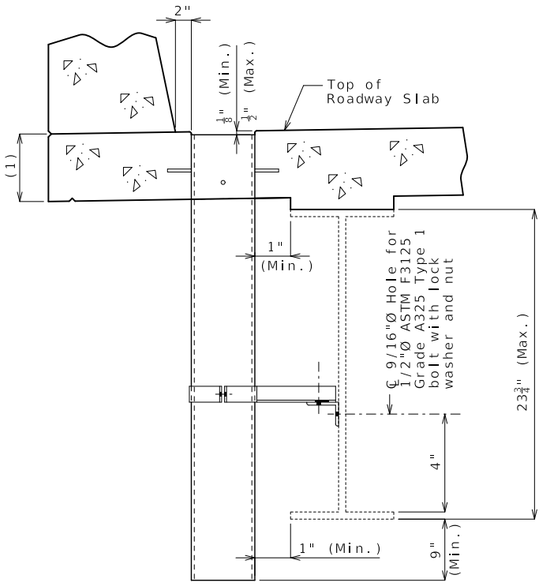
ELEVATION OF DRAIN



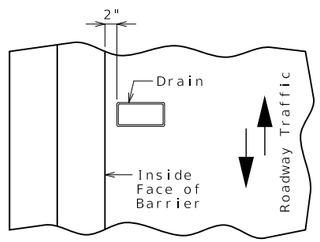
PLAN OF STEEL DRAIN OPTION



PLAN OF FRP DRAIN OPTION



PART SECTION NEAR DRAIN



PART PLAN OF SLAB AT DRAIN

General Notes:

Contractor shall have the option to construct either steel or FRP slab drains. All drains shall be of same type.

Slab drain bracket assembly shall be ASTM A709 Grade 36 steel.

Locate drains in slab by dimensions shown in Part Section Near Drain.

Reinforcing steel shall be shifted to clear drains.

The bracket assembly shall be galvanized in accordance with ASTM A123.

All bolts, hardened washers, lock washers and nuts shall be galvanized in accordance with ASTM F2329.

All 1/2-inch diameter bolts shall be ASTM A307, except as shown.

Shop drawings will not be required for the slab drains and the bracket assembly.

The bolt hole for the bracket assembly attachment shall be shifted to the minimum extent necessary to field drill in the existing web.

(1) See front sheet for slab thickness

Notes for Steel Drain:

Slab drains may be fabricated of either 1/4-inch welded sheets of ASTM A709 Grade 36 steel or from 1/4-inch structural steel tubing ASTM A500 or A501.

Outside dimensions of drains are 8" x 4".

The drains shall be galvanized in accordance with ASTM A123.

Notes for FRP Drain:

Drains shall be machine filament-wound thermosetting resin tubing meeting the requirements of ASTM D2996 with the following exceptions:

Shape of drains shall be rectangular with outside nominal dimensions of 8" x 4".

Minimum reinforced wall thickness shall be 1/4 inch.

The resin used shall be ultraviolet (UV) resistant and/or have UV inhibitors mixed throughout. Drains may have an exterior coating for additional UV resistance.

The color of the slab drain shall be gray (Federal Standard #26373). The color shall be uniform throughout the resin and any coating used.

The combination of materials used in the manufacture of the drains shall be tested for UV resistance in accordance with ASTM D4329 Cycle A. The representative material shall withstand at least 500 hours of testing with only minor discoloration and without any physical deterioration. The contractor shall furnish the results of the required ultraviolet testing prior to acceptance of the slab drains.

At the contractor's option, drains may be field cut. The method of cutting FRP slab drain shall be as recommended by the manufacturer to ensure a smooth, chip free cut.

SLAB DRAINS

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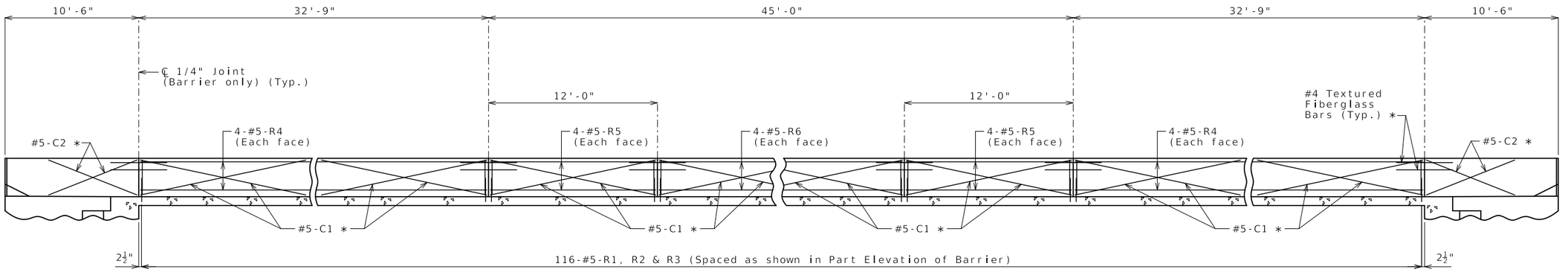
DATE PREPARED 9/30/2026
ROUTE DD | STATE MO
DISTRICT BR | SHEET NO. 6
COUNTY BUCHANAN
JOB NO. JNW0048
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A25811

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
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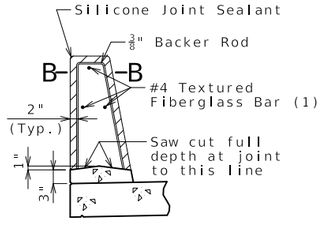
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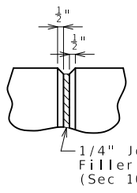
ELEVATION OF BARRIER

(Left barrier shown, right barrier similar)

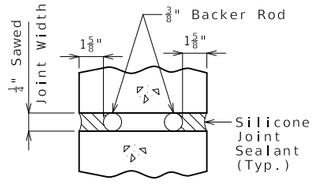
Longitudinal dimensions are horizontal.



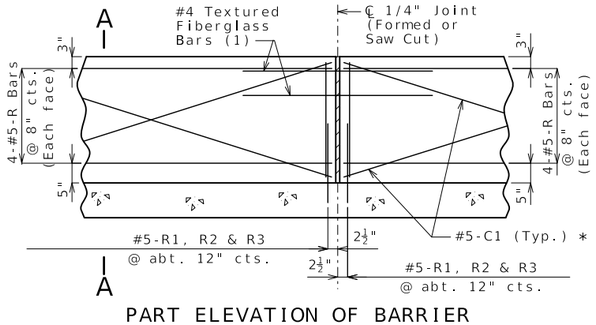
SECTION THRU
SAW CUT JOINT



PART ELEVATION
AT FORMED JOINT

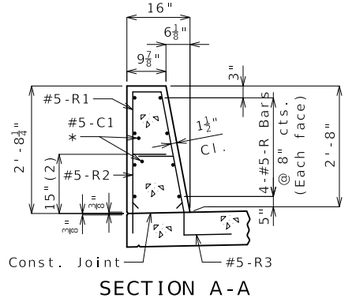


SECTION B-B



PART ELEVATION OF BARRIER

(1) Four feet long, centered on joint, slip-formed option only

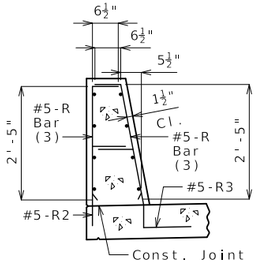


SECTION A-A

Use a minimum lap of 2'-6" for #5 horizontal barrier bars.

The cross-sectional area above the slab is 2.89 square feet.

(2) To top of bar



R-BAR PERMISSIBLE ALTERNATE SHAPE

(3) The R1 bar may be separated into two bars as shown, at the contractor's option, only when slip forming is not used. (All dimensions are out to out.)

General Notes:

* Slip-formed option only.

Conventional forming or slip forming may be used. Saw cut joints may be used with conventional forming.

Top of barrier shall be built parallel to grade and barrier joints (except at end bents) normal to grade.

All exposed edges of barrier shall have either a 1/2-inch radius or a 3/8-inch bevel, unless otherwise noted.

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for Type H Barrier per linear foot.

Concrete in barrier shall be Class B-1.

Measurement of barrier is to the nearest linear foot for each structure, measured along the outside top of slab from end of wing to end of wing.

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 H Barrier.

Joint sealant and backer rods shall be in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

For slip-formed option, both sides of barrier shall have a vertically broomed finish and the top shall have a transversely broomed finish.

TYPE H BARRIER

Detailed Aug. 2026
Checked Aug. 2026

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

STATE OF MISSOURI
TRENTON B. CRAWFORD
NUMBER PE-2012018053
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/30/2026

ROUTE	STATE
DD	MO
DISTRICT	SHEET NO.
BR	7

COUNTY
BUCHANAN

JOB NO.
JNW0048

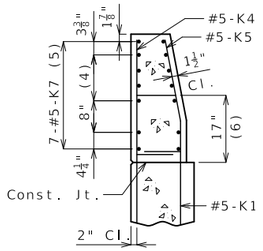
CONTRACT ID.

PROJECT NO.

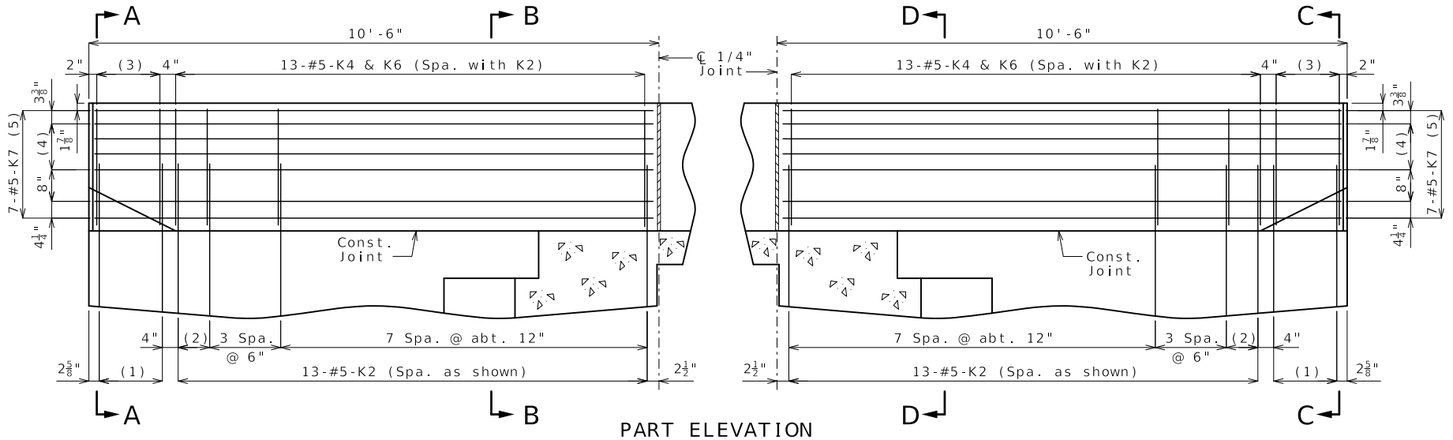
BRIDGE NO.
A25811

DESCRIPTION	DATE

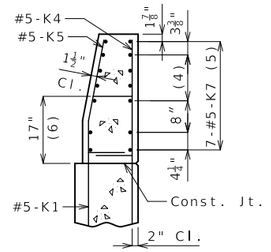
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



SECTION A-A



PART ELEVATION



SECTION C-C

(1) 5-#5-K1 @ 4" cts.

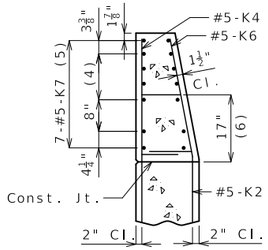
(2) 2 Spaces @ 4"

(3) 5-#5-K4 and 5-#5-K5, spaced with K1

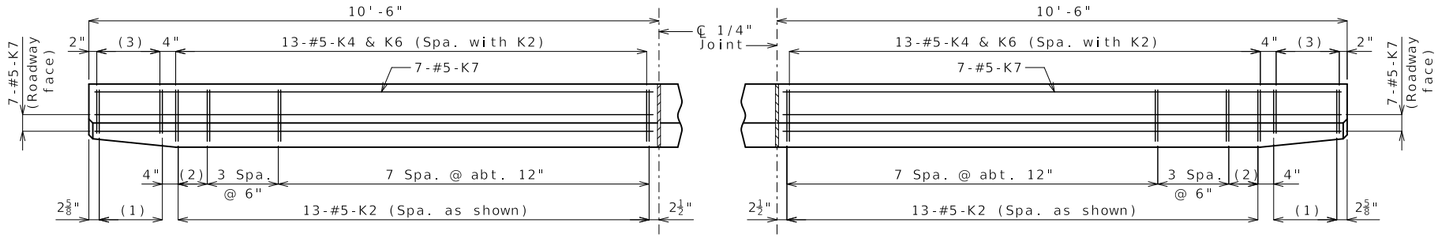
(4) 3 Spaces @ $3\frac{13}{16}$"

(5) Spaced as shown, each face

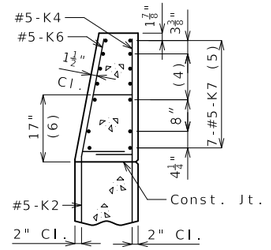
(6) To top of bar



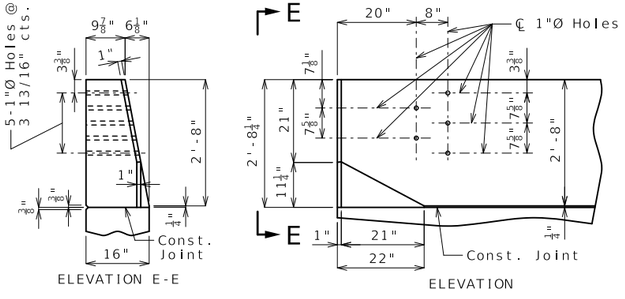
SECTION B-B

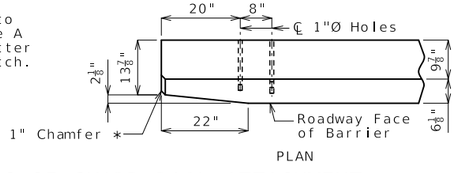


PART PLAN



SECTION D-D





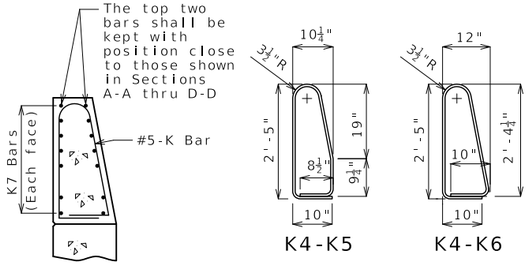
DETAILS OF GUARD RAIL ATTACHMENT

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 H Barrier.

Reinforcing Steel:

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



PERMISSIBLE ALTERNATE SHAPES

(Other K bars not shown for clarity)

The K4-K5 and K4-K6 bar combination may be furnished as one bar as shown, at the contractor's option.

All dimensions are out to out.

TYPE H BARRIER AT END BENTS

(Left barrier shown, right barrier similar)

Detailed Aug. 2026
Checked Aug. 2026

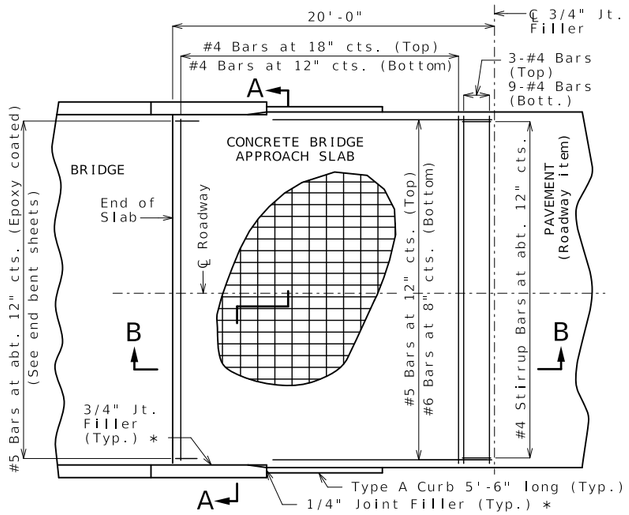
Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRENTON B. CRAWFORD
NUMBER PE-2012018053
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 9/30/2026
ROUTE: DD
STATE: MO
DISTRICT: BR
SHEET NO.: 8
COUNTY: BUCHANAN
JOB NO.: JNW0048
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A25811

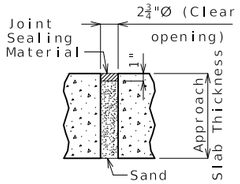
DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



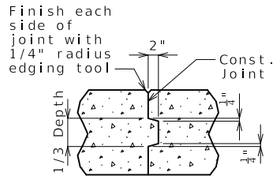
PART PLAN OF SQUARED STRUCTURE

(Skewed structure similar)

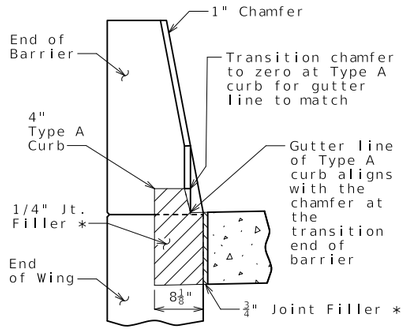


UNDERSEAL ACCESS HOLE DETAIL

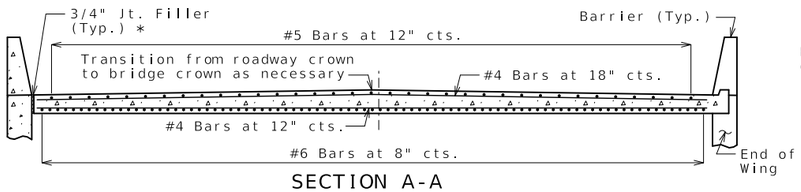
(If required)



CONSTRUCTION JOINT DETAIL

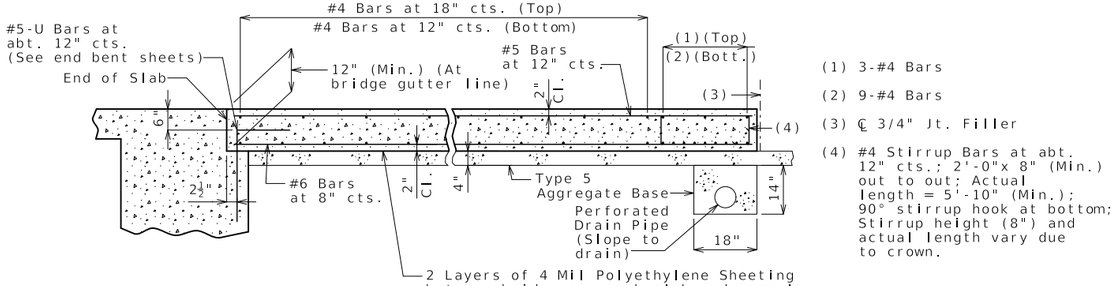


SECTION BETWEEN CURB AND BARRIER



SECTION A-A

With the approval of the engineer, the contractor may crown the bottom of the approach slab to match the crown of the roadway surface.



(1) 3-#4 Bars

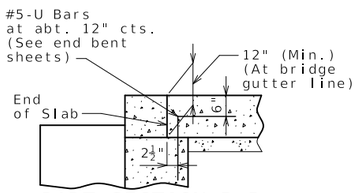
(2) 9-#4 Bars

(3) ℄ 3/4" Jt. Filler

(4) #4 Stirrup Bars at abt. 12" cts.; 2'-0"x 8" (Min.) out to out; Actual length = 5'-10" (Min.); 90° stirrup hook at bottom; Stirrup height (8") and actual length vary due to crown.

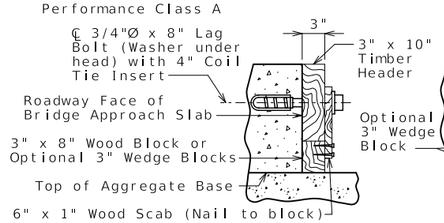
SECTION B-B

(Integral end bent)

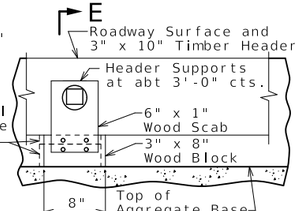


PART SECTION B-B

(Non-integral end bent)



SECTION E-E



PART ELEVATION

DETAILS OF TIMBER HEADER

Remove timber header when concrete pavement is placed.

OPTIONAL CONCRETE SLAB

Notes For Concrete Slab Only:

All concrete for the bridge approach slab shall be in accordance with Sec 503 (f'c = 4,000 psi).

The reinforcing steel in the bridge approach slab shall be epoxy coated Grade 60 with fy = 60,000 psi.

Longitudinal construction joints in bridge approach slab shall be aligned with longitudinal construction joints in bridge slab.

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

The reinforcing steel in the bridge approach slab shall be continuous. The transverse reinforcing steel may be made continuous by providing a minimum lap splice of 26 inches for #4 bars, or by mechanical bar splice.

Mechanical bar splices shall be in accordance with Sec 710.

All joint filler shall be in accordance with Sec 1057 for preformed fiber expansion joint filler except as noted.

Payment for furnishing all materials, labor and excavation necessary to construct the concrete bridge approach slab, including the timber header, underdrain, Type 5 aggregate base, joint filler, and all other appurtenances and incidental work as shown on this sheet, complete in place, will be considered completely covered by the contract unit price for Bridge Approach Slab (Minor) per square yard.

See Missouri Standard Plan 609.00 for details of Type A curb.

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

* 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.

STATE OF MISSOURI
TRENTON B. CRAWFORD
NUMBER PE-2012018053
PROFESSIONAL ENGINEER
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DATE PREPARED 9/30/2026

ROUTE	STATE
DD	MO
DISTRICT	SHEET NO.
BR	9

COUNTY BUCHANAN

JOB NO. JNW0048

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A25811

DESCRIPTION	DATE

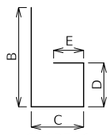
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BRIDGE APPROACH SLAB (MINOR)

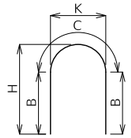
Integral end bents shown, non-integral end bent similar.

Detailed Aug. 2026
Checked Aug. 2026

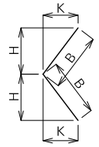
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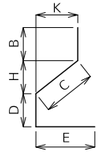
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or 6S



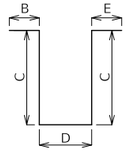
SHAPE 7



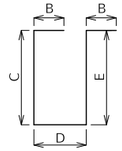
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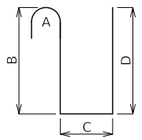
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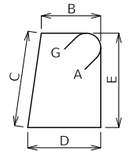
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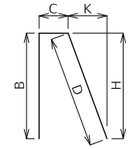
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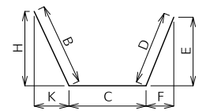
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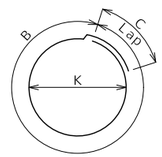
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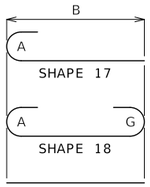
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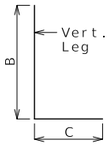
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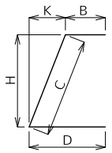
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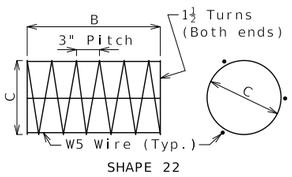
SHAPE 17
SHAPE 18
SHAPE 20



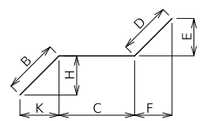
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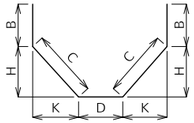
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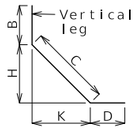
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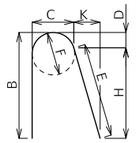
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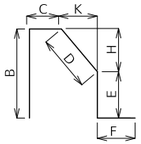
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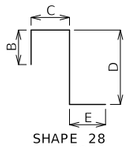
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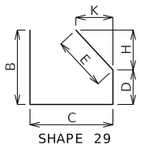
SHAPE 26



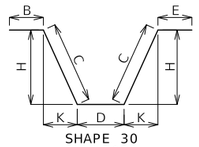
SHAPE 27S



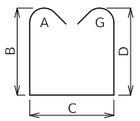
SHAPE 28
or 28S



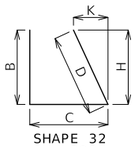
SHAPE 29
or 29S



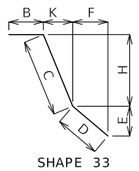
SHAPE 30
or 30S



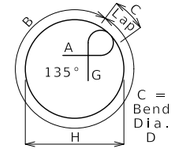
SHAPE 31S



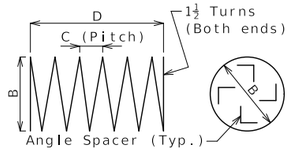
SHAPE 32
or 32S



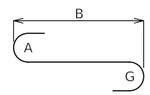
SHAPE 33
or 33S



SHAPE 34S



SHAPE 35 (1)

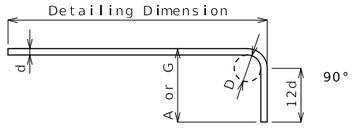


SHAPE 36

Finished Bend Diameters D and Hook Dimensions

Standard Pin Bend Shapes

Size	Case	D	A or G		J
			90°	180°	180°
#4	1	3"	8"	6"	4"
#5	1	3¾"	10"	7"	5"
#6	1	4½"	12"	8¼"	6"
#7	2	5¼"	14"	9¾"	7"
	3	7"	15"	11½"	8¾"
#8	2	6"	16"	11"	8"
	3	8"	17"	13¼"	10"
#9	1	9½"	19½"	15½"	11¾"
#10	1	10¾"	22"	17½"	13¼"
#11	1	12"	24½"	19½"	14⅞"
#14	1	18¼"	31¼"	27½"	21⅝"
#18	1	24"	41½"	36¾"	28½"

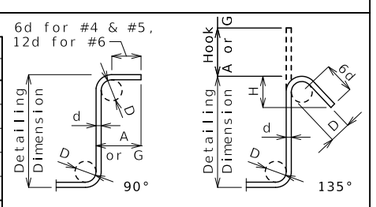


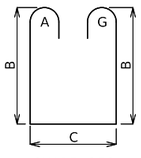
Stirrup Pin Bend Shapes (S)

Size	Case	D	A or G			H	J
			90°	135°	180°	135°	180°
#4	2	2"	4½"	4½"	5"	2⅝"	3"
	3	3"	5"	5¼"	6"	3"	4"
#5	2	2½"	5¾"	5¾"	5¾"	3⅝"	3¾"
	3	3¾"	6¼"	6½"	7"	3⅞"	5"
#6	1	4½"	12"	7¾"	8¼"	4⅝"	6"

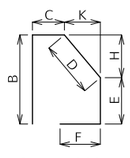
Applicable for all grades of steel.

Case 1 applies to all reinforcement. Case 2 applies to all reinforcement except for galvanized bars. Case 3 applies to galvanized bars only.





SHAPE 37S



SHAPE 38S

BENDING DIAGRAMS

All dimensions are out to out.

Shapes ending with an S shall be bent in accordance with stirrup pin bend shapes.

Unless otherwise noted, finished bending diameter D is the same for all bends of a shape.

(1) Shall be a deformed or plain spiral bar or wire.

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 Totals (Pounds)

		Substructure		Superstructure				Entire Bridge	
				Slab			Slip		
	Size	Plain	Coated	Plain	Coated	Barrier	Form	Plain	Coated
By Size	W5	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0
	5	0	0	0	29,765	6,073	466	0	36,304
	6	0	0	0	11,044	0	0	0	11,044
	7	0	0	0	0	0	0	0	0
	8	0	0	0	876	0	0	0	876
	9	0	0	0	0	0	0	0	0
	10	0	0	0	0	0	0	0	0
	11	0	0	0	0	0	0	0	0
	14	0	0	0	0	0	0	0	0
	18	0	0	0	0	0	0	0	0
By Type		0	0	0	41,685	6,073	466	0	48,224

All superstructure reinforcing steel shall be Epoxy Coated unless otherwise specified.

BENDING DIAGRAMS AND REINFORCING STEEL TOTALS

Detailed Aug. 2026
Checked Aug. 2026

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

STATE OF MISSOURI
TRENTON B. CRAWFORD
NUMBER PE-2012018053
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 9/30/2026
ROUTE DD | STATE MO
DISTRICT BR | SHEET NO. 10
COUNTY BUCHANAN
JOB NO. JNW0048
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A25811

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Bill of Reinforcing Steel

No. Req.	Size/ Mark	Location	Codes C	SH	V	Dimensions B ft in.	C ft in.	D ft in.	E ft in.	F ft in.	H ft in.	K ft in.	Nom. Length ft in.	Actual Length ft in.	Weight lb
		SUBSTRUCTURE													
		SUPERSTRUCTURE													
		END BENT 1													
16	6 F100	WING BRACE	E	15S		20.25	4 8.00	20.25	14.25	14.25	14.25	14.25	8 1	7 11	190
16	6 F101	DIAPHRAGM	E	19S		4 9.00	2 3.00						7 0	6 10	164
32	8 H100	WING	E	20		10 3.00							10 3	10 3	876
18	6 H101	DIAPHRAGM	E	20		40 5.00							40 5	40 5	1,093
32	6 H102	DIAPHRAGM	E	20		8 2.00							8 2	8 2	393
32	6 H103	WING	E	20		9 0.00							9 0	9 0	433
40	6 H104	WING	E	20		7 9.00							7 9	7 9	466
16	6 H105	DIAPHRAGM	E	20		3 0.00							3 0	3 0	72
40	6 H106	DIAPHRAGM	E	20		7 8.00							7 8	7 8	461
100	6 U100	DIAPHRAGM	E	19S		3 0.00	4 3.00						7 3	7 1	1,064
76	6 U101	DIAPHRAGM	E	10S			2 1.00	2 3.00					6 5	6 1	694
76	5 U102	DIAPHRAGM	E	10S			3 0.00	21.00					7 9	7 6	595
76	5 U103	DIAPHRAGM	E	19S		2 0.00	15.00						3 3	3 2	251
30	6 V100	DIAPHRAGM	E	20		2 1.00							2 1	2 1	94
64	6 V101	WING	E	20		6 1.00							6 1	6 1	585
		SLAB													
172	5 S1	SLAB	E	20		58 9.00							58 9	58 9	10,540
128	6 S2	SLAB	E	20		27 9.00							27 9	27 9	5,335
436	5 S3	SLAB	E	20		40 5.00							40 5	40 5	18,379
		BARRIER													
		TYPE H													
32	5 C1	SLIP FORM	E	20		12 0.00							12 0	12 0	401
8	5 C2	SLIP FORM	E	20		7 9.00							7 9	7 9	65
20	5 K1	BARRIER	E	27S		3 5.00	9.25	5.25	2 11.75		5.25	1.00	7 7	7 5	155
52	5 K2	BARRIER	E	27S		3 5.00	9.25	14.50	2 2.75		14.25	2.75	7 8	7 5	402
72	5 K4	BARRIER	E	19S		2 5.00	10.00						3 3	3 2	238
20	5 K5	BARRIER	E	38S				19.25	9.50	8.25	18.75	4.25	3 1	3 0	63
52	5 K6	BARRIER	E	21S			2 5.00	10.00			2 4.25	6.00	3 3	3 2	172
56	5 K7	BARRIER	E	20		10 3.00							10 3	10 3	599
232	5 R1	BARRIER	E	14S		2 5.00	6.50	2 5.50			2 5.00	5.50	5 5	5 3	1,270
232	5 R2	BARRIER	E	19S		19.50	9.50						2 5	2 4	565
232	5 R3	BARRIER	E	27S			9.50	15.25	4.00	12.00	15.00	3.00	3 5	3 3	786
32	5 R4	BARRIER	E	20		32 6.00							32 6	32 6	1,085
32	5 R5	BARRIER	E	20		11 9.00							11 9	11 9	392
16	5 R6	BARRIER	E	20		20 9.00							20 9	20 9	346

Bill of Reinforcing Steel

No. Req.	Size/ Mark	Location	Codes C	SH	V	Dimensions B ft in.	C ft in.	D ft in.	E ft in.	F ft in.	H ft in.	K ft in.	Nom. Length ft in.	Actual Length ft in.	Weight lb

Nominal lengths are based on out to out dimensions shown in bending diagrams and are listed to the nearest inch for fabricator's use. Actual lengths are measured along centerline bar to the nearest inch. Weights are based on actual lengths.

For bending diagrams and steel reinforcing totals, see Sheet No. 10.

Reinforcing steel (ASTM A615 Grade 60) fy = 60,000 psi

Codes: C = Required coatings, where E = Epoxy Coated and G = Galvanized.

SH = Required shape, see bending diagrams.

V = Sets of varied bars and number of bars of each length. Bar dimensions vary in equal increments between dimensions shown on this line and the following line and the actual length dimension shown on this line and the following line vary by the specified increment.

Detailed Aug. 2026
Checked Aug. 2026

BILL OF REINFORCING STEEL

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

STATE OF MISSOURI
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PROFESSIONAL ENGINEER

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