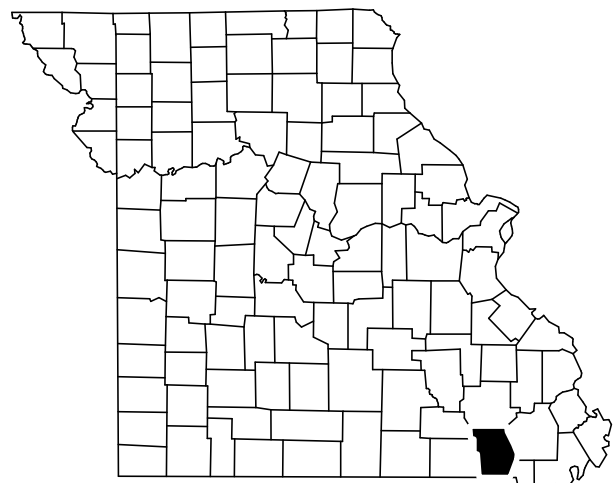


DESIGN DESIGNATION

A.A.D.T. - 2027 = 6,584
A.A.D.T. - 2037 = 6,921
D.H.V. = 7.41%
T = 5.02%
V = 45 M.P.H.
D = 49.1%

FUNCTIONAL CLASSIFICATION- PRINCIPAL ARTERIAL

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
PLANS FOR PROPOSED
STATE HIGHWAY
BUTLER COUNTY

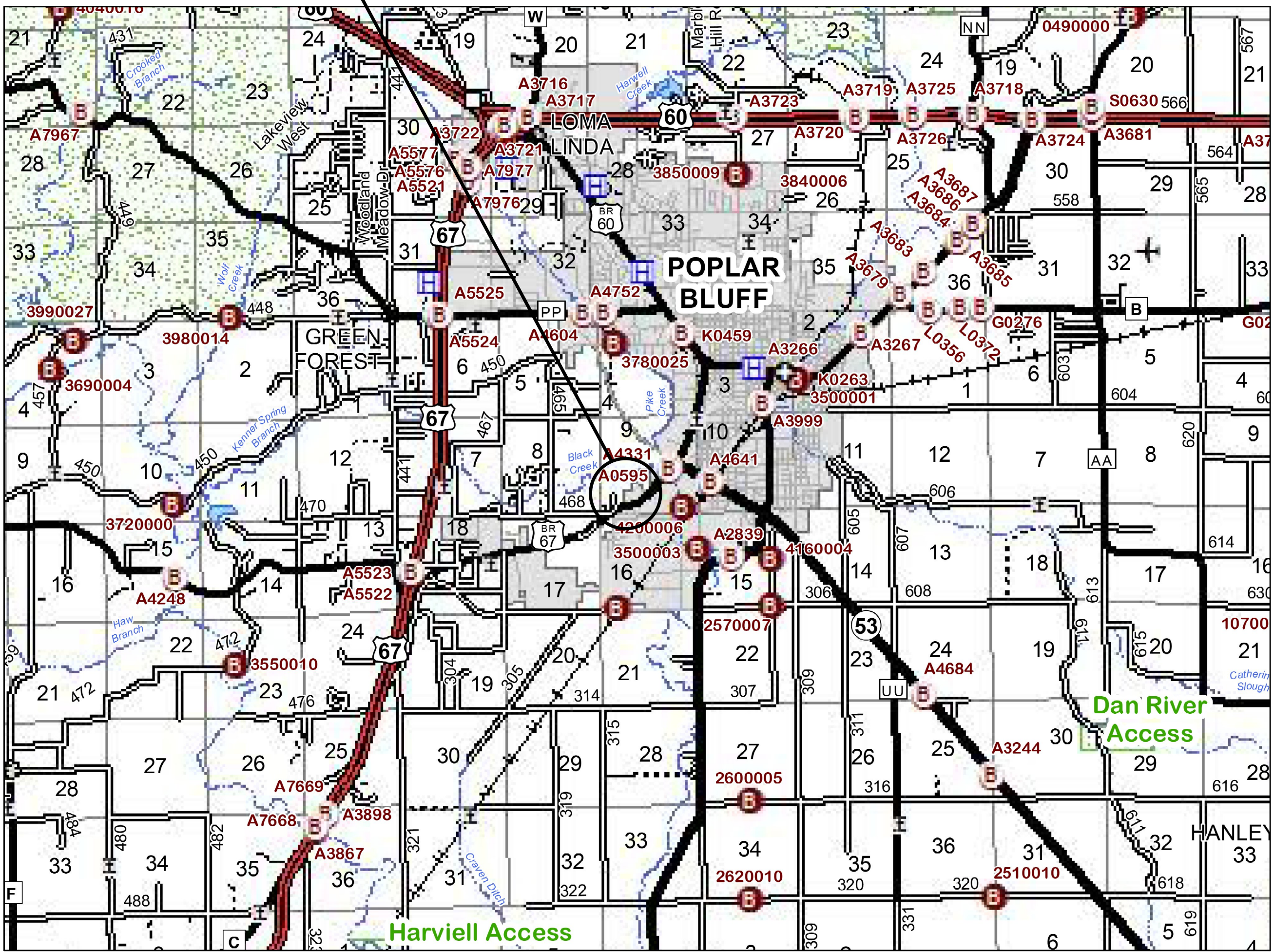


KEY MAP
LOCATION OF BUTLER COUNTY

PROJECT LOCATION
BRIDGE REDECK



T 25 N
T 24 N



R 5 E | R 6 E

R 6 E | R 7 E

CONVENTIONAL SYMBOLS
(USED IN PLANS)

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

NOTE: DASHED OR OPEN SYMBOLS INDICATE
EXISTING FEATURES

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
REFERENCE POINTS (RP)-----	5
SPECIAL SHEETS (SS)-----	6
TRAFFIC CONTROL SHEETS (TC)-----	7-8
BRIDGE DRAWINGS (B)	
A05951-----	1-15



Seiji Shimbo

DATE PREPARED
8/5/2026

ROUTE STATE

BU67 MO

DISTRICT SHEET NO.

SE 1

COUNTY

BUTLER

JOB NO.

JSE0106

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

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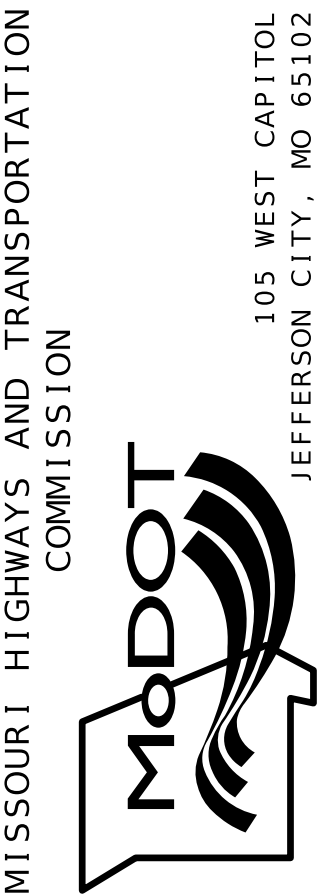
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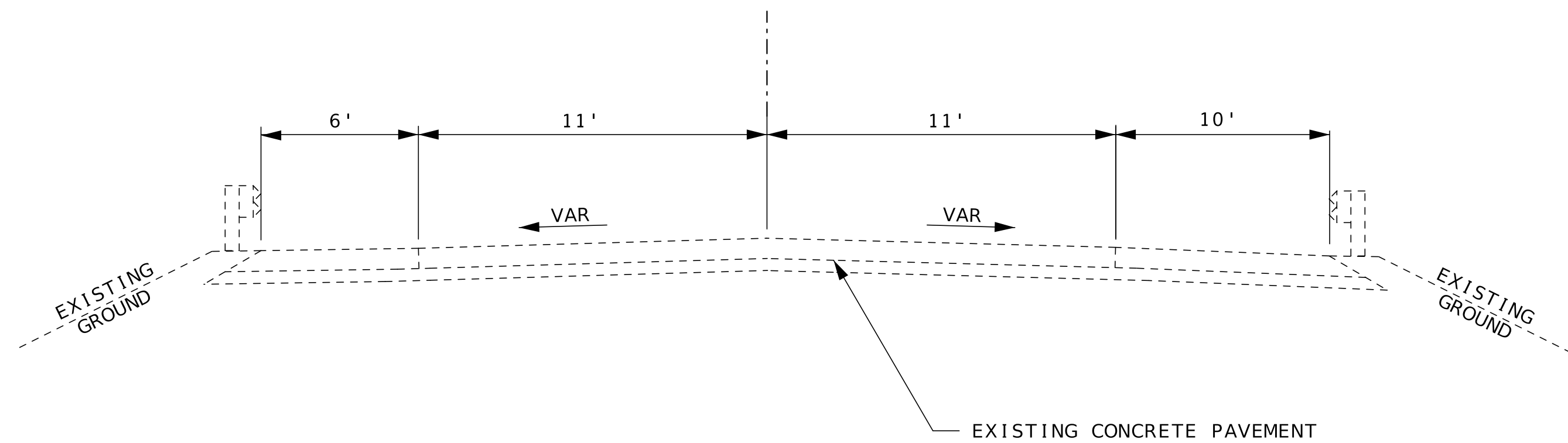
DATE

LENGTH OF PROJECT

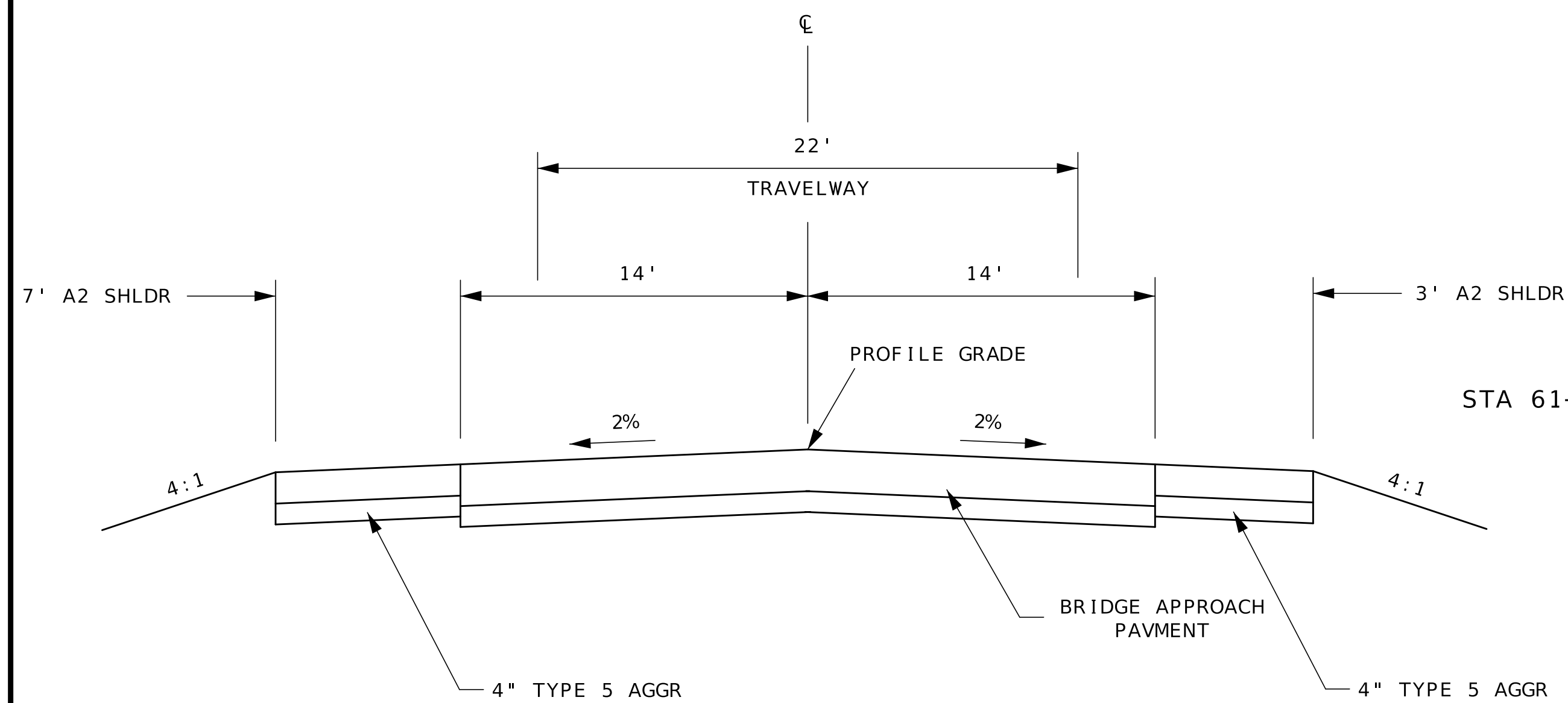
BEGINNING OF PROJECT	STA 60+63.90
END OF PROJECT	STA 63+97.50
APPARENT LENGTH	333.60 FEET
EQUATIONS AND EXCEPTIONS:	

TOTAL CORRECTIONS	0.00 FEET
NET LENGTH OF PROJECT	333.60 FEET
STATE LENGTH	0.063 MILES
FOR INFORMATION ONLY ESTIMATED DISTURBED ACRES	0.5 ACRES

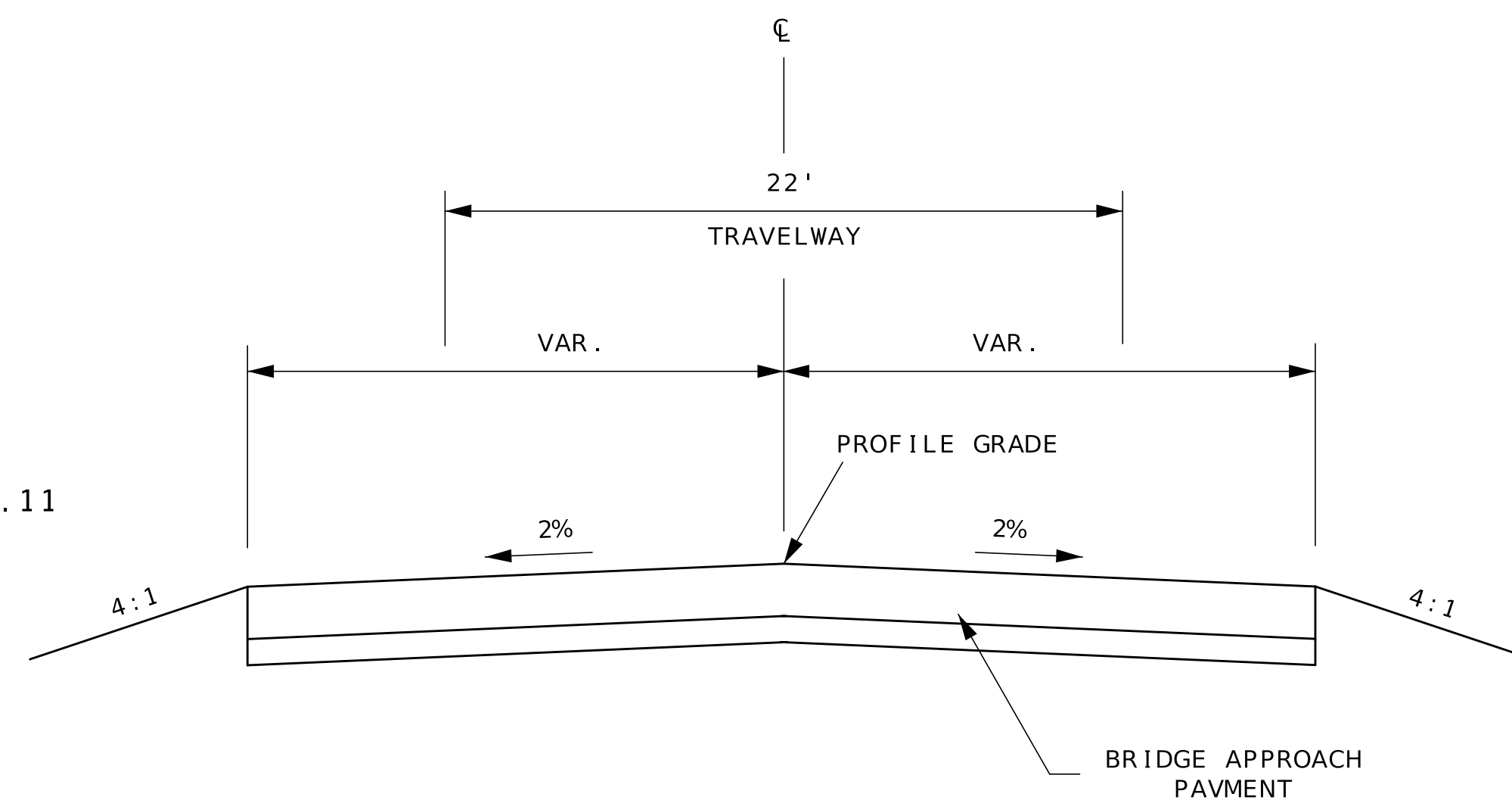




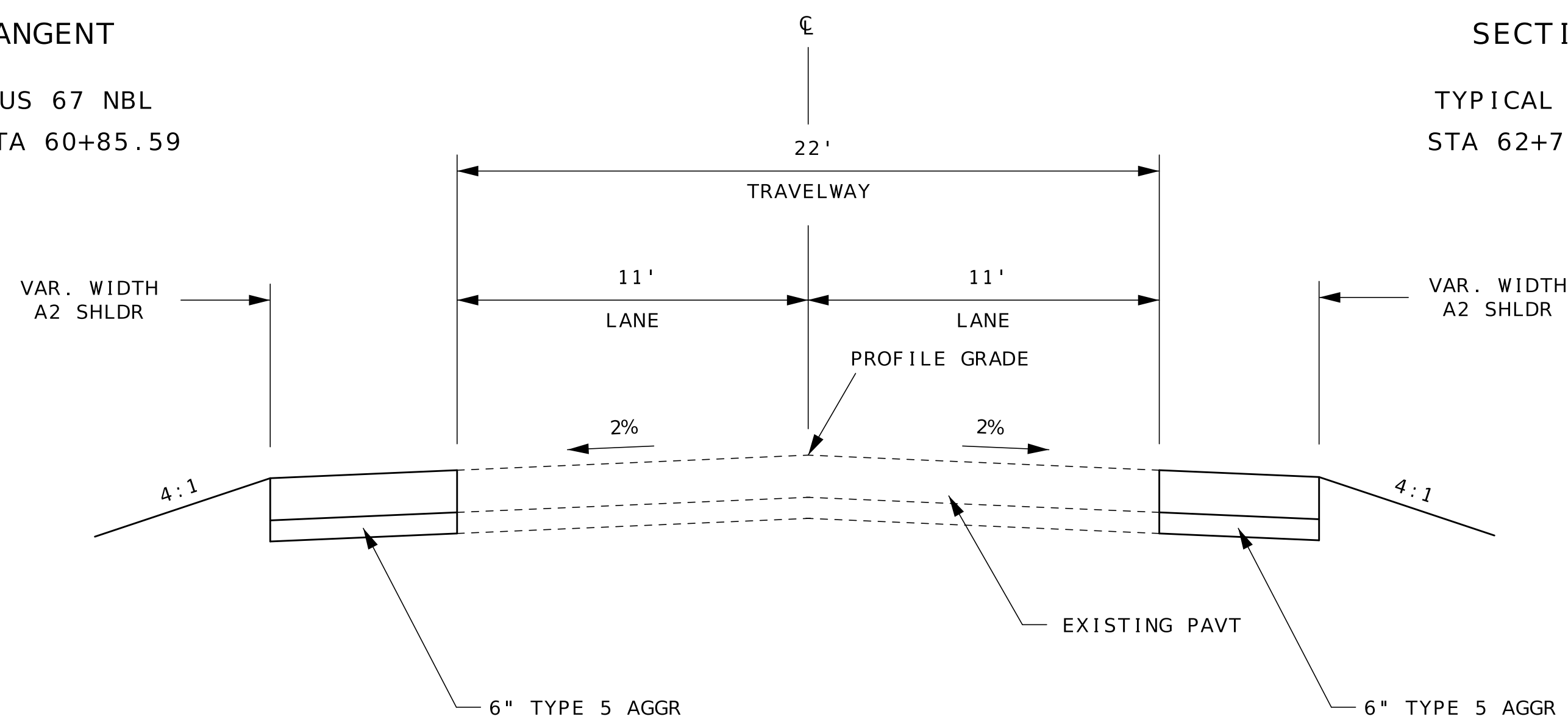
EXISTING TYPICAL SECTION



SECTION ON TANGENT
TYPICAL SECTION BUS 67 NBL
STA 60+63.90 TO STA 60+85.59



SECTION ON TANGENT
TYPICAL SECTION BUS 67 NBL
STA 62+72.11 TO STA 62+95.05



SECTION ON TANGENT
TYPICAL SECTION BUS 67 NBL
STA 62+95.05 TO STA 63+97.50

NOTE:
DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.



Seiji Shimbo
09/07/2026 2:41:03 PM
SEIJI SHIMBO - CIVIL
MO-PE-2017019046

DATE PREPARED
8/7/2026

ROUTE BU67	STATE MO
DISTRICT SE	SHEET NO. 2

COUNTY
BUTLER

JOB NO.
JSE0106

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)

MoDOT

TYPICAL SECTION
SHEET 1 OF 1

REMOVAL OF IMPROVEMENTS	
DESCRIPTION	REMARKS
260' OF GUARDRAIL	INCLUDES CET, TRANSITION, AND ANCHOR
200 SY CONC PAVEMENT	SAW CUTS AT NOT DIRECT PAY
LUMP SUM ONE	

MOBILIZATION
LUMP SUM ONE

CONTRACTOR FURNISHED SURVEYING AND STAKING
LUMP SUM ONE

CLEARING AND GRUBBING
NO DIRECT PAY FOR CLEARING AND GRUBBING

TYPE 2 ROCK BLANKET								
SHEET	SECTION	DEPTH (FT)	AVG WIDTH (FT)	LENGTH (FT)	TYPE 2 ROCK BLANKET		GEOTEXTILE FABRIC (SY)	REMARKS
					FURNISH (CY)	PLACE (CY)		
6	A-A TO B-B	2	40.5	43	129.0	129.0	236.5	
6	B-B TO C-C	2	55.5	10	41.1	41.1	69.4	
6	C-C TO D-D	2	50.0	44	163.0	163.0	278.7	
6	D-D TO E-E	2	45.5	20	67.4	67.4	116.7	
6	E-E TO F-F	2	35.5	43	113.1	113.1	212.6	
6	G-G TO H-H	2	35.5	43	113.1	113.1	212.6	
6	H-H TO I-I	2	44.5	20	65.9	65.9	118.9	
6	I-I TO J-J	2	48.0	30	106.7	106.7	183.3	
6	J-J TO K-K	2	59.0	20	87.4	87.4	146.7	
6	K-K TO L-L	2	52.0	43	165.6	165.6	281.9	
				TOTAL	1053	1053	1858	

CONCRETE APPROACH PAVEMENT AND A2 SHOULDER									
SHEET	STA	STA	LOC	LENGTH (FT)	WIDTH (FT)	CONCRETE APPROACH PAVEMENT (SY)	4" TYPE 5 AGGREGATE (SY)	A2 SHOULDER (SY)	REMARKS
4	60+63.90	60+85.59	LT BUS 67	21.69	14.00	40.45			
4	60+63.90	60+85.59	RT BUS 67	21.69	14.00	26.98			
4	60+63.90	61+05.59	LT BUS 67	41.69	VAR		41.6	41.63	
4	60+63.90	61+05.59	RT BUS 67	41.69	VAR		13.4	13.39	
4	62+72.11	62+95.05	LT BUS 67	22.94	14.00	29.97			
4	62+72.11	62+95.05	RT BUS 67	22.94	14.00	41.97			
4	62+95.05	63+97.50	LT BUS 67	102.45	VAR		79.0	79.01	
4	62+95.05	63+94.00	RT BUS 67	98.95	VAR		53.8	53.81	
					TOTAL	139.4	188	187.9	

GUARDRAIL								
SHEET	STA	STA	LOC	MGS GUARDRAIL FT	MGS BRIDGE APPROACH TRANSITION SECTION EA	TYPE A CRASHWORTHY END TERMINAL (MASH) EA	MODIFIED SHAPING SLOPES CLASS III (100F)	REMARKS
4	62+60.00	63+97.50	LT	50.0	1	1	1.4	
4	64+04.50		LT				0.5	DRIVEWAY SHIFT
4	62+44.00	63+94.00	RT	62.5	1	1	1.5	
			TOTAL	113	2	2	3	

TEMPORARY PAVEMENT MARKING				
	PREFORMED SHORT TERM MARKING TAPE YELLOW (LF)	PREFORMED SHORT TERM MARKING TAPE WHITE (LF)	TEMPORARY PAVEMENT MARKING REMOVAL (LF)	REMARKS
SHEET				
8	1275	325	1600	STAGE 1
8	325	1275	1600	STAGE 2
TOTAL	1600	1600	3200	

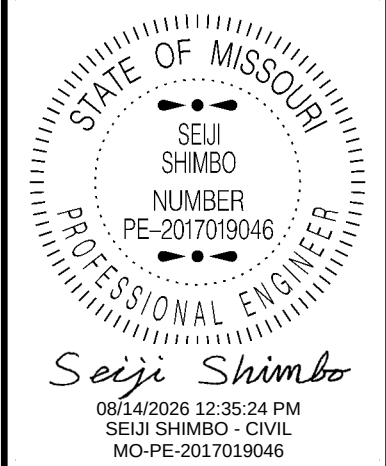
POROUS BACKFILL				
SHEET	STA	LOC	POROUS BACKFILL (CY)	REMARKS
4	61+05.59	BUS 67 NBL	42.4	
4	62+52.11	BUS 67 NBL	29.4	
		TOTAL	72	
POROUS BACKFILL SHALL BE GRADES 3,4,OR 5.				

GRAVEL A OR CRUSHED STONE B				
SHEET	STA	LOC	GRAVEL A CRUSHED STONE B (TON)	REMARKS
4	94+04.50	LT	10.0	DRIVEWAY SHIFT
			10	

PAVEMENT MARKING					
	CLASS 1 HIGH BUILD PAINT TYPE P BEADS			PAVEMENT MARKING REMOVAL (LF)	REMARKS
	4" INT WHITE (LF)	4" SOLID WHITE (LF)	4" SOLID YELLOW (LF)		
SHEET					
8	320.0			855	CENTERLINE
8		1275	1275.0		EDGE LINE
TOTAL	1595		1275	855	

TEMPORARY EROSION CONTROL						
SHEET	SILT FENCE (LF)	ROCK DITCH CHECK (LF)	TYPE C BERM (LF)	SEDIMENT REMOAVL (CY)	TEMPORARY SEEDING (ACRE)	MULCHING (ACRE)
6	300	40	250	7.0	0.5	0.5
TOTAL	300	40	250	7	0.5	0.5

SEEDING AND MULCH						
SHEET	STA	STA	LOC	SEEDING COOL SEASON GRASSES (ACRE)	MULCHING (ACRE)	REMARKS
4	60+78.01	63+97.50	LT	0.15	0.15	
4	60+78.01	63+97.50	RT	0.15	0.15	
			TOTAL	1	1	
NOTE: SEEDING ACRES FOR INFORMATION ONLY						



DATE PREPARED 8/14/2026	
ROUTE BU67	STATE MO
DISTRICT SE	SHEET NO. 3
COUNTY BUTLER	
JOB NO. JSE0106	
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)								

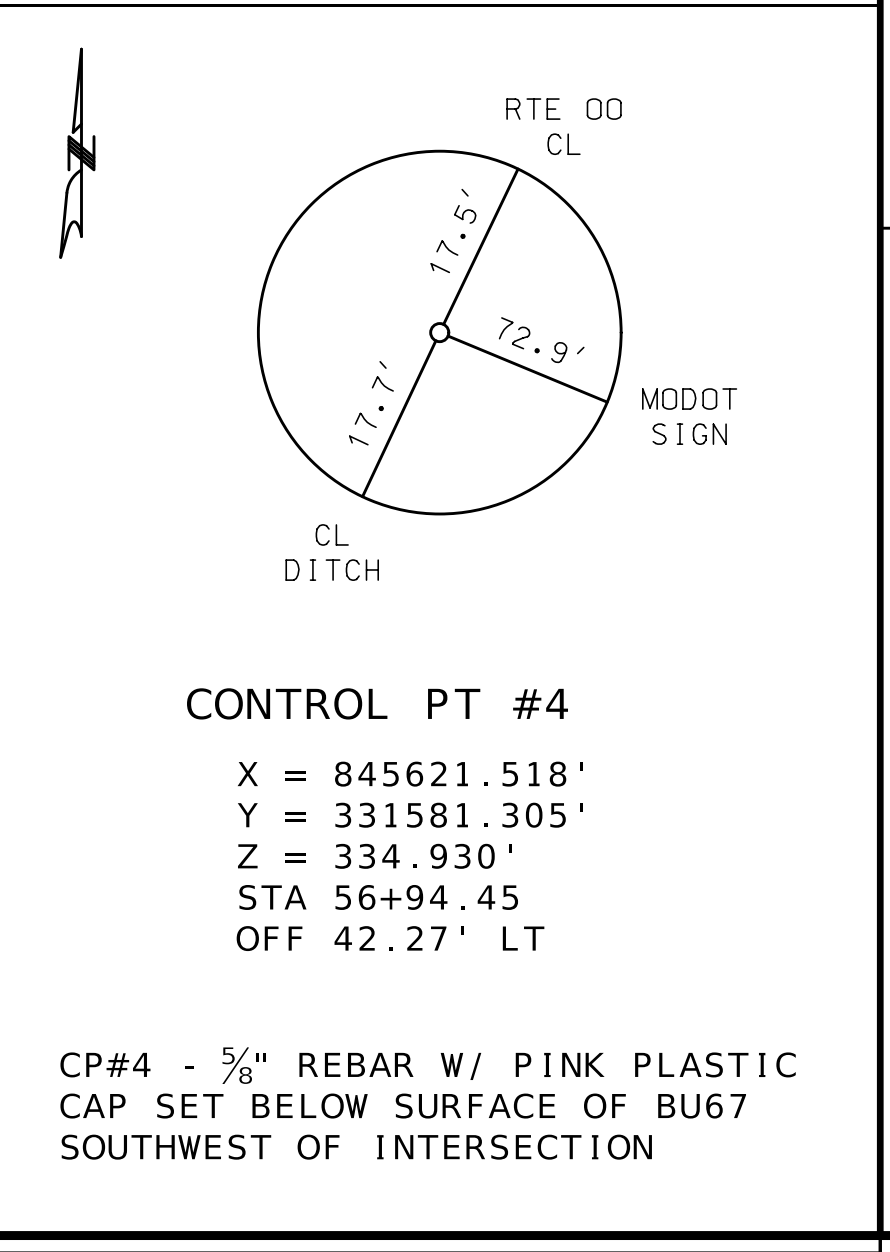
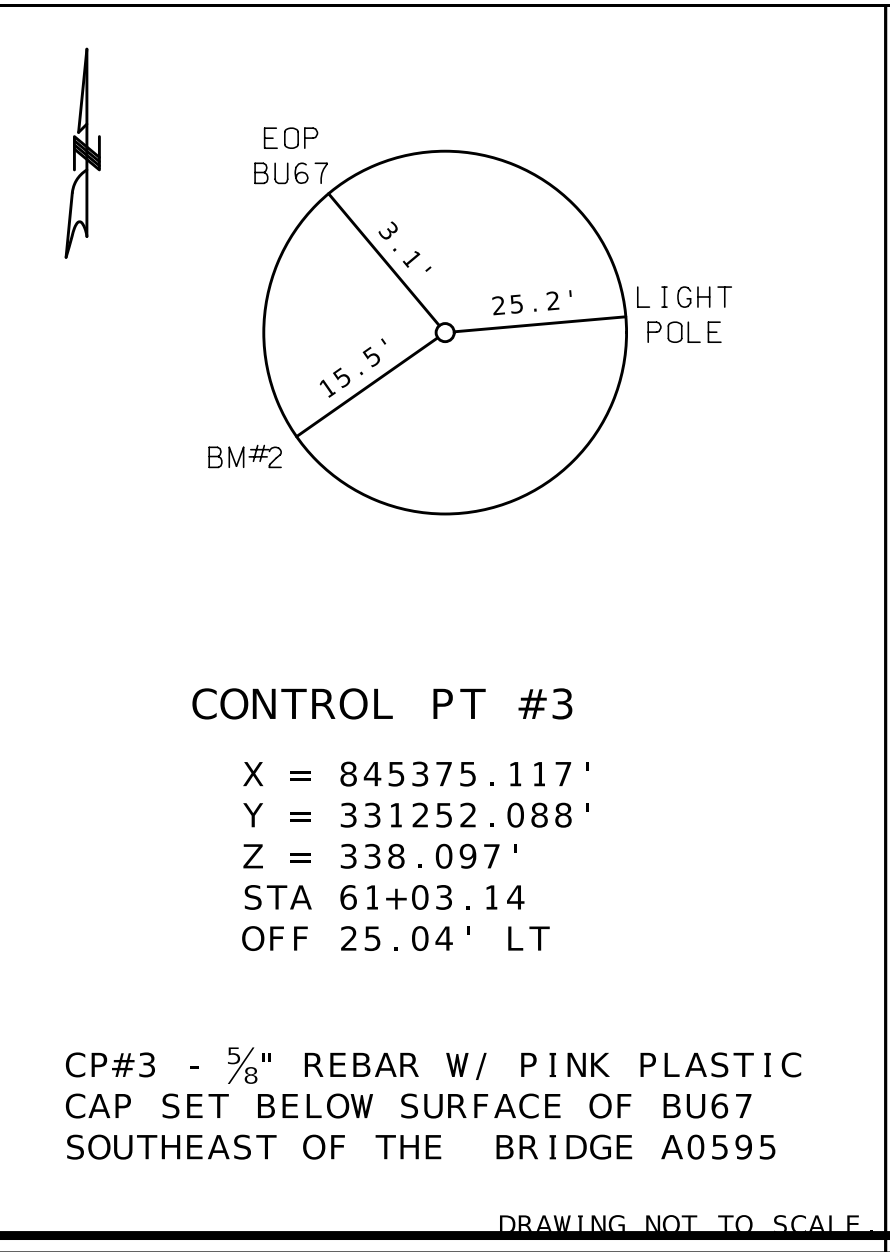
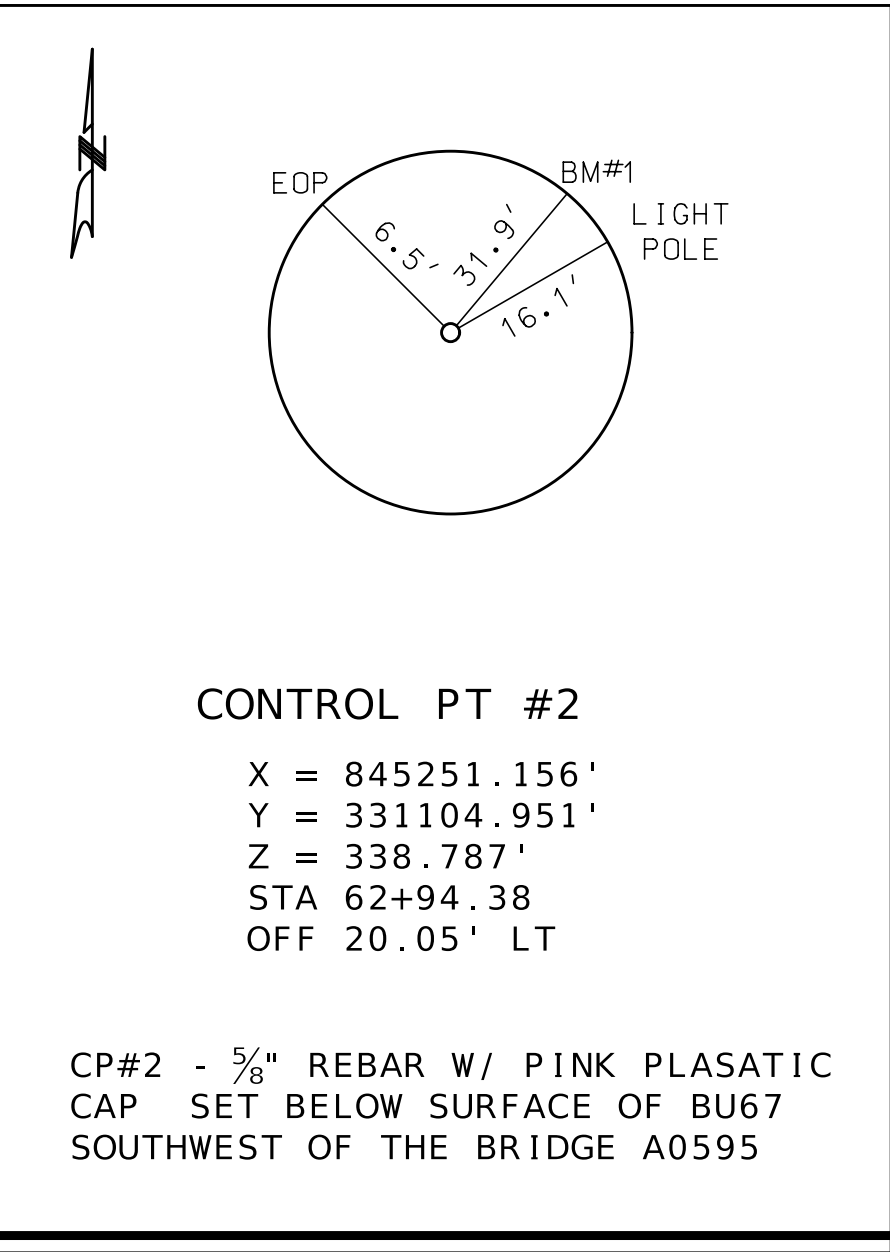
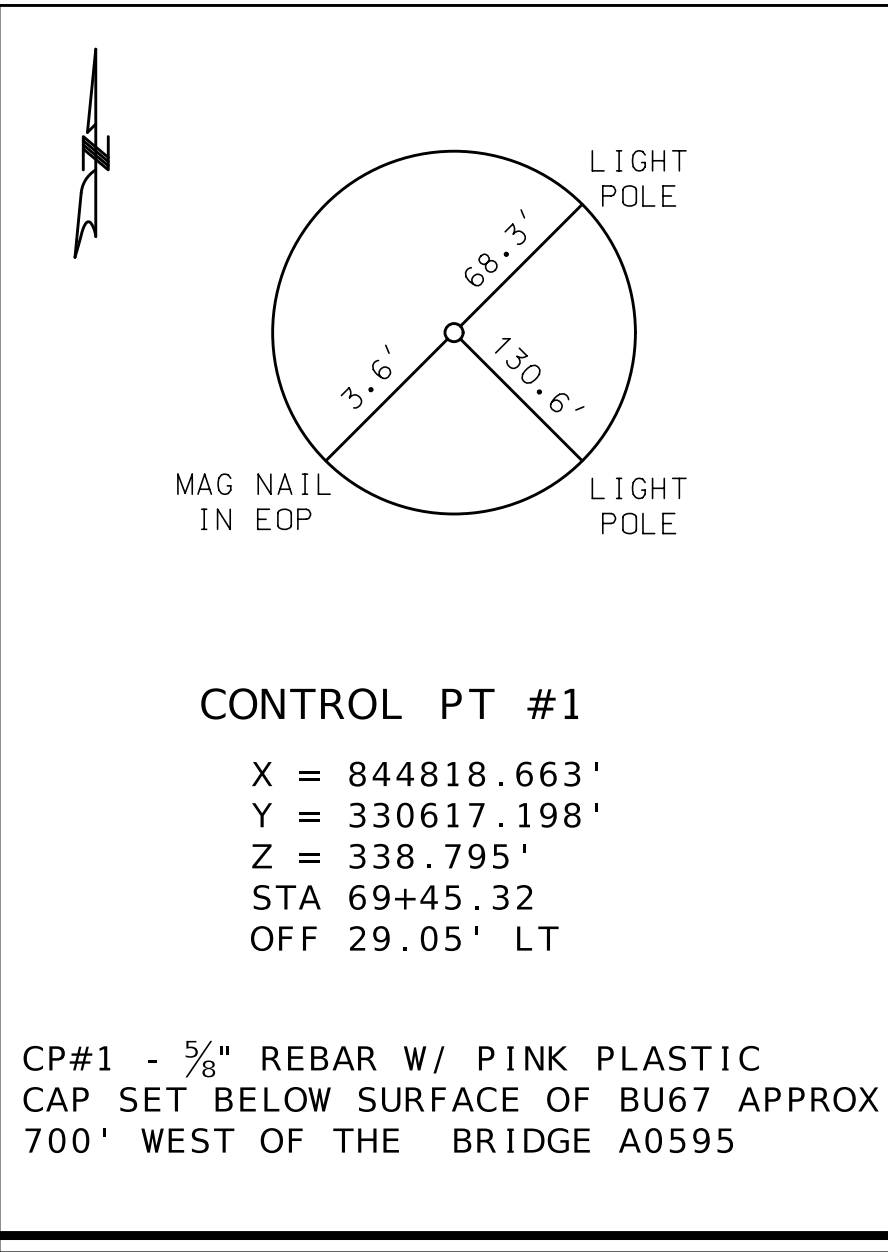
SUMMARY OF QUANTITIES SHEET 1 OF 2

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION										SUMMARY OF QUANTITIES SHEET 2 OF 2																													
STATE OF MISSOURI SEIJI SHIMBO NUMBER PE-2017019046 PROFESSIONAL ENGINEER Seiji Shimbo 06/07/2026 2:44:12 PM SEIJI SHIMBO - CIVIL MO-PE-2017019046 DATE PREPARED 8/5/2026										ROUTE STATE BU67 MO DISTRICT SHEET NO. SE 3 COUNTY BUTLER JOB NO. JSE0106 CONTRACT ID. PROJECT NO. BRIDGE NO.																													
EFFECTIVE: 07-01-2025																																							
SIGN SIZE AREA QTY TOTAL RELOC TOTAL SIGN										SIGN SIZE AREA QTY TOTAL RELOC TOTAL SIGN										ITEM TOTAL										DESCRIPTION									
SIGN IN. SQ.FT. EACH SQ.FT. EACH SQ.FT. NO.										SIGN IN. SQ.FT. EACH SQ.FT. EACH SQ.FT. NO.										NUMBER QTY										DESCRIPTION									
WARNING SIGNS										GUIDE SIGNS										6122008 1 IMPACT ATTENUATOR 40 MPH (SAND BARRELS)																			
WO1-1L 48X48 16.00										E05-1 36X48 12.00										6122009 1 IMPACT ATTENUATOR 45 MPH (SAND BARRELS)																			
WO1-1R 48X48 16.00										E05-2 48X36 12.00										6122010 IMPACT ATTENUATOR 50 MPH (SAND BARRELS)																			
WO1-2L 48X48 16.00										E05-2a 48X36 12.00										6122012 IMPACT ATTENUATOR 55 MPH (SAND BARRELS)																			
WO1-2R 48X48 16.00										GO20-1 60X24 10.00										6122014 IMPACT ATTENUATOR 60 MPH (SAND BARRELS)																			
WO1-3L 48X48 16.00										GO20-2 48X24 8.00										6122017 IMPACT ATTENUATOR 65 MPH (SAND BARRELS)																			
WO1-3R 48X48 16.00										GO20-4 36X18 4.50										6122019 IMPACT ATTENUATOR 70 MPH (SAND BARRELS)																			
WO1-4L 48X48 16.00										GO20-4a 42X30 8.75										6122020 2 REPLACEMENT SAND BARREL																			
WO1-4R 48X48 16.00										GO20-4a 18X12 1.50										6122030 1 IMPACT ATTENUATOR (RELOCATION)																			
WO1-4bL 48X48 16.00										GO20-5aP 36X24 6.00										6122040 WORK ZONE CRASH CUSHION (NARROW)																			
WO1-4bR 48X48 16.00										MO4-8a 24X18 3.00										6122041 WORK ZONE CRASH CUSHION (RELOCATION)																			
WO1-4cL 48X48 16.00										MO4-9L 48X36 12.00										6123001 1 TRUCK MOUNTED ATTENUATOR (TMA)																			
WO1-4cR 48X48 16.00										MO4-9R 48X36 12.00										6161012 BUOYS (BOATS KEEP OUT)																			
WO1-6 60X30 12.50										MO4-9P 48X12 4.00										6161013 BUOYS (NO WAKE)																			
WO1-6a 72X36 18.00										MO4-10L 48X18 6.00										6161014 SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)																			
WO1-7 60X30 12.50										MO4-10R 48X18 6.00										6161020 CHANNELIZER (DRUM-LIKE)																			
WO1-7a 72X36 18.00																				6161022 CHANNELIZER (CONE)																			
WO1-8 18X24 3.00										REGULATORY SIGNS										6161025 25 CHANNELIZER (TRIM-LINE)																			
WO1-8a 30X36 7.50										R1-1 48X48 13.25										6161026 CHANNELIZER (VERTICAL PANEL)																			
WO3-1 48X48 16.00										R1-2 48TRI. 6.93										6161030 TYPE 3 MOVEABLE BARRICADE																			
WO3-2 48X48 16.00										R1-2a 36X36 9.00										6161033 13 DIRECTION INDICATOR BARRICADE																			
WO3-3 48X48 16.00										R1-3P 30X12 2.50										6161040 1 FLASHING ARROW PANEL																			
WO3-4 48X48 16.00										R2-1 36X48 12.00 2 24.00										6161047 TYPE 3 OBJECT MARKER																			
WO3-5 48X48 16.00										R3-1 48X48 16.00										6161055 SEQUENTIAL FLASHING WARNING LIGHT																			
WO4-1L 48X48 16.00										R3-2 48X48 16.00										6161070 TUBULAR MARKER																			
WO4-1R 48X48 16.00										R3-3 36X36 9.00										6161095 RADAR SPEED ADVISORY SYSTEM																			
WO4-1aL 48X48 16.00										R3-4 48X48 16.00										6161096 CHANGEABLE MESSAGE SIGN, COMMISSION FURNISHED/RETAINED																			
WO4-1aR 48X48 16.00										R3-7L 30X30 6.25										6161098A CHANGEABLE MESSAGE SIGN WITHOUT COMM. INTERFACE, CONTRACTOR FURNISHED/RETAINED																			
WO5-1 48X48 16.00										R3-7R 30X30 6.25										6161099 CHANGEABLE MESSAGE SIGN WITH COMM. INTERFACE, CONTRACTOR FURNISHED/RETAINED																			
WO5-3 48X48 16.00										R4-1 36X48 12.00										6162000A WORK ZONE TRAFFIC SIGNAL SYSTEM																			
WO5-5 48X48 16.00										R4-2 36X48 12.00										6162002 TEMPORARY LONG-TERM RUMBLE STRIPS																			
WO6-1 48X48 16.00										R4-7a 36X48 12.00										6173600D TEMPORARY TRAFFIC BARRIER, CONTRACTOR FURNISHED/RETAINED																			
WO6-2 48X48 16.00										R4-8a 36X48 12.00										6173700B 500 TEMP. TRAFFIC BARRIER ANCHORED, CONTRACTOR FURNISHED/RETAINED																			
WO6-3 48X48 16.00										R5-1 30X30 6.25										6173706 TEMP. TRAFFIC BARRIER STIFFNESS TRANSITION, CONTRACTOR FURNISHED/RETAINED																			
WO7-3a 30X24 5.00										R5-1a 36X24 6.00										6174000A TEMP. TRAFFIC BARRIER HEIGHT TRANSITION, CONTRACTOR FURNISHED/RETAINED																			
WO8-1 48X48 16.00										R6-1L 54X18 6.75										6175010A 500 RELOCATING TEMPORARY TRAFFIC BARRIER																			
WO8-2 48X48 16.00										R6-1R 54X18 6.75										6175011B RELOCATING TEMP. TRAFFIC BARRIER ANCHORED																			
WO8-3 48X48 16.00										R6-2L 24X30 5.00										6175013 RELOCATING TEMP. TRAFFIC BARRIER STIFFNESS																			
WO8-4 48X48 16.00										R6-2R 24X30 5.00										6175020A RELOCATING TEMP. TRAFFIC BARRIER HEIGHT																			
WO8-5 48X48 16.00										R9-9 24X12 2.00										6208064A TEMPORARY RAISED PAVEMENT MARKER																			
WO8-6 48X48 16.00										R9-11L 24X18 3.00										9029400 TEMPORARY TRAFFIC SIGNALS																			
WO8-6c 48X48 16.00										R9-11R 24X18 3.00										9029401 TEMPORARY TRAFFIC SIGNALS AND LIGHTING																			
WO8-7 36X36 9.00										R10-6 24X36 6.00																													
WO8-7a 36X36 9.00										R11-2 48X30 10.00																													
WO8-9 48X48 16.00										R11-3a 60X30 12.50																													
WO8-11 48X48 16.00										R11-4 60X30 12.50																													
WO8-12 48X48 16.00										CONST-3A 60X48 20.00																													
WO8-15 48X48 16.00										CONST-3X 56X12 4.67																													
WO8-15P 30X24 5.00																																							
WO8-17L 48X48 16.00																																							
WO8-17R 48X48 16.00																																							
WO8-17P 30X24 5.00																																							
W10-1 42RND. 9.62																																							
WO12-1 24X24 4.00																																							
WO12-2 48X48 16.00																																							
WO12-2x 24X18 3.00																																							
WO12-2a 84X24 14.00																																							
WO12-4 120X60 50.00																																							
WO12-5 120X60 50.00																																							
WO13-1 30X30 6.25																																							
WO16-2 30X24 5.00																																							
WO16-3 30X24 5.00																																							
WO20-1 48X48 16.00 2 32.00																																							
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WO20-3 48X48 16.00																																							
WO20-4 48X48 16.00																																							
WO20-5 48X48 16.00 2 32.00																																							
WO20-5a 48X48 16.00																																							
WO20-6a 48X48 16.00																																							
WO20-7a 48X48 16.00																																							
WO21-2 36X36 9.00																																							
WO21-5 48X48 16.00 1 16.00																																							
WO22-1 48X48 16.00																																							
WO22-2 42X36 10.50																																							
WO22-3 42X36 10.50																																							
GO22-1 21X15 2.19																																							

COORDINATE POINT LISTING								
SHEET NO	STATION	LOCATION	OFFSET (USFT)	MODIFIED STATE PLANE (GROUND)			DESCRIPTION	GPK POINT ID
				NORTHING (US SURVEY FT)	EASTING (US SURVEY FT)	ELEVATION (US SURVEY FT)		
PROJECT CONTROL POINTS								
4	69+45.32	CL NBL BUS 67	29.05' LT	330,617.198	844,818.663	338.795	5/8" REBAR WITH PINK PLASTIC CAP SET BELOW SURFACE SOUTH OF RTE. 67 APPROX. 700 FEET WEST OF BRIDGE A0595	CP100
4	62+94.38	CL NBL BUS 67	20.05' LT	331,104.951	845,251.156	338.787	5/8" REBAR WITH PINK PLASTIC CAP SET BELOW SURFACE SOUTHWEST OF BRIDGE A0595	CP101
4	61+03.14	CL NBL BUS 67	25.04' LT	331,252.088	845,375.117	338.097	5/8" REBAR WITH PINK PLASTIC CAP SET BELOW SURFACE SOUTHEAST OF BRIDGE A0595	CP102
4	56+94.45	CL NBL BUS 67	42.27' LT	331,581.305	845,621.518	334.930	5/8" REBAR WITH PINK PLASTIC CAP SET BELOW SURFACE SOUTHWEST OF RTE. 53 & RTE. 67 INTERSECTION	CP103
ALIGNMENTS								
4	56+00.00	CL NBL BUS 67	0	331,709.29	845,702.96		BEG CL NBL BUS 67 CHAIN	
4	58+17.94	CL NBL BUS 67	0	331,526.33	845,584.53		PC	
4	61+45.39	CL NBL BUS 67	0	331,251.45	845,406.59		PI	
4	64+71.24	CL NBL BUS 67	0	331,010.87	845,184.46		PT	
4	70+00.10	CL NBL BUS 67	0	330,622.30	844,825.69		END CL NBL BUS 67 CHAIN	

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	MO SPC	
HORIZONTAL DATUM	NAD83 (2011)	
VERTICAL DATUM	NAVD88	
GEOID MODEL	2018	
ELEVATIONS DETERMINED BY	DIFFERENTIAL LEVELING	
PROJECT PROJECTION FACTOR	1.00007758	
REFERENCE CONTROL INFORMATION		
COORDINATE SYSTEM	MO SPC	
CONTROL STATION	MODP	
DESIGNATION	MODOT DONIPHAN CORS ARP	
CORS_ID	MODP	
PID	DP2873	
LATITUDE	363842.39196	
LONGITUDE	904752.77641	
NORTHING (M)	90112.7650	
EASTING (M)	223354.0820	
ZONE	EAST	
PROJECT AVERAGE GRID FACTOR	0.99992242	
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 #___ N 599022.856 X 0.99992242 = N 598976.384 E 1016377.682 X 0.99992242 = E 1016298.831		
LINEAR UNIT CONVERSION		
1 METER = 3.280833333 US SURVEY FEET (USFT)		



DRAWING NOT TO SCALE

STATE OF MISSOURI

SEI SHIMBO

NUMBER

PE-2017019046

PROFESSIONAL ENGINEER

Seiji Shimbo

08/07/2026 2:47:08 PM

SEI SHIMBO - CIVIL

MO-PE-2017019046

DATE PREPARED

8/5/2026

ROUTE

STATE

BU67

MO

DISTRICT

SHEET NO.

SE

5

COUNTY

BUTLER

JOB NO.

JSE0106

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL

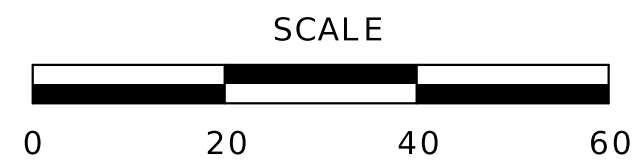
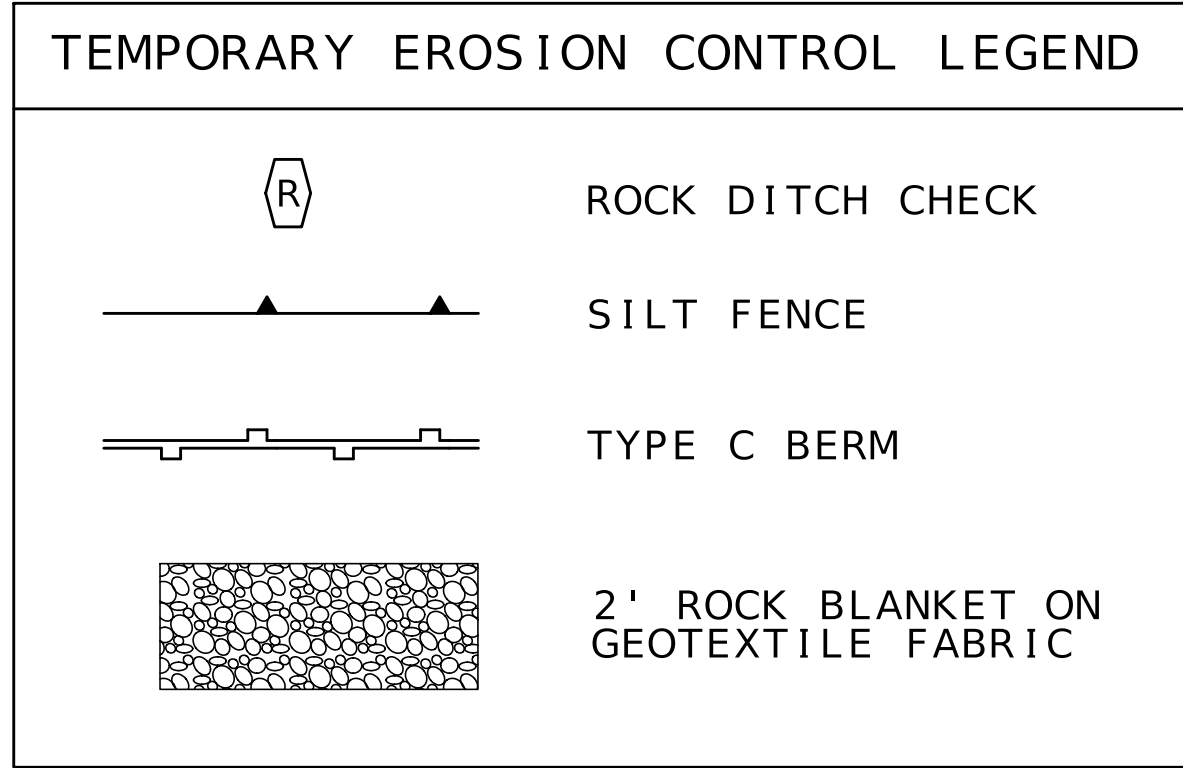
JEFFERSON CITY, MO 65102

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

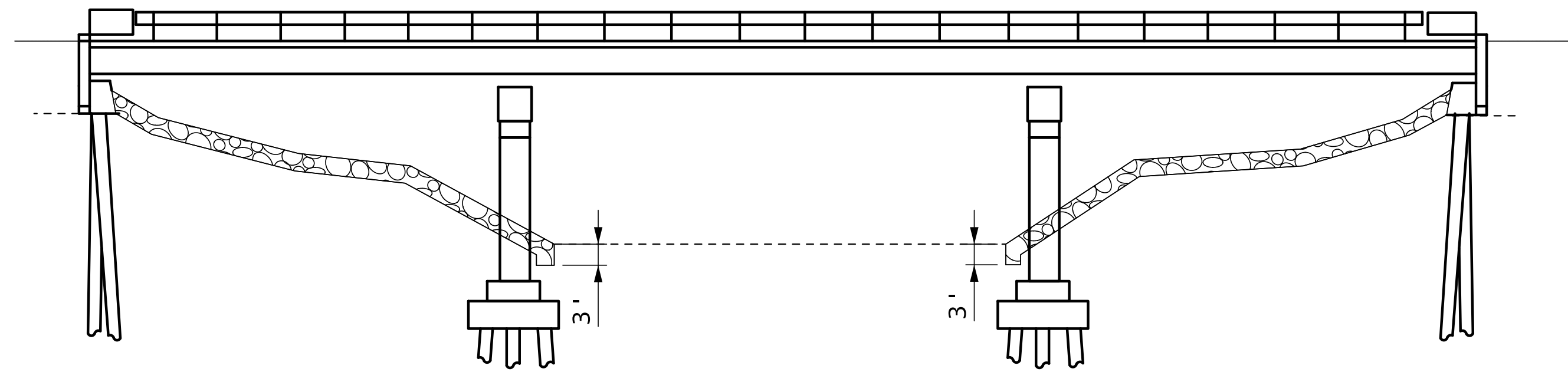
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REFERENCE POINTS

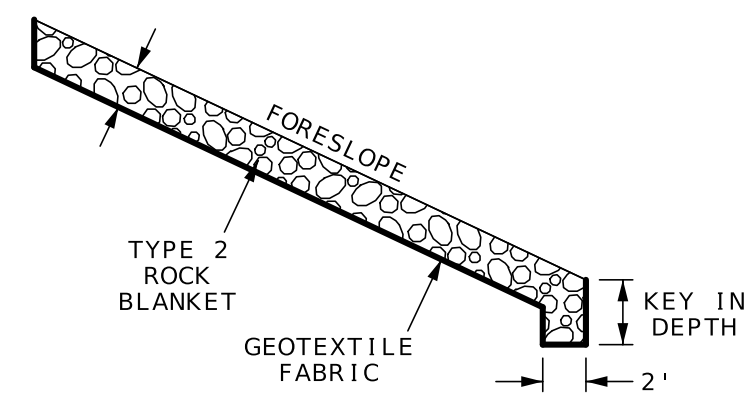
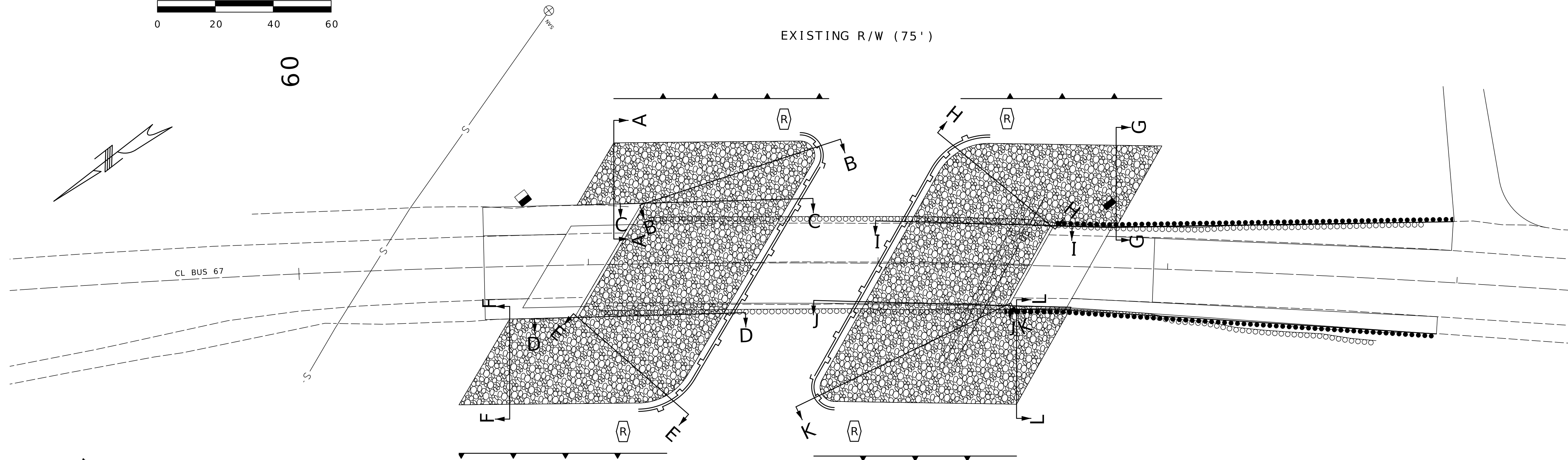
SHEET 1 OF 1



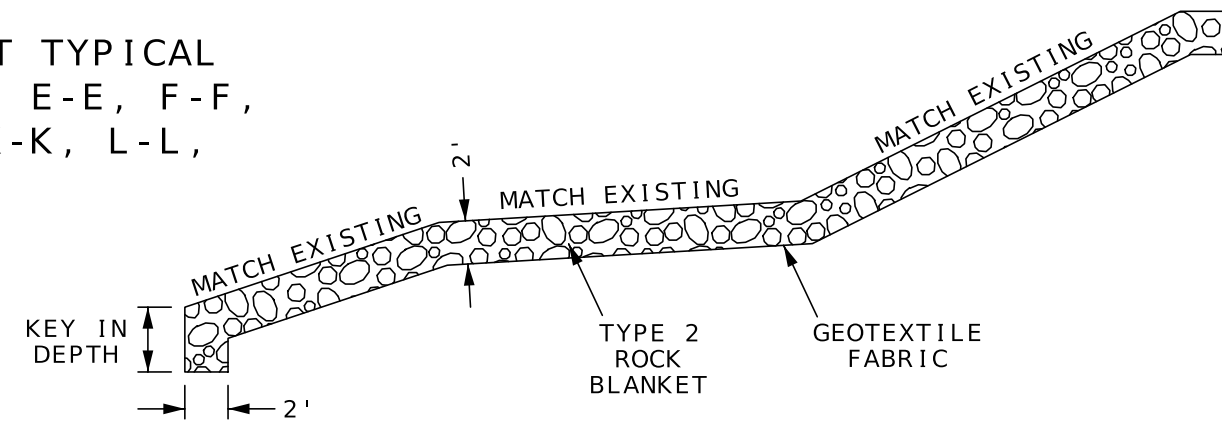
60



EXISTING R/W (75')



ROCK BLANKET TYPICAL
SEC A-A, B-B, E-E, F-F,
G-G, H-H, K-K, L-L,

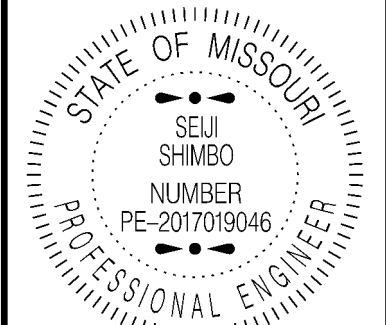


ROCK BLANKET TYPICAL
SEC C-C, D-D, I-I, J-J

TYPE 2 ROCK BLANKET				
SEC	FORESLOPE	SECTION WIDTH (FT)	KEY IN DEPTH (FT)	LENGTH BETWEEN (FT)
A-A	4.0:1	20	3.0	43
B-B	4.0:1	61	3.0	10
C-C	VAR	50	3.0	44
D-D	VAR	50	3.0	20
E-E	4.0:1	41	3.0	43
F-F	4.0:1	30	3.0	--
G-G	4.0:1	30	3.0	43
H-H	4.0:1	41	3.0	20
I-I	VAR	48	3.0	30
J-J	VAR	48	3.0	20
K-K	4.0:1	70	3.0	43
L-L	4.0:1	34	3.0	

NOTE:
TOP OF ROCK BLANKET SHALL MATCH EXISTING
GRADE AND MAY BE ADJUSTED TO MATCH FIELD
CONDITIONS AS APPROVED BY THE ENGINEER.

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.



Seiji Shimbo

08/07/2026 2:47:40 PM
SEIJI SHIMBO - CIVIL
MO-PE-2017019046

DATE PREPARED
8/5/2026

ROUTE
BU67

STATE
MO

DISTRICT
SE

SHEET NO.
6

COUNTY
BUTLER

JOB NO.
JSE0106

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

DATE

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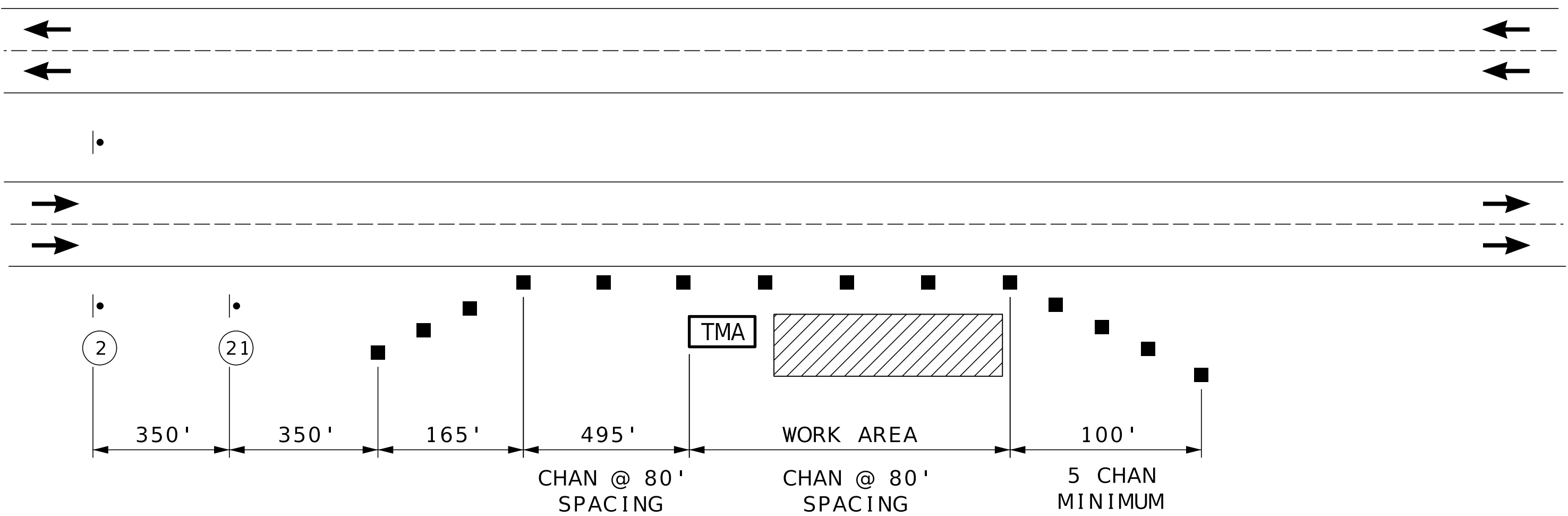
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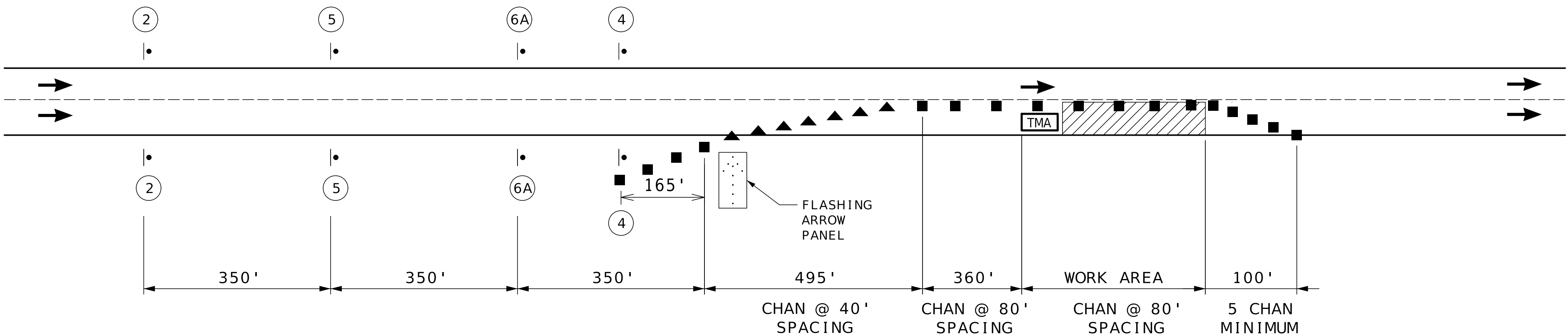
TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- SIGN (DOUBLE SIDED)
- FLAGGER
- CONE
- CHANNELIZER
- BARRICADE
- CHANGEABLE MESSAGE BOARD

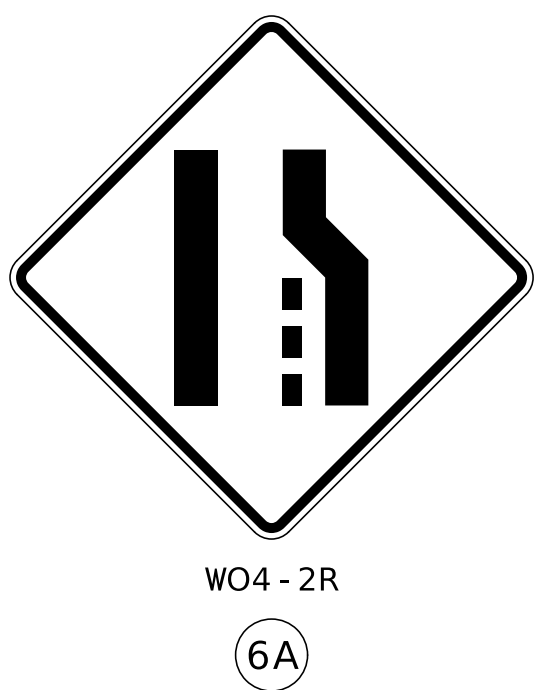
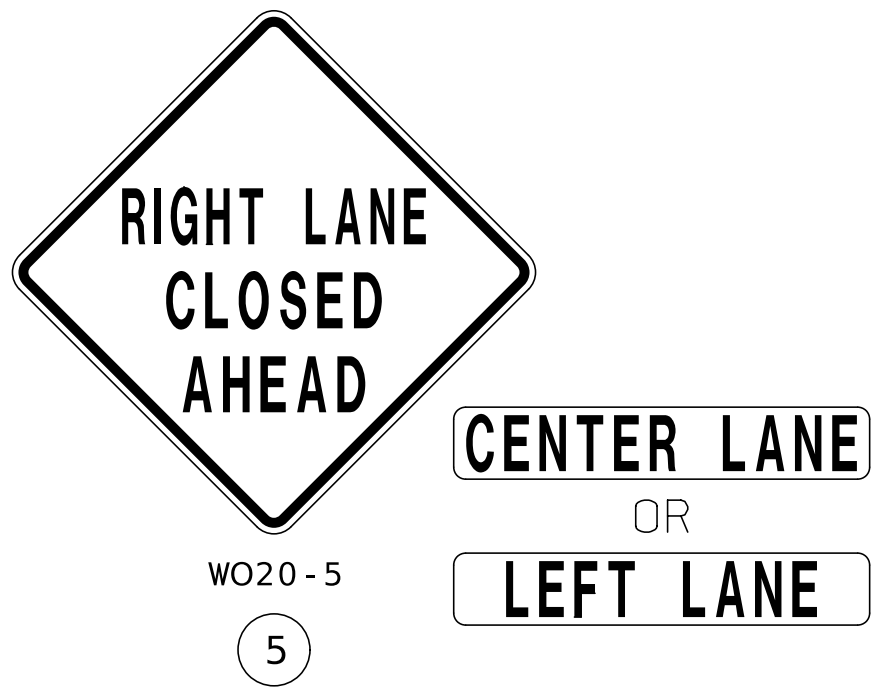
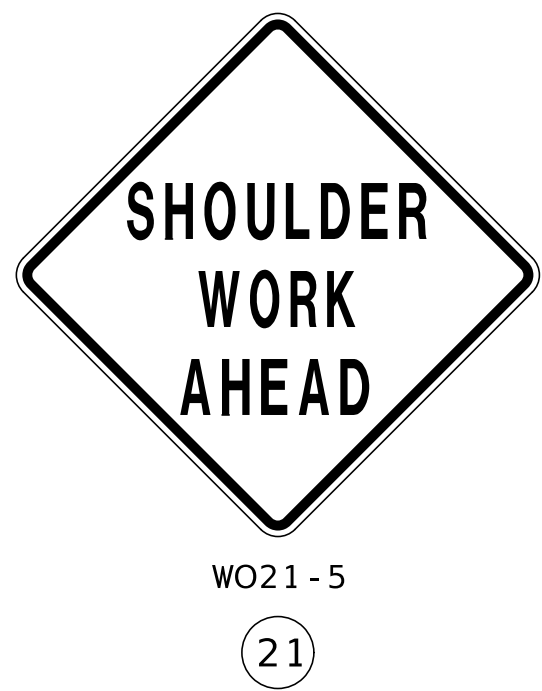
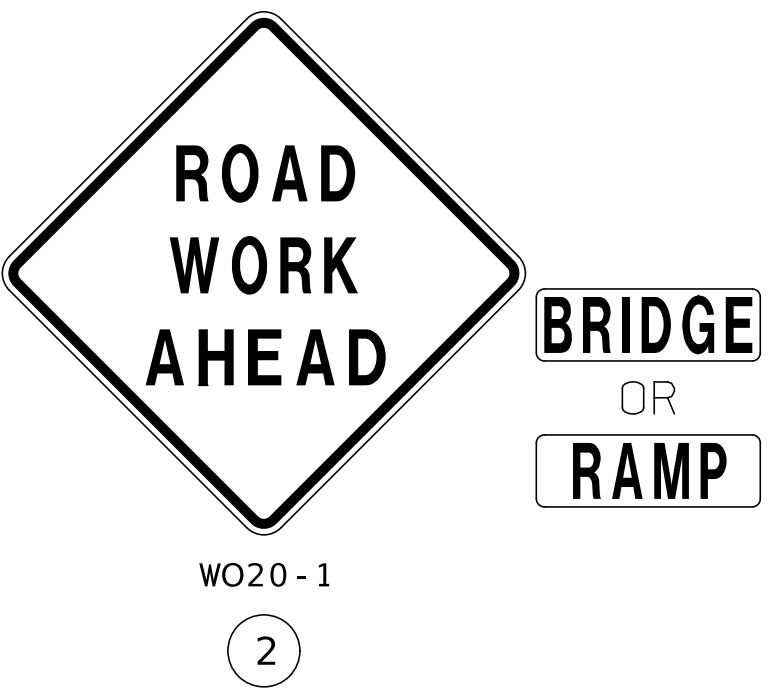


RIGHT SHOULDER WORK- HIGH SPEED DIVIDED ROADWAYS

USED FOR WORK ON SHOULDER OR FOR WORK OFF SHOULDER
WITH WORK VEHICLES PARKED ON THE SHOULDER OF A HIGH SPEED ROADWAY.



SINGLE LANE CLOSURE



DATE PREPARED 8/5/2026	
ROUTE BU67	STATE MO
DISTRICT SE	SHEET NO. 7
COUNTY BUTLER	
JOB NO. JSE0106	
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 (SINGLE SIDED)
	SIGN (DOUBLE SIDED)
	FLAGGER
	FLASHING ARROW PANEL
	CHANNELIZER
	BARRICADE
	CHANGEABLE MESSAGE BOARD

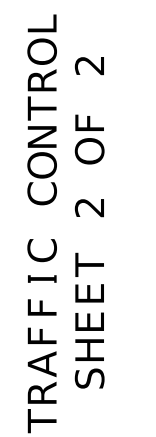
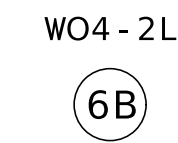
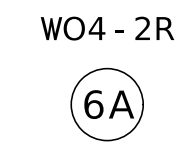
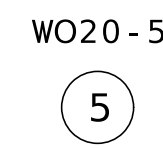
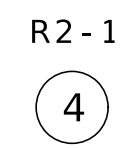
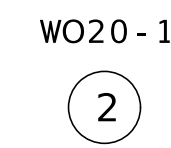


Table Showing S2 Bar Lengths			
Int. Bent No. 2		Int. Bent No. 3	
Span 1	Span 2	Span 2	Span 3
15'-9"	17'-6"	17'-6"	15'-9"

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.

General Notes:

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

Design Loading:
H20-44 (1957) (Existing)
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.

MBS refers to mechanical bar splices. Mechanical bar splices
shall be in accordance with Sec 706 or 710.

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.

Contractor shall verify all dimensions in field before finalizing shop
drawings or ordering materials.

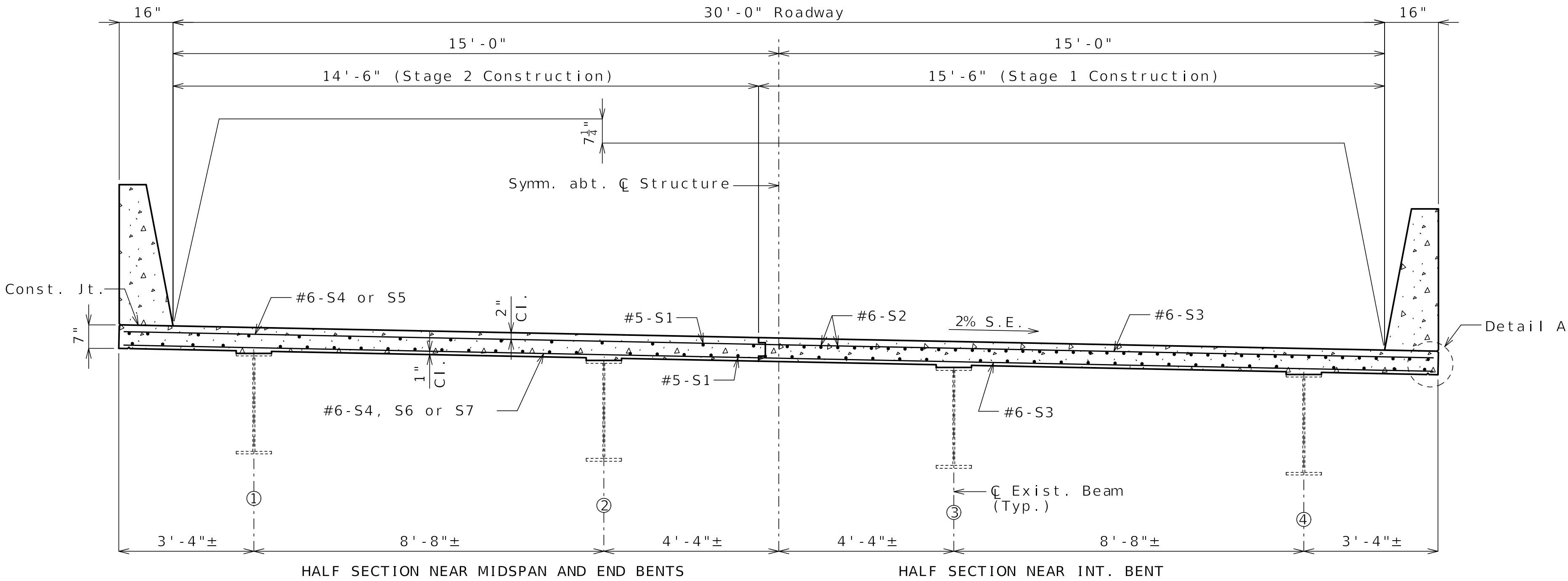
The area exposed by the removal of concrete and not covered with
new concrete shall be coated with an approved qualified special
mortar in accordance with Sec 704.

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

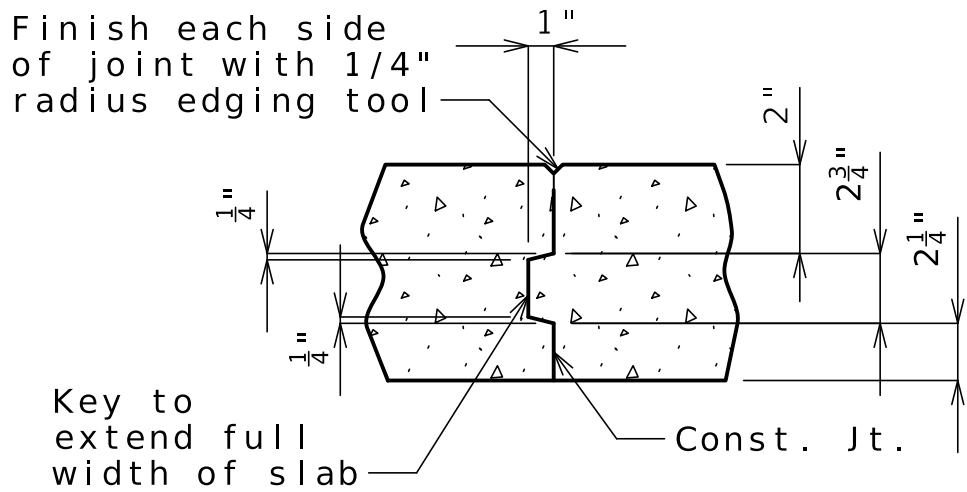
Traffic Handling:

Traffic to be maintained on structure during construction, see
roadway plans for traffic control and Sheet No. 3 for staged
construction details.

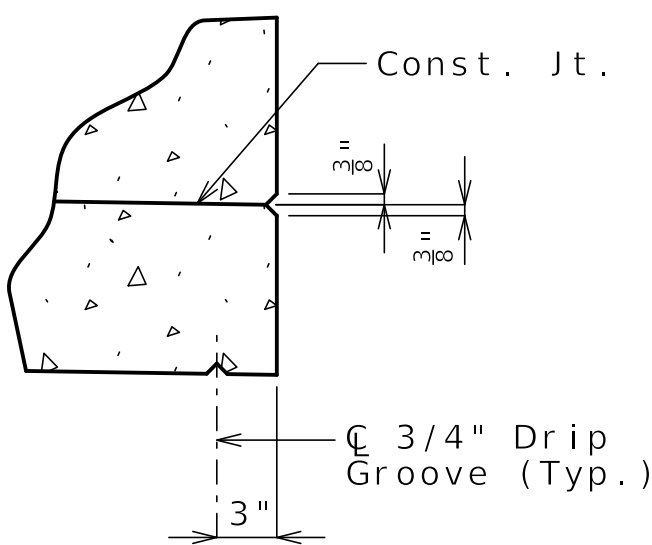
U.I.P., REDECK AND MAKE COMPOSITE EXISTING (44'- 55'- 44') CONTINUOUS WIDE FLANGE BEAM SPANS



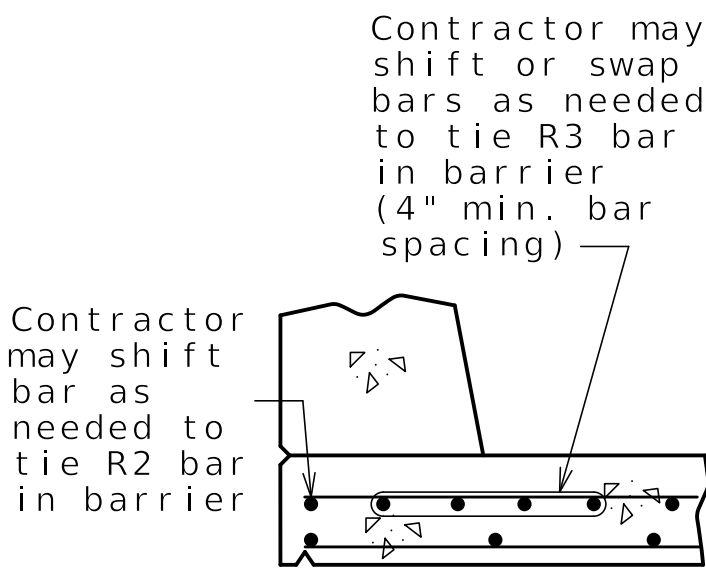
TYPICAL SECTION THRU SLAB
Mechanical Bar Splices not shown for clarity



SLAB CONSTRUCTION JOINT



DETAIL A



OPTIONAL SHIFTING
TOP BARS AT BARRIER

Estimated Quantities		
Item		Total
Class 1 Excavation	cu. yard	90
Removal of Existing Bridge Deck	sq. foot	4631
Bridge Approach Slab (Major)	sq. yard	145
Slab on Steel	sq. yard	535
Type D Barrier	linear foot	293
Mechanical Bar Splice	each	526
Protective Coating - Concrete Bents and Piers (Epoxy)	lump sum	1
Shear Connectors	each	1456
Slab Drain	each	13
Non-Destructive Testing	linear foot	24
Vertical Drain at End Bents	each	2

Estimated Quantities for Slab on Steel		
Item		Total
Class B-2 Concrete	cu. yard	122
Reinforcing Steel (Epoxy Coated)	pound	42,910

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.

For Plan of Slab Showing Reinforcement, see Sheet No. 10.

REPAIRS TO BRIDGE: BUSINESS
ROUTE 67 OVER PIKE CREEK

BUSINESS ROUTE 67 NB FROM ROUTE 53 TO ROUTE 67
ABOUT 0.1 MILE SOUTHWEST OF ROUTE 53
BEGINNING STATION 61+06.00 ± (MATCH EXISTING)

STATE OF MISSOURI

TIMOTHY D. LEAF

NUMBER

PE-2012000778

PROFESSIONAL ENGINEER

DATE PREPARED

8/10/2026

ROUTE

BU 67

DISTRICT

BR

STATE

MO

SHEET NO.

1

COUNTY

BUTLER

JOB NO.

JSE0106

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

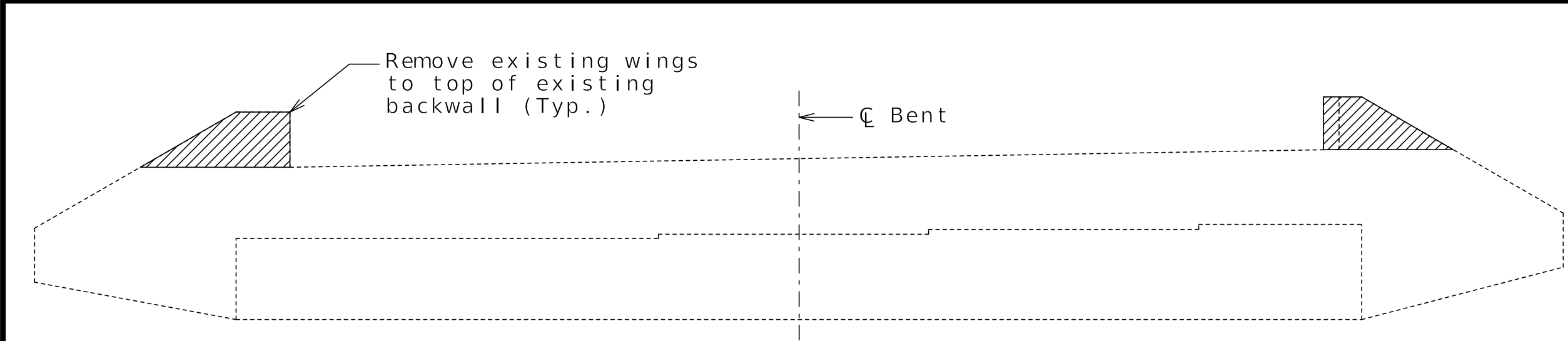
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DESCRIPTION

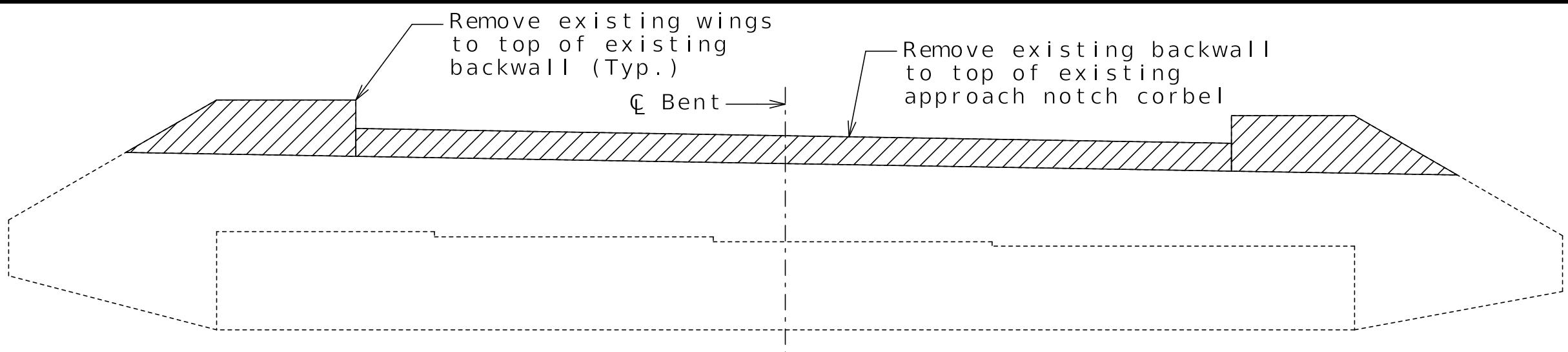
DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

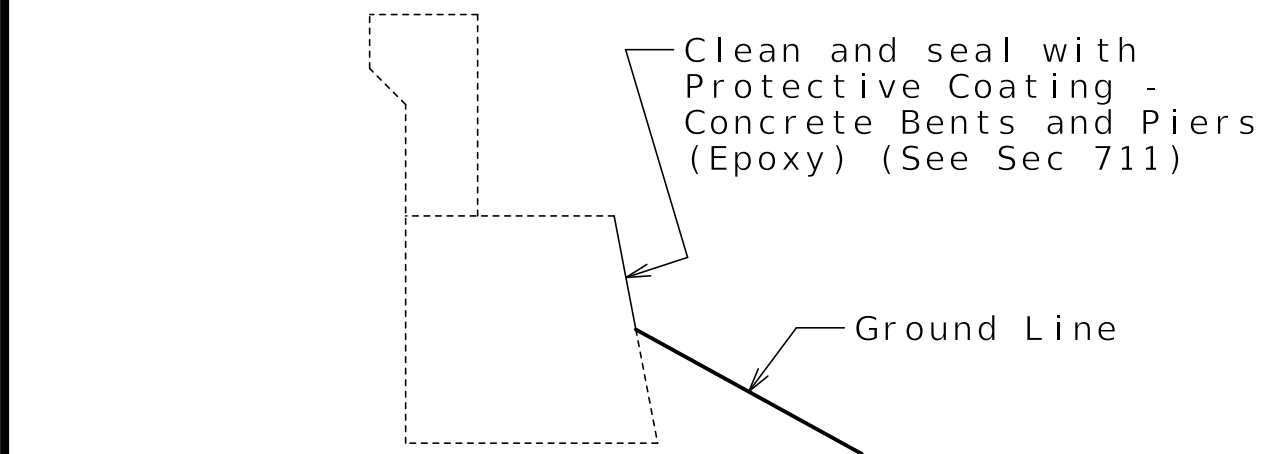
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



DETAILS OF CONCRETE REMOVAL AT END BENT NO. 1

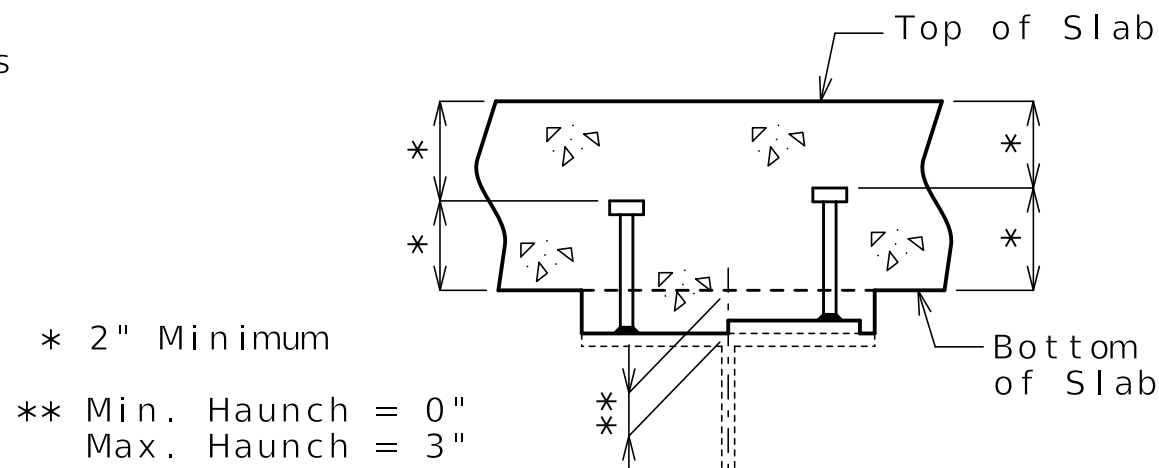


DETAILS OF CONCRETE REMOVAL AT END BENT NO. 4

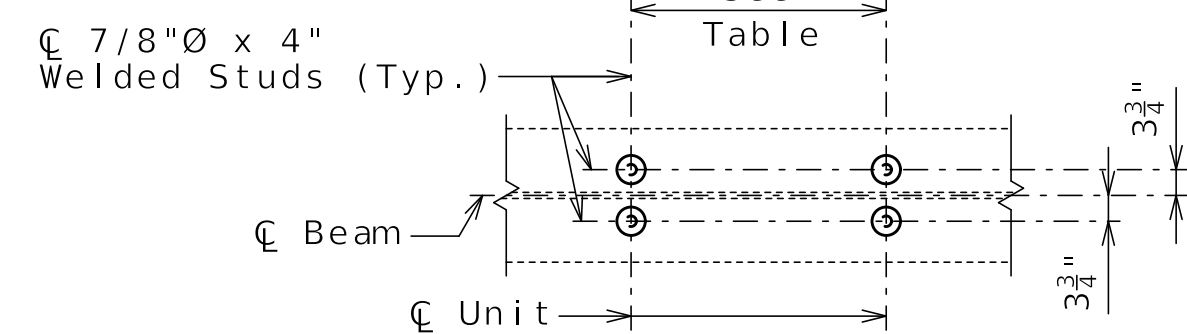
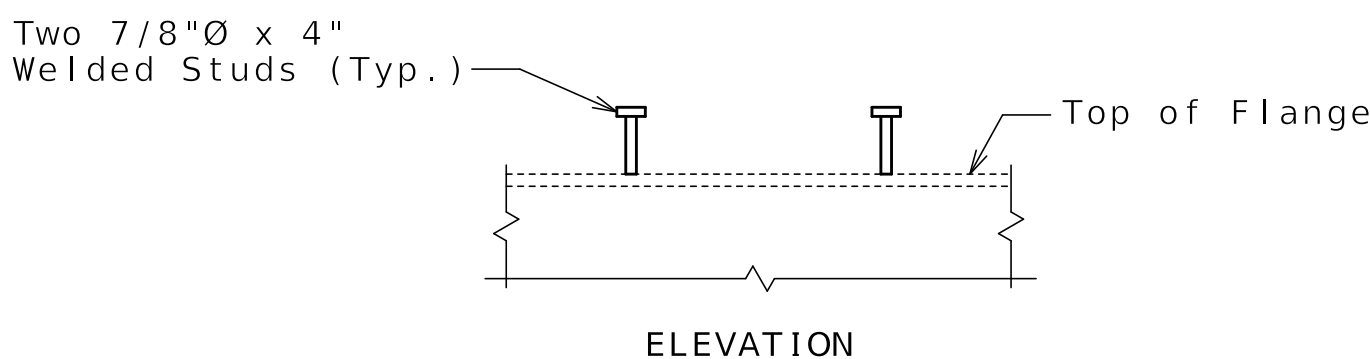


TYPICAL SECTION THRU
END BENTS NO. 1 & 4
SHOWING PROTECTIVE COATING

The cost of concrete removal as shown will be considered completely covered by the contract unit price for Removal of Existing Bridge Deck. Vertical backwall and wingwall reinforcement to be cut off one inch below concrete removal surface and the resulting holes shall be filled with a qualified special mortar. A smooth, level surface shall be provided on End Bents No. 1 & 4 removal lines.



SECTION THRU EXIST.
BEAM SHOWING
SHEAR CONNECTORS

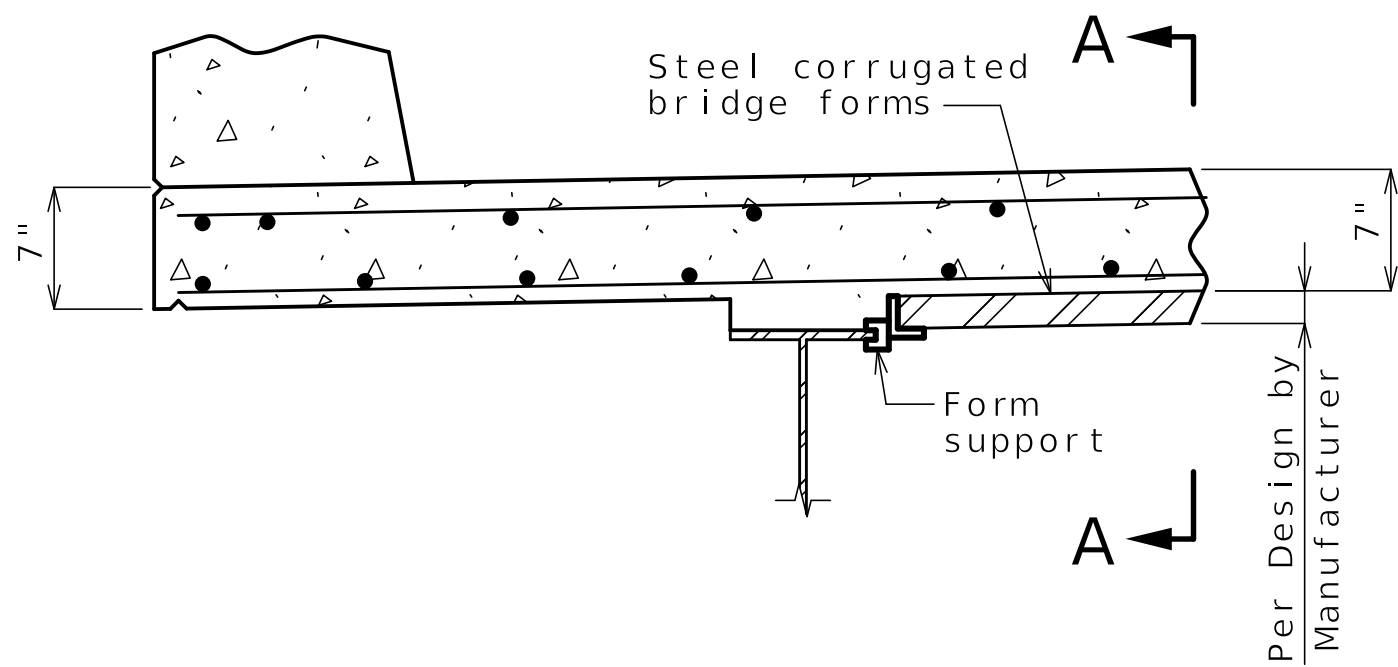


PLAN OF SHEAR CONN. (2 PER UNIT)

DETAILS OF SHEAR CONNECTORS

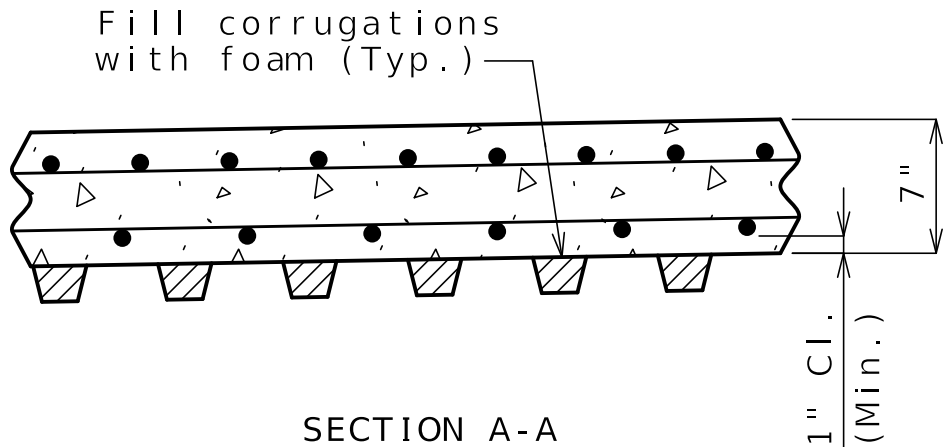
The cost of supplying and installing shear connectors will be considered completely covered by the contract unit price for Shear Connectors.

Shear connectors shall be in accordance with Sec 712, 1037 & 1080.



SECTION A-A

OPTIONAL STAY-IN-PLACE
FORM DETAILS



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.

Pouring and Finishing Slab:

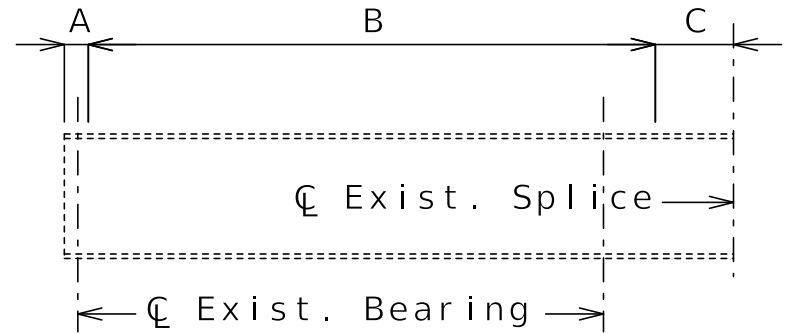
The contractor shall provide bracing necessary for lateral and torsional stability of the beams during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not weld on or drill holes in the beams. The cost for furnishing, installing, 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.

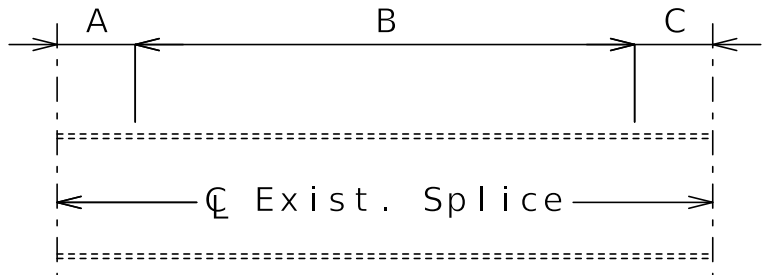
Alternate pour sequences may be submitted to the engineer for approval. Keyed construction joints shall be provided between pours.

Haunching:

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

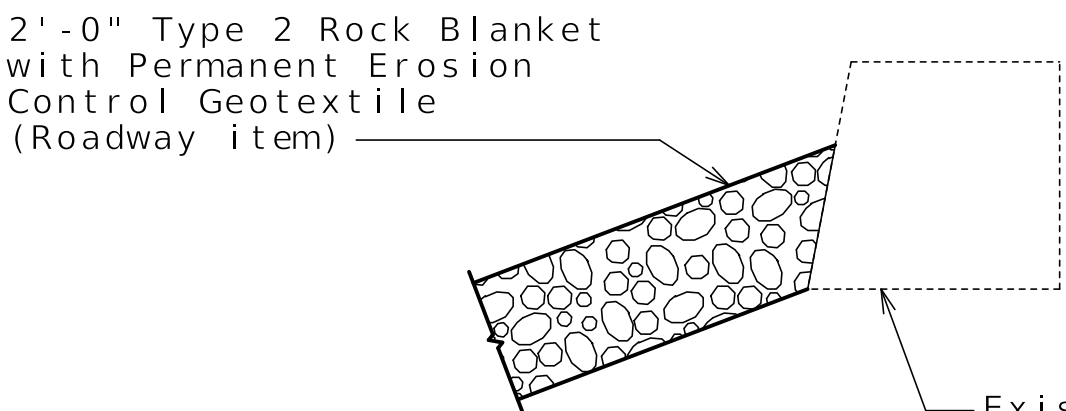


ELEVATION SHOWING SHEAR
CONNECTOR SPACING FOR
END BEAMS



ELEVATION SHOWING SHEAR
CONNECTOR SPACING FOR
MID SPAN

TABLE SHOWING SHEAR CONNECTOR UNIT SPACING				
Span	S.C. per unit	A	B	C
End Beam Span (1-2)	2	11½"±	75 Units @ 9" cts.	2'-1½"±
Mid Span (2-3)	2	2'-1½"±	32 Units @ 9" cts.	2'-1½"±
End Beam Span (3-4)	2	9¾"±	75 Units @ 9" cts.	2'-1½"±
Total shear connectors required				1456



ROCK BLANKET ON SPILL SLOPES

STATE OF MISSOURI

TIMOTHY D. LEAF

NUMBER
PE-2012000778

PROFESSIONAL ENGINEER

Timothy D. Leaf

08/10/2026 1:53:22 PM

TIMOTHY D. LEAF - CIVIL

MO-PE-2012000778

DATE PREPARED

8/10/2026

ROUTE

BU 67

STATE

MO

DISTRICT

BR

SHEET NO.

2

COUNTY

BUTLER

JOB NO.

JSE0106

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

A05951

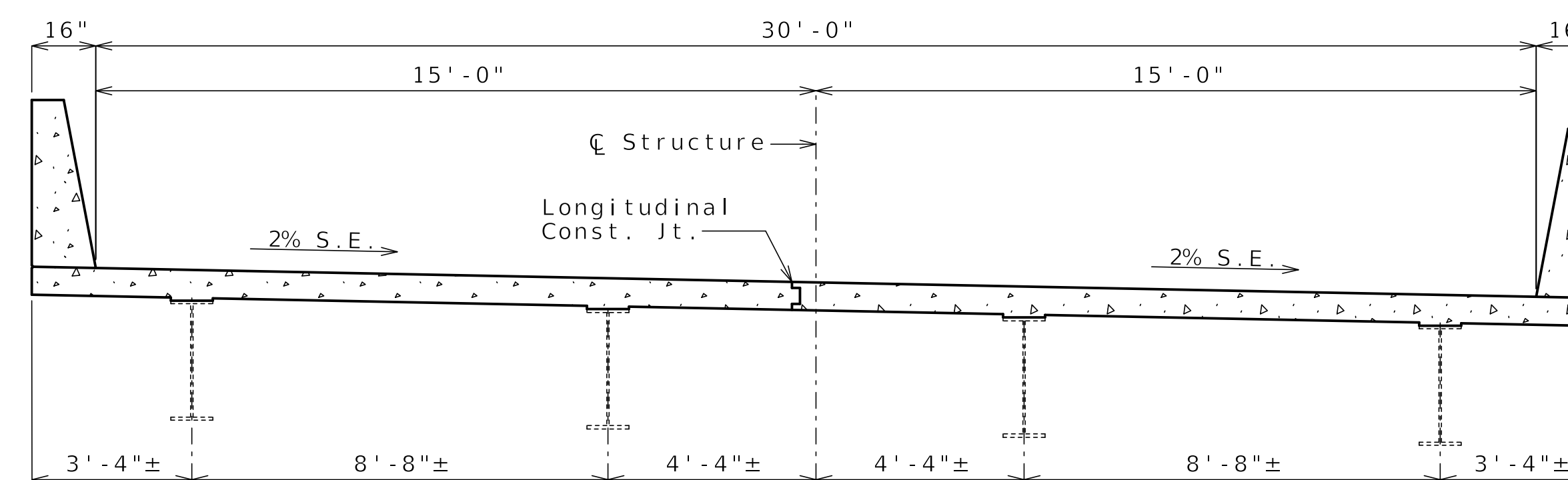
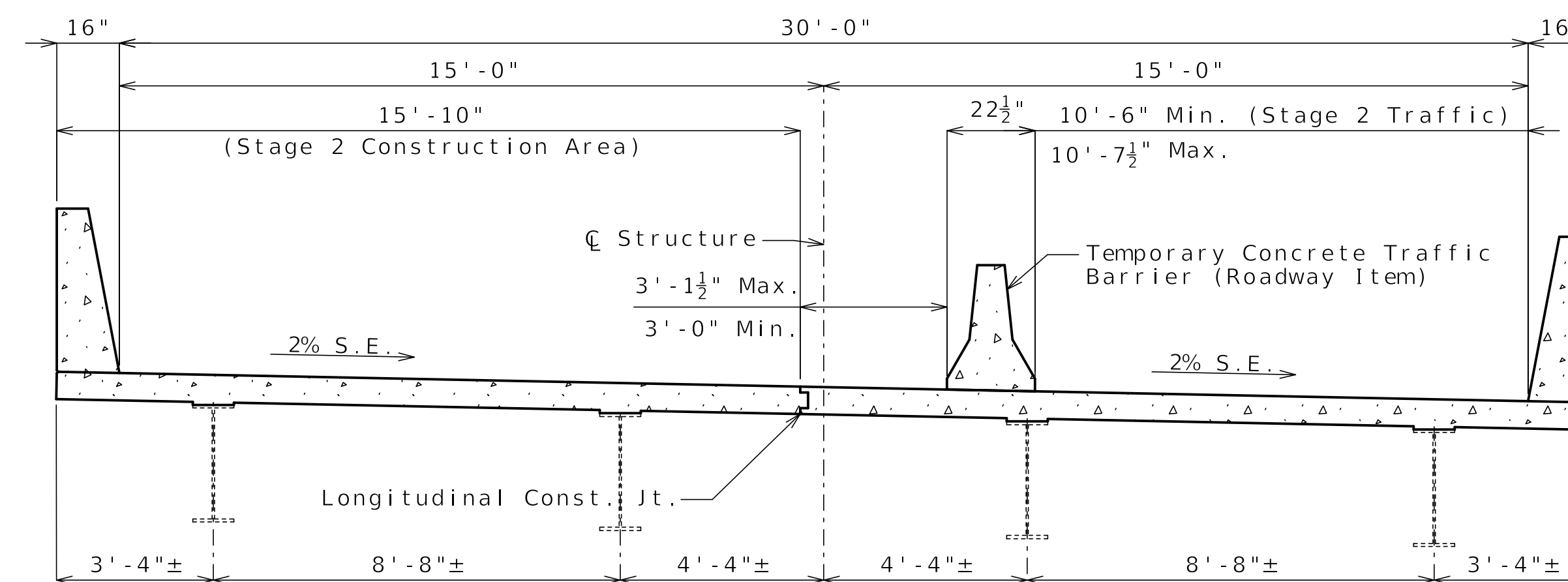
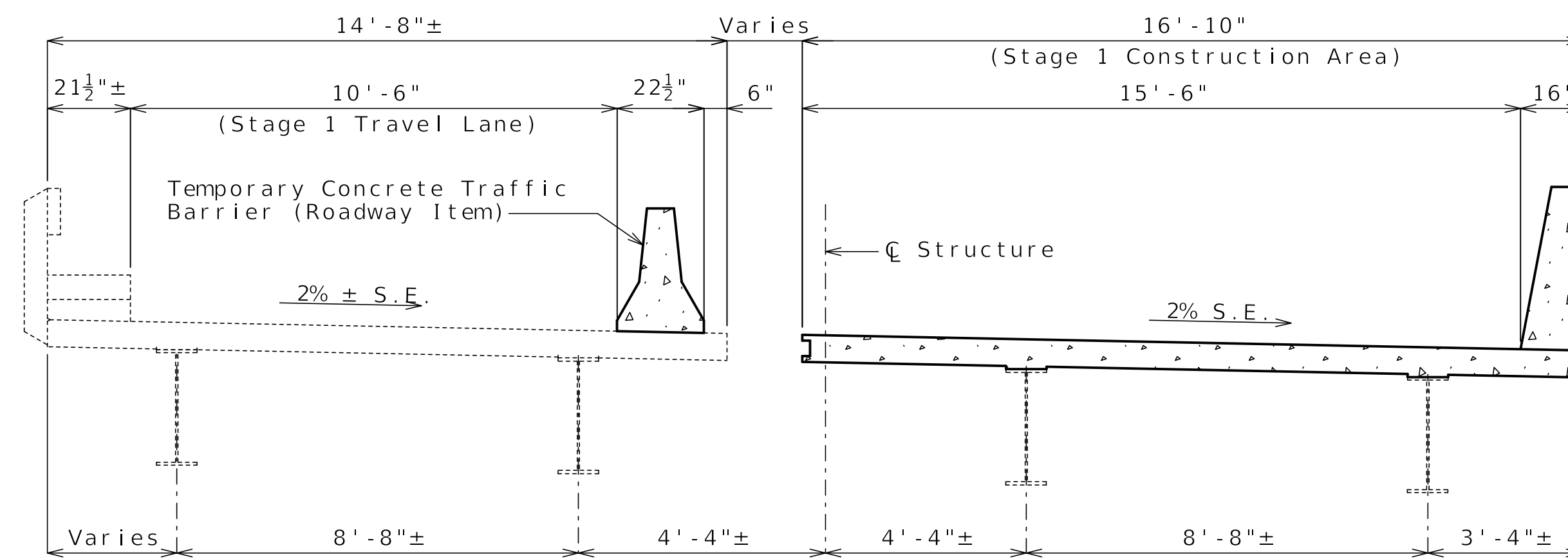
DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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

MoDOT



DETAILS OF STAGED CONSTRUCTION

Notes :

Method of attachment for the Type F Temporary barrier shall be tie-down strap.

The contractor shall use bolt through deck method of attaching the temporary concrete traffic barrier for Stage 1 only.

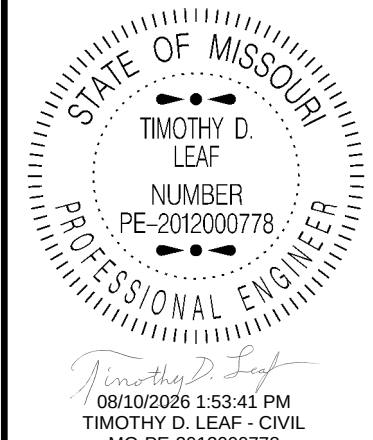
Existing bolts on intermediate diaphragms and cross frames that connect stringers under different construction staged slab pours shall be removed and replaced with new in kind high strength bolts installed snug tight and in accordance with Sec 712. The high strength bolts shall be tightened after both adjacent slab pours are completed. Cost will be considered incidental to other pay items.

For details of slab construction joint, see Sheet No. 1.

Detailed Dec. 2025
Checked Feb. 2026

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

Sheet No. 3 of 15



DATE PREPARED
8/10/2026

ROUTE	STATE
BU 67	MO

DISTRICT BR	SHEET NO. 3
----------------	----------------

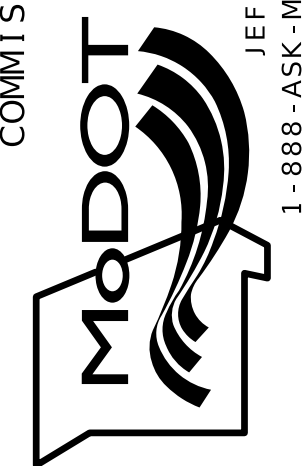
COUNTY
BUTLER

JOB NO.
JSE0106

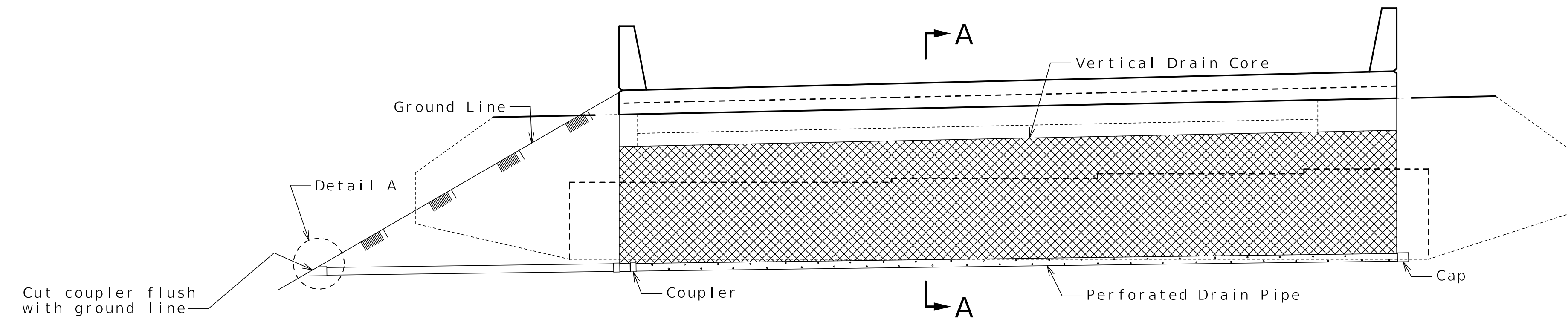
CONTRACT ID.

PROJECT NO.

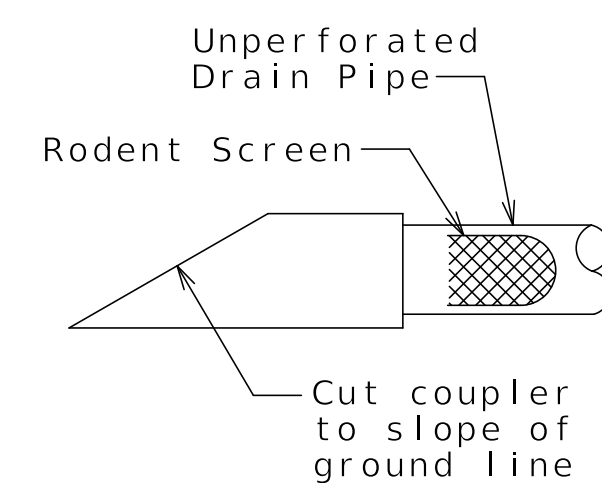
BRIDGE NO.
A05951

[illegible]MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

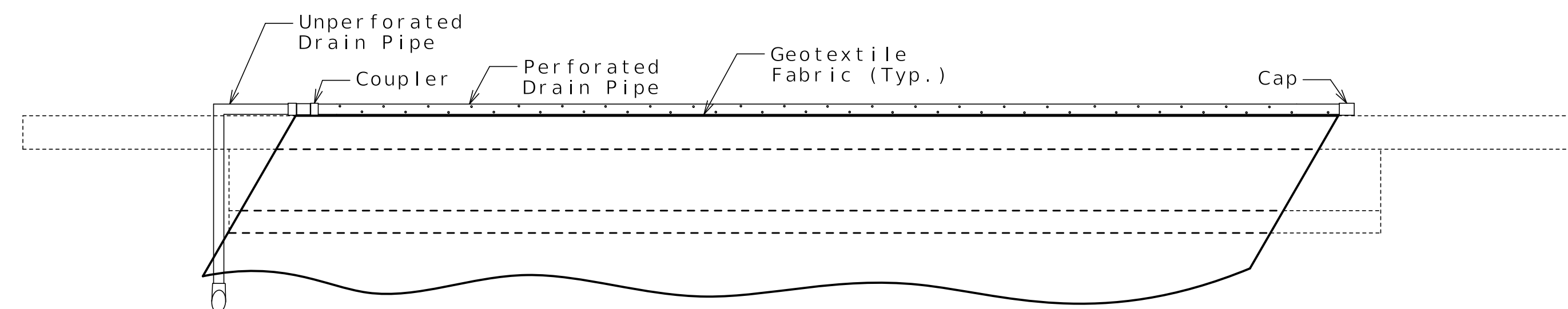
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



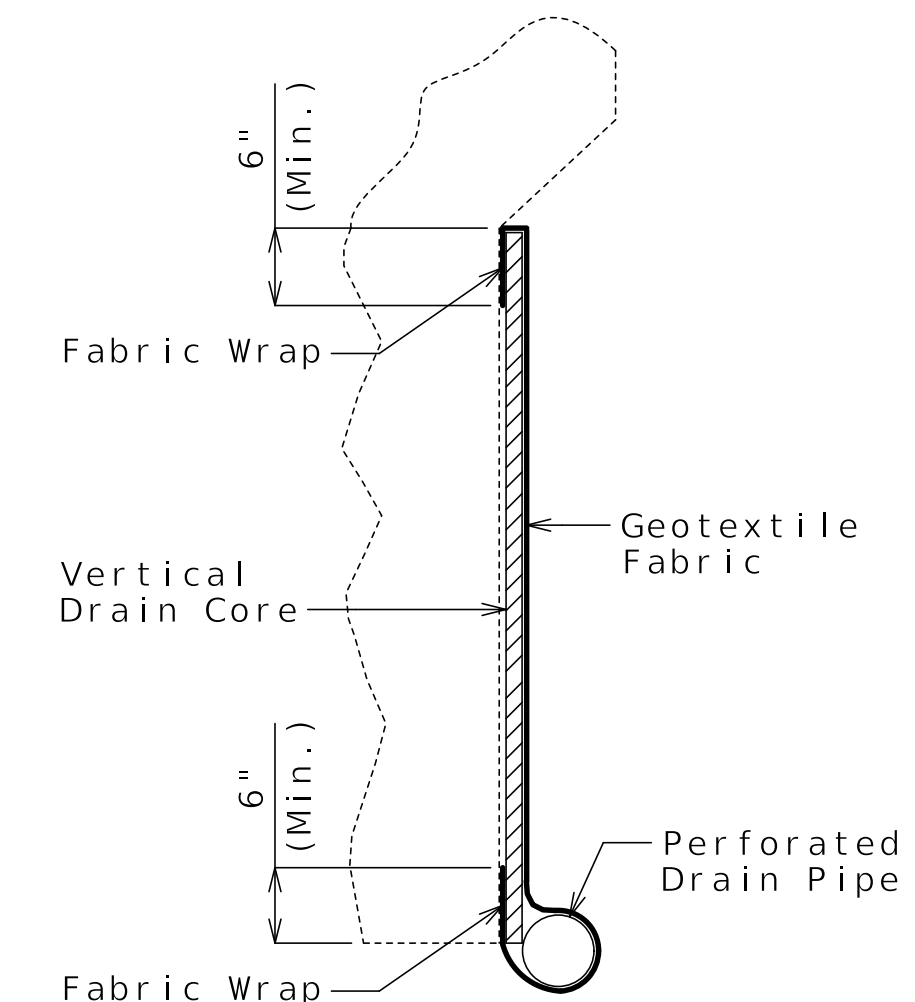
ELEVATION OF END BENT



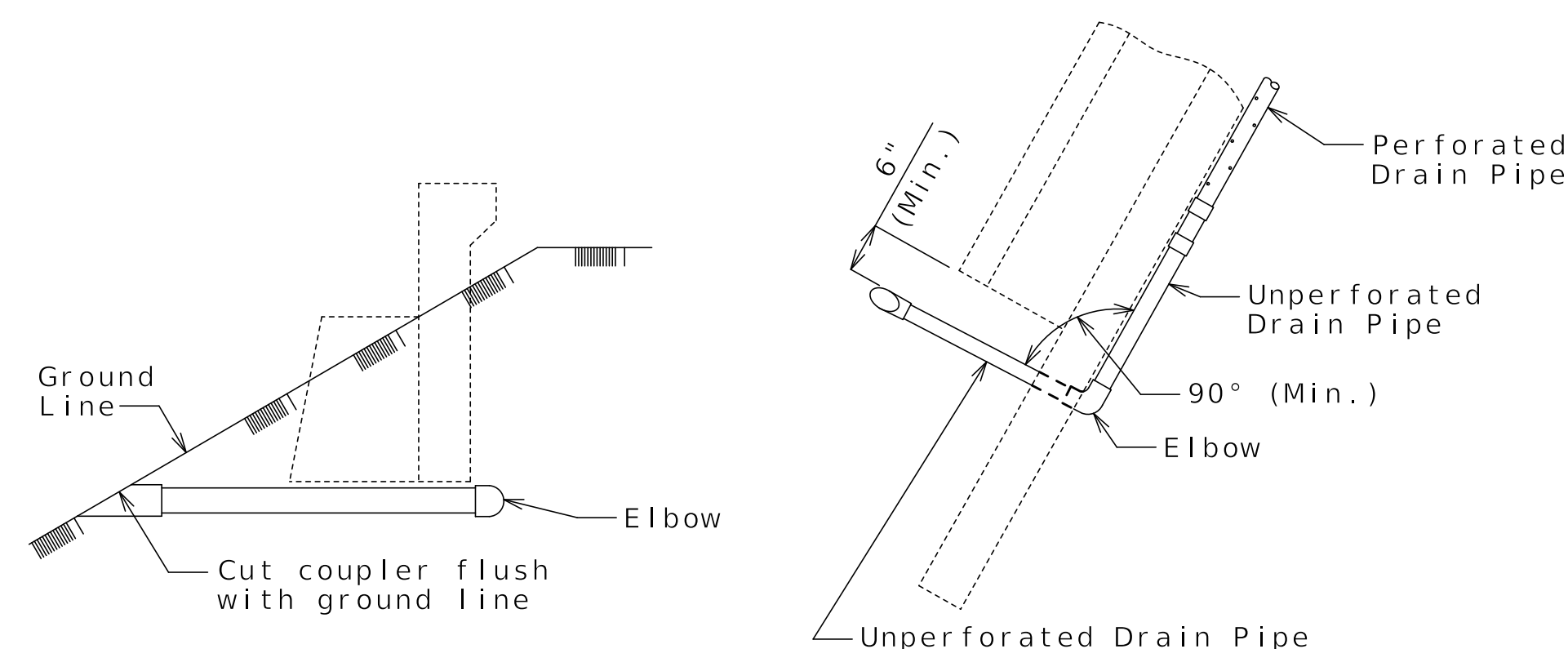
DETAIL A



PLAN OF END BENT



PART SECTION A-A
(Section thru wing similar)



ELEVATION OF WING

PART PLAN

OPTIONAL TURNED DRAIN

(Use only when straight drain is not practical.)

VERTICAL DRAIN AT END BENTS

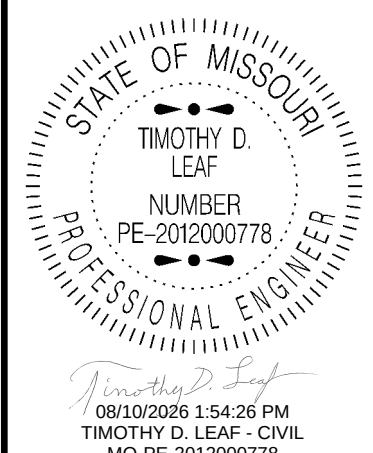
General Notes:

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

Perforated pipe shall be placed at fill face side 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

ROUTE	STATE
BU 67	MO

DISTRICT BR	SHEET NO. 6
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COUNTY

BUTLER

JOB NO.

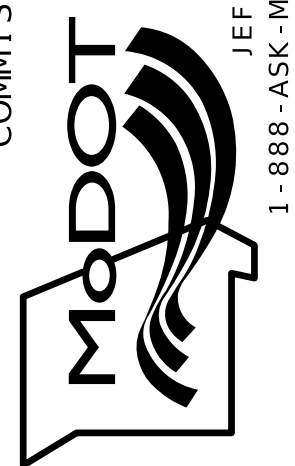
JSE0106

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

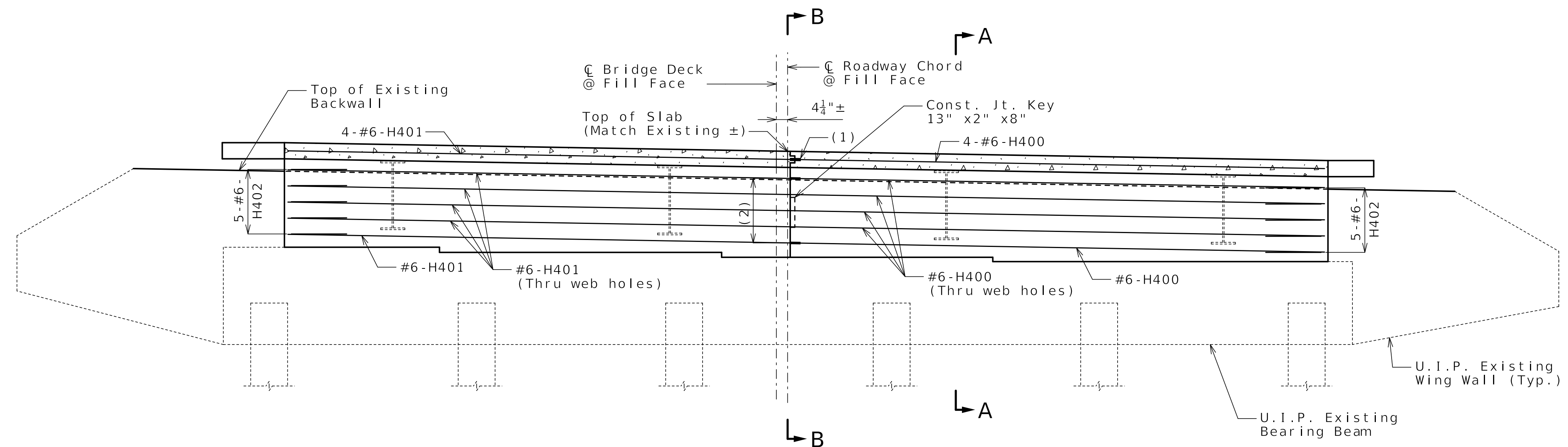
A05951

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105 WEST CAPITOL
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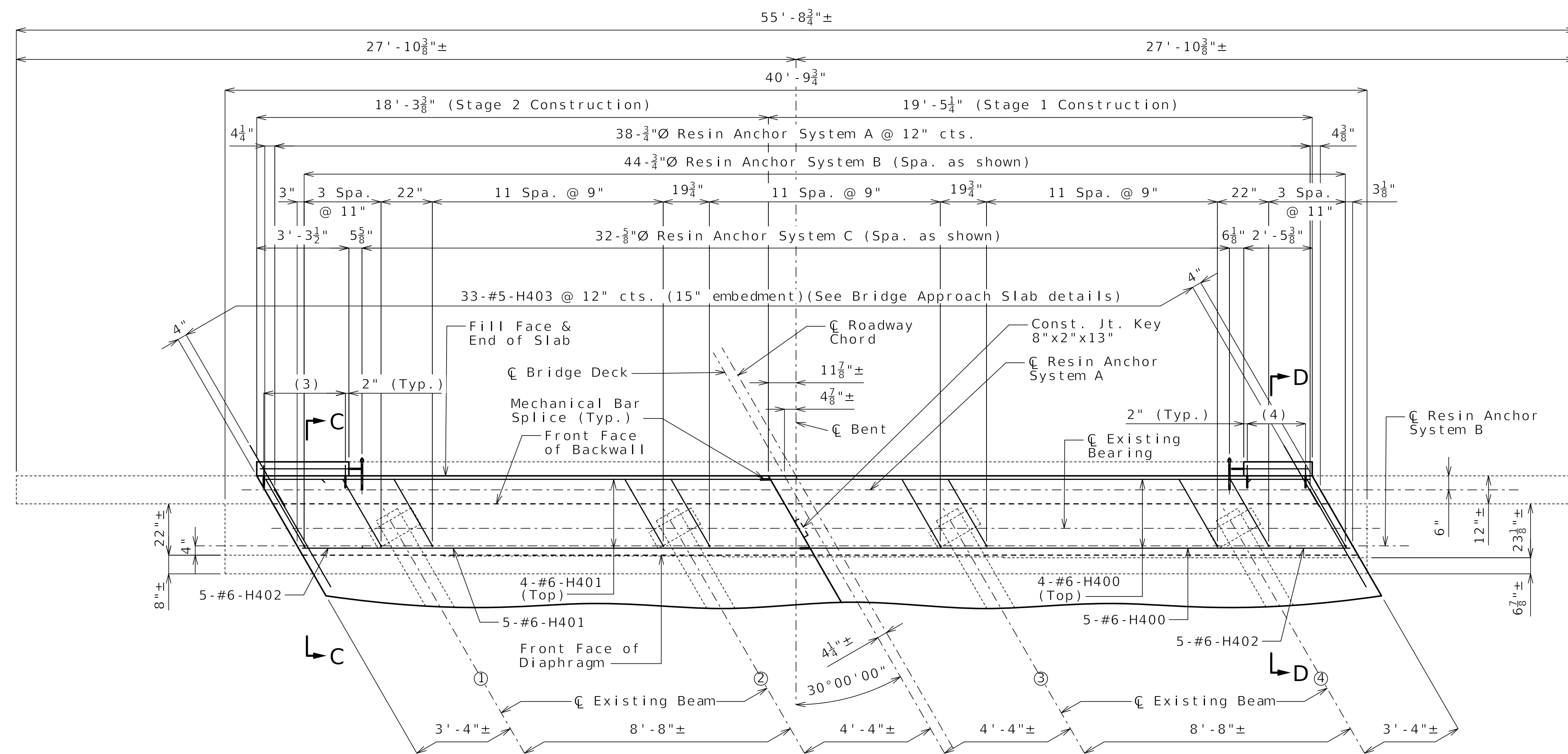
(4) 6 Pr.-5/8"Ø Resin Anchor System F @ abt. 5" cts.



SECTION NEAR END BENT

Bearing stiffeners, bearings, steel end diaphragms, reinforcement, resin anchors and Type D barrier not shown for clarity.

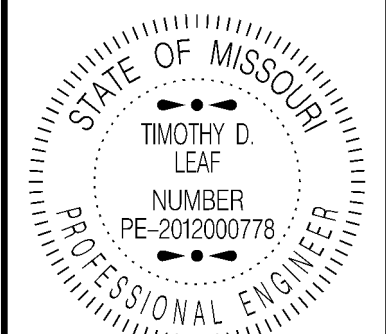
- (1) 4-MBS H400-H401
(2) 5-MBS H400-H401



PART PLAN

© Roadway not shown for clarity

DETAILS OF END BENT NO. 4



08/10/2026 1:54:36 PM
TIMOTHY D. LEAF - CIVIL
MO-PE-2012000778

DATE PREPARED
8/10/2026

ROUTE	STATE
BU 67	MO

DISTRICT	SHEET NO.
BR	7

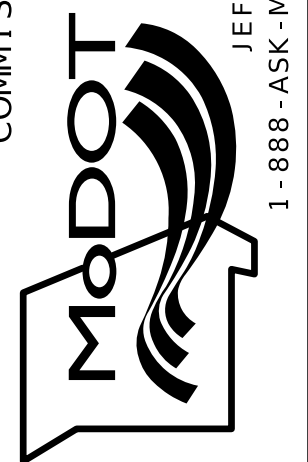
COUNTY
BUTLER

JOB NO.
JSE0106

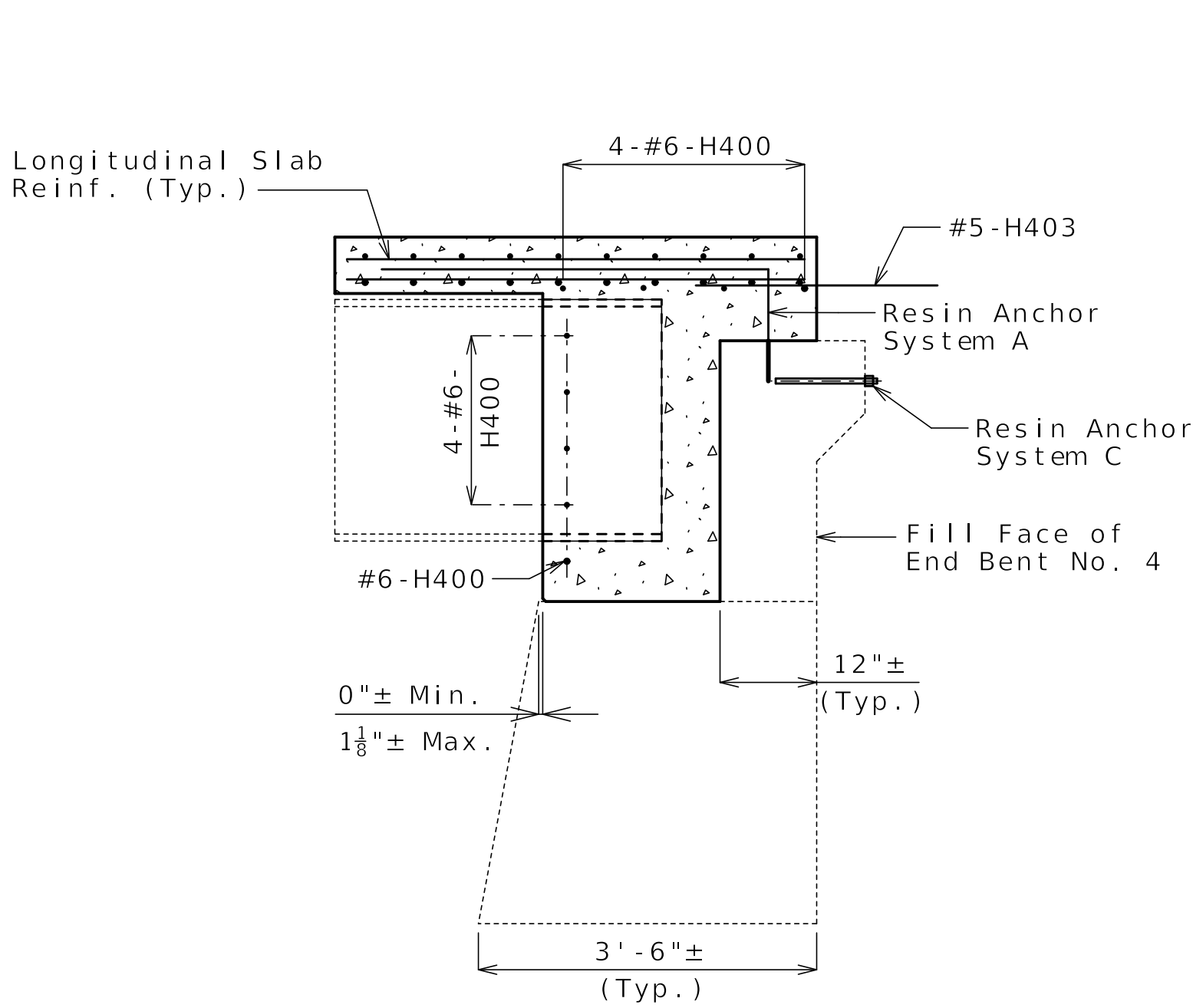
CONTRACT ID.

PROJECT NO.

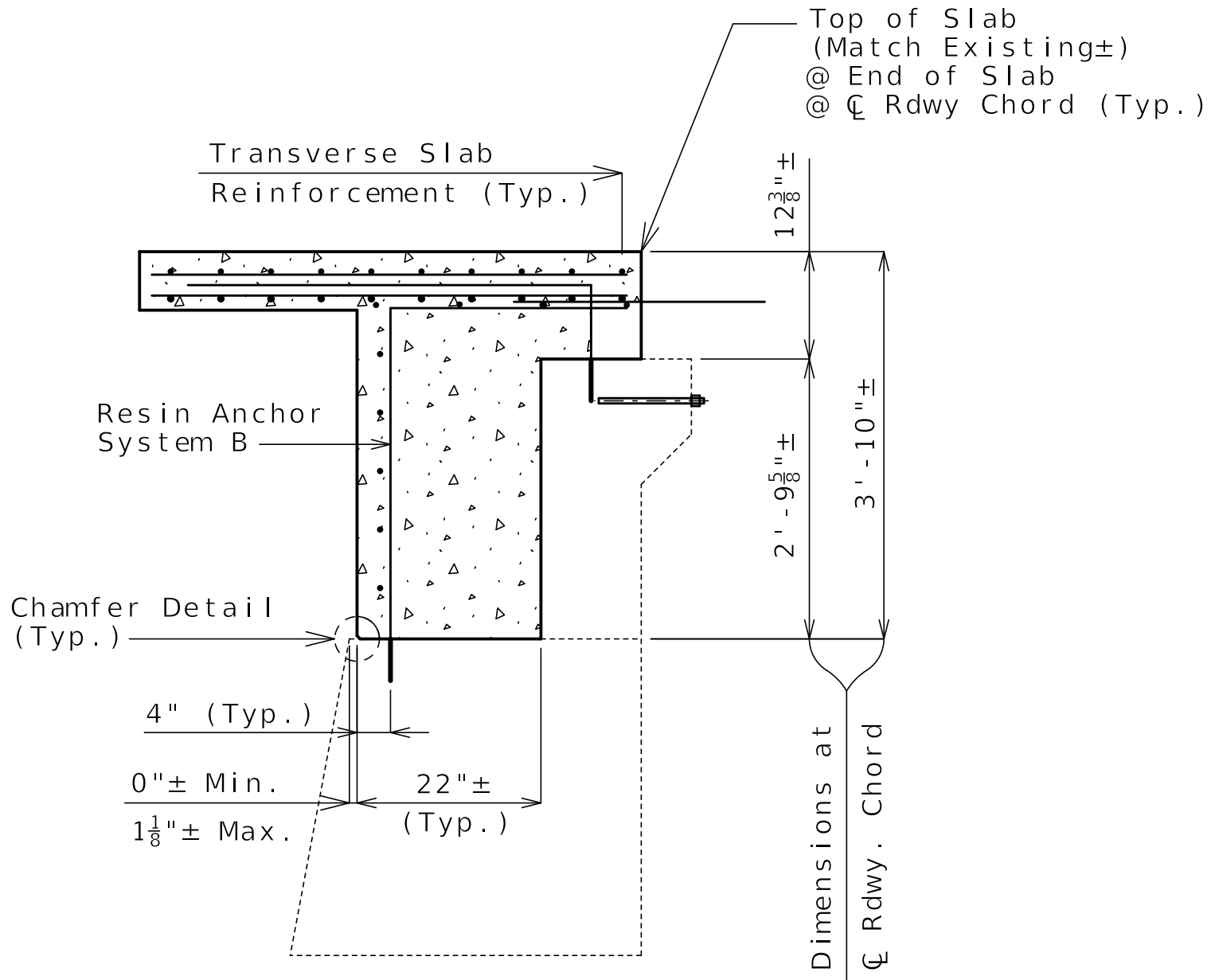
BRIDGE NO.	A05951
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[illegible]MISSOURI HIGHWAYS AND TRANSPORTATION
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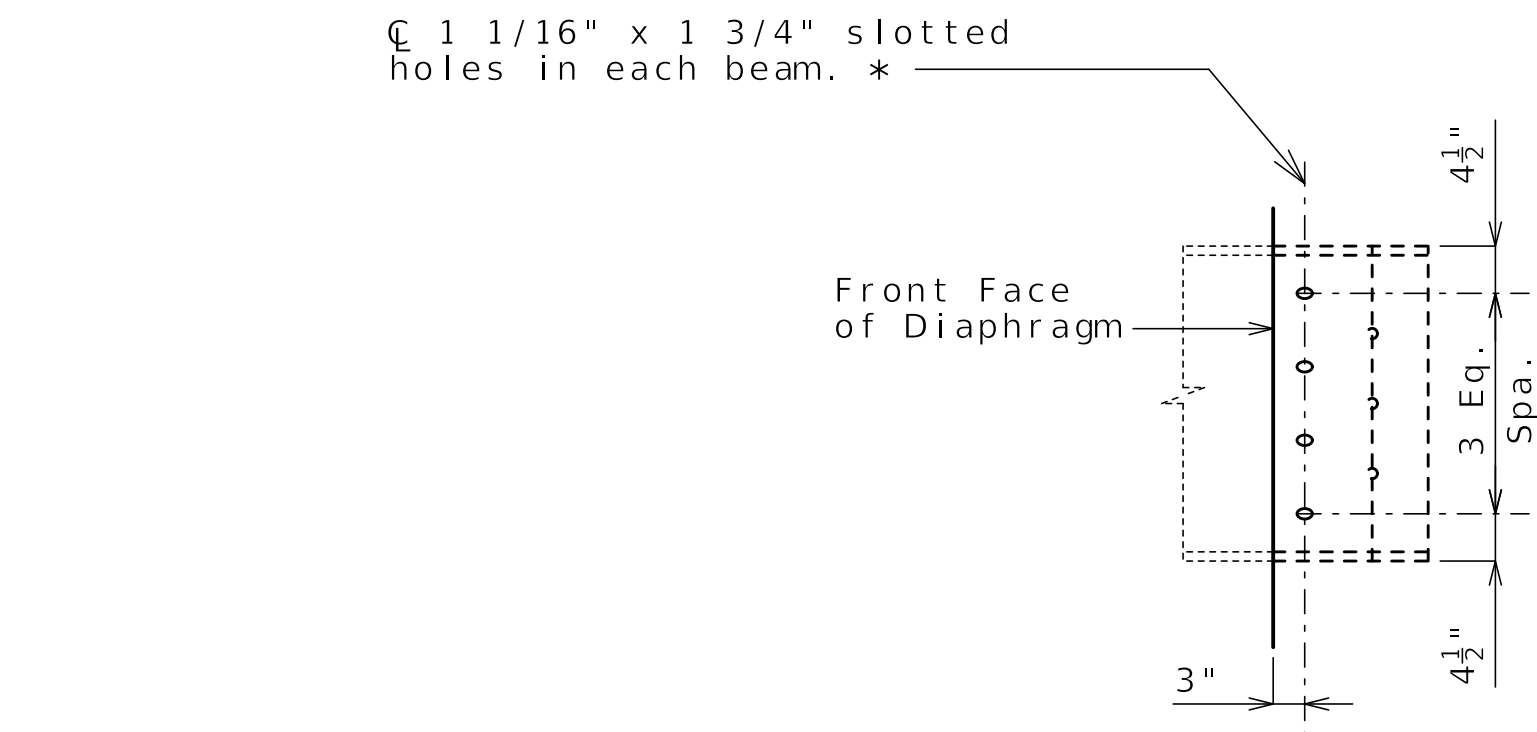
105 WEST CAPITOL
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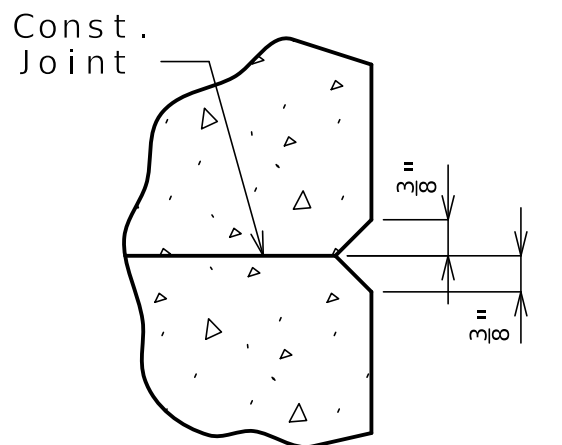
SECTION A-A



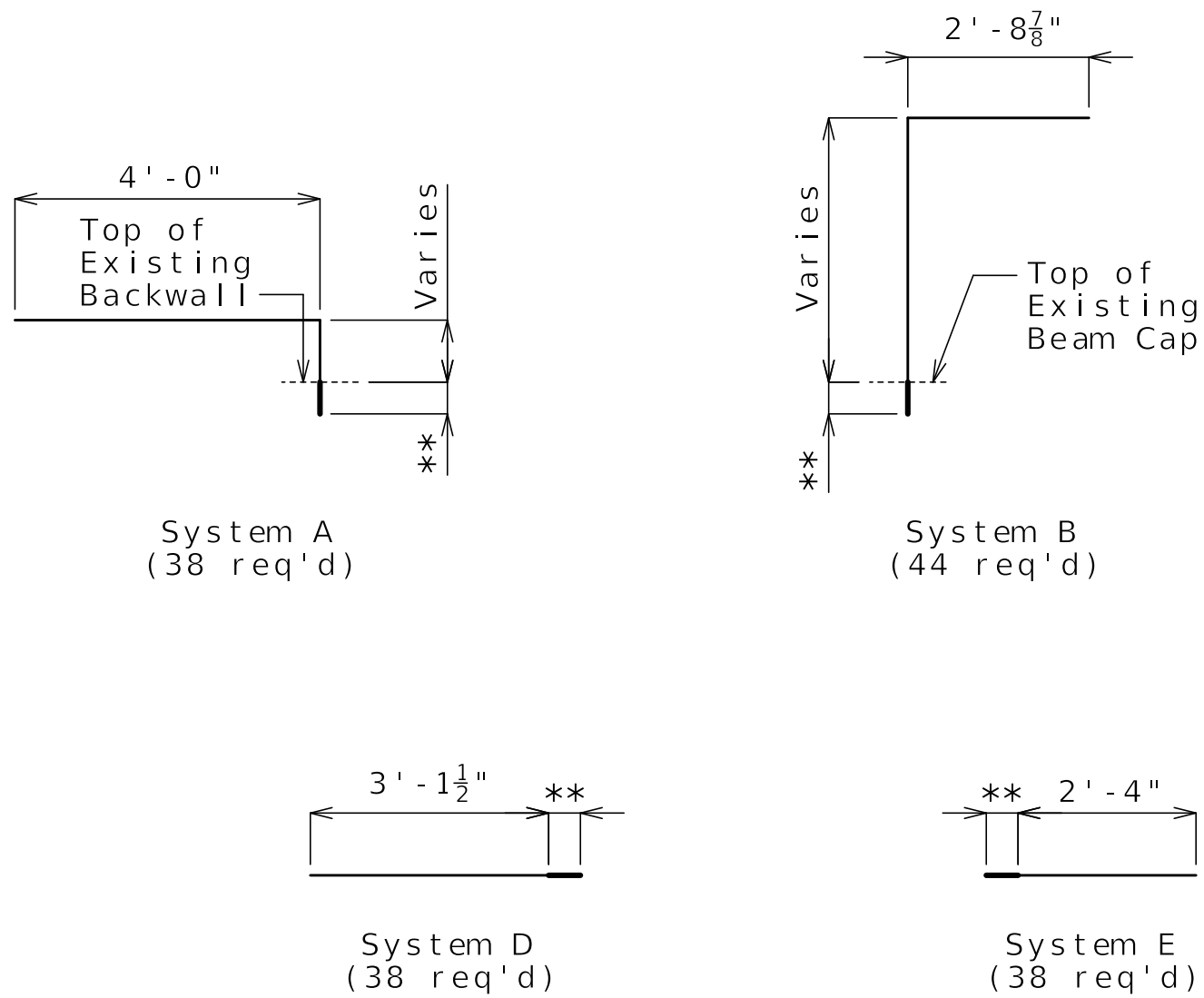
SECTION B-B



DETAILS OF WEB HOLES AT END BENTS

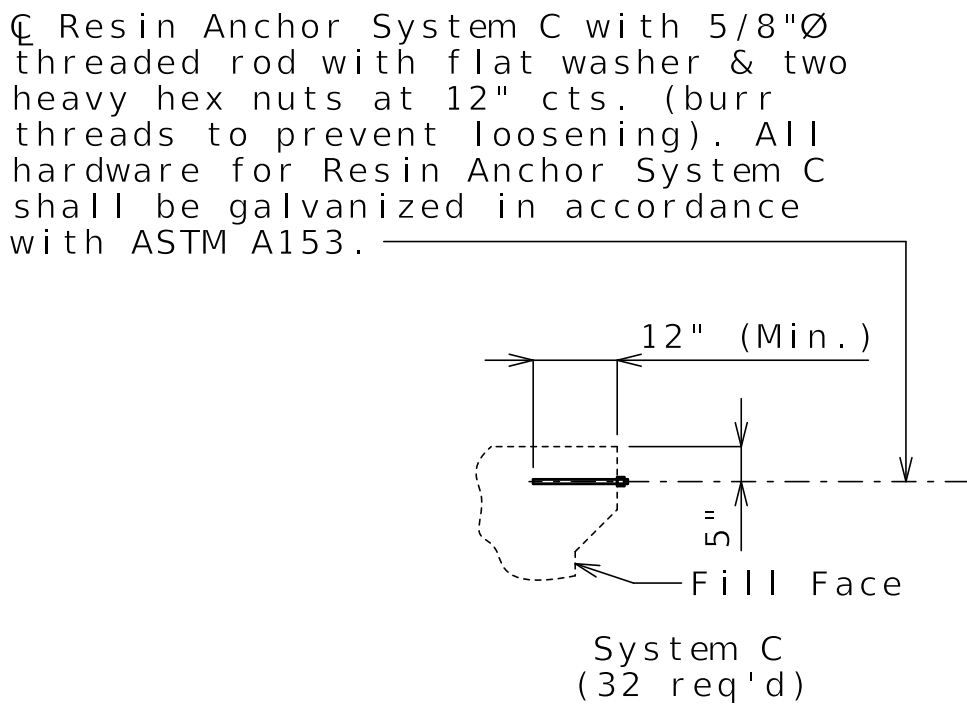


CHAMFER DETAIL



DETAILS OF RESIN ANCHOR SYSTEMS

** Manufacturer's recommended embedment length (5" min)



DETAILS OF END BENT NO. 4

Notes:

Work this sheet with Sheet No. 7.

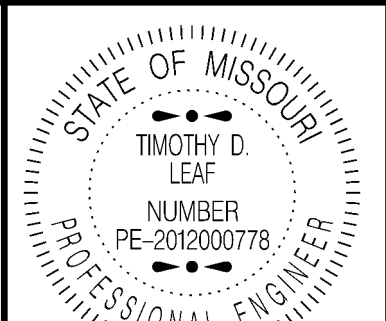
The contractor shall use one of the qualified resin anchor systems in accordance with Sec 1039.

Cost of furnishing and installing the resin anchor systems, 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 systems shall be that required to meet the minimum ultimate pull out strength in accordance with Sec 1039 but shall not be less than 5".

An epoxy coated #6 Grade 60 reinforcing bar as shown shall be substituted for the 3/4"Ø threaded rod in Resin Anchor Systems A & B.

For details and reinforcement of Type D Barrier not shown, see Sheets No. 11 & 12.



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8/10/2026

ROUTE 67
DISTRICT BR
STATE MO
SHEET NO. 8

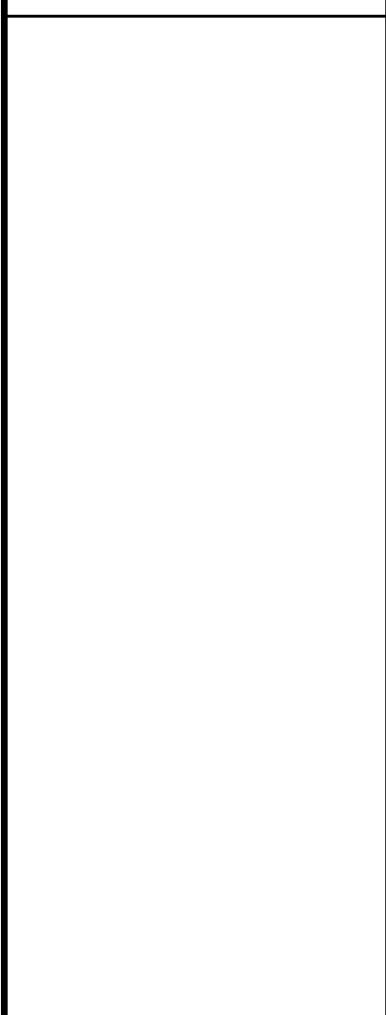
COUNTY BUTLER
JOB NO. JSE0106
CONTRACT ID.

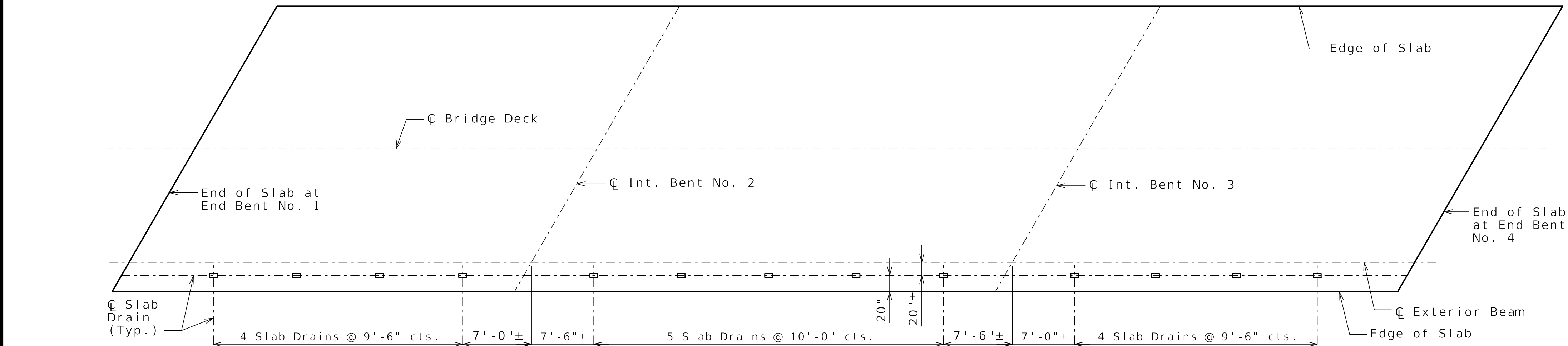
PROJECT NO.

BRIDGE NO. A05951

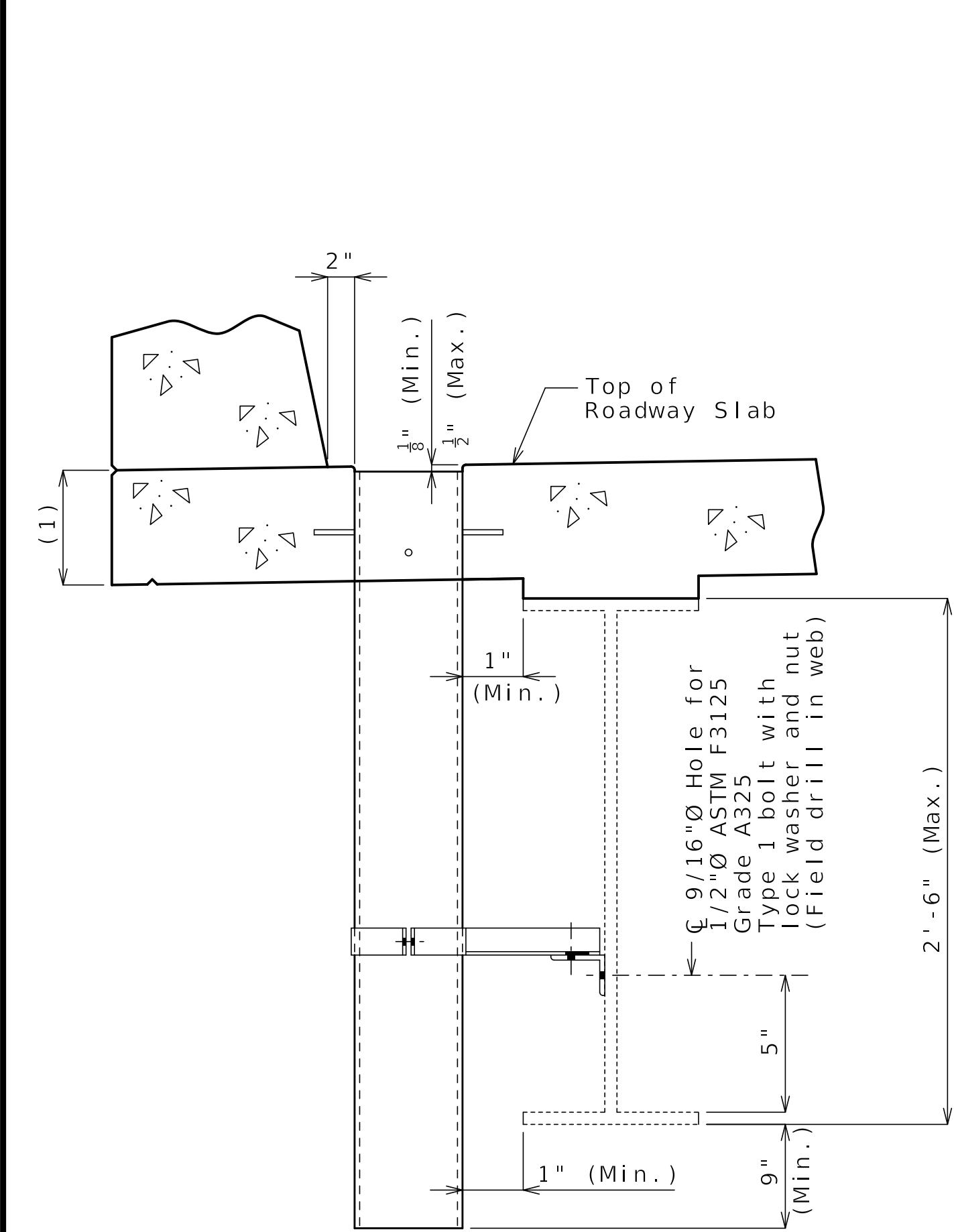
DESCRIPTION	DATE

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105 WEST CAPITOL
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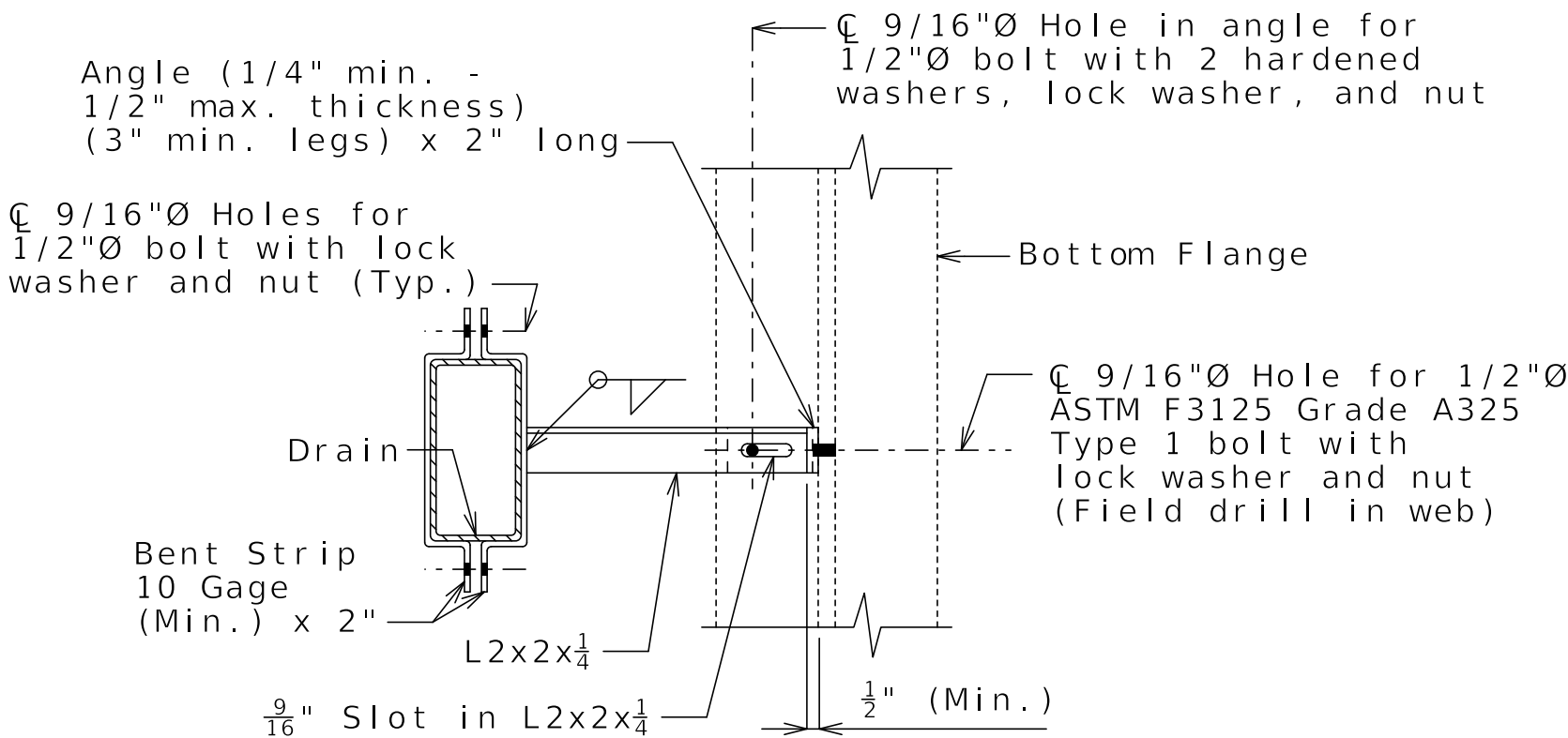




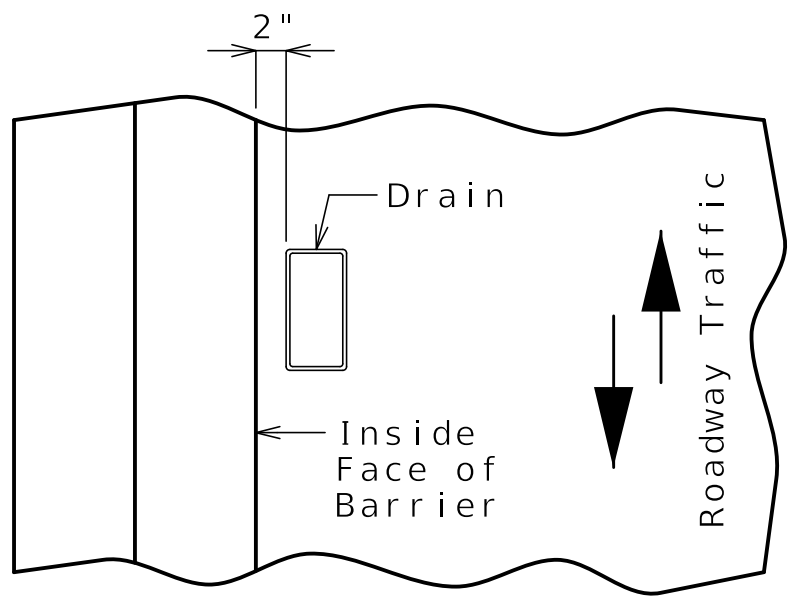
PLAN OF SLAB SHOWING SLAB DRAIN LOCATIONS



PART SECTION NEAR DRAIN

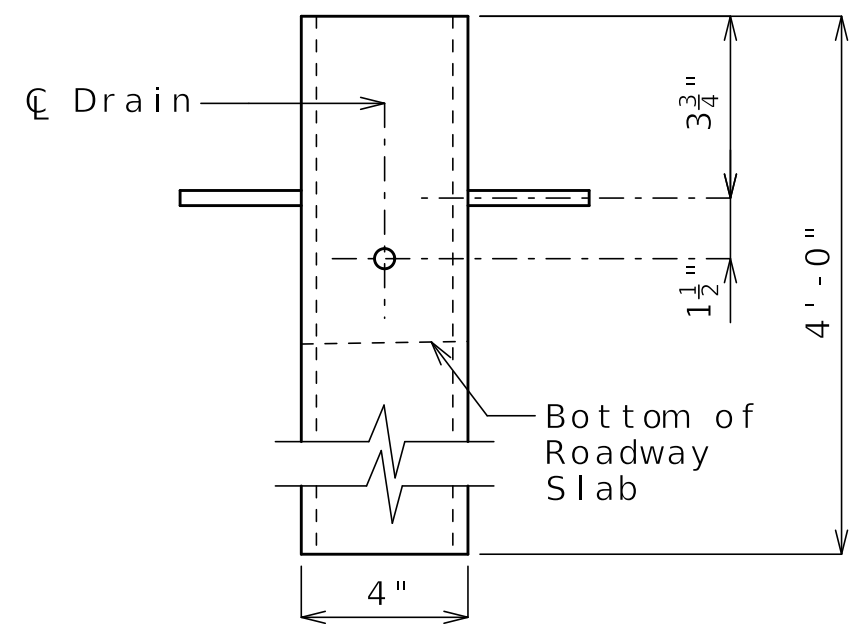


PART SECTION SHOWING BRACKET ASSEMBLY

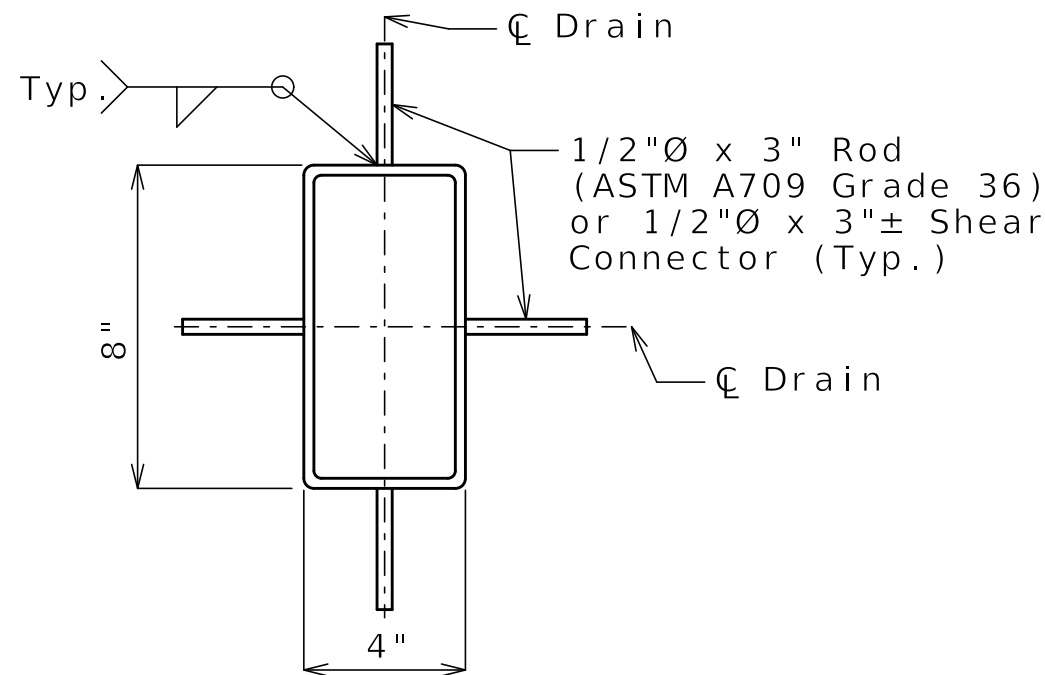


PART PLAN OF SLAB AT DRAIN

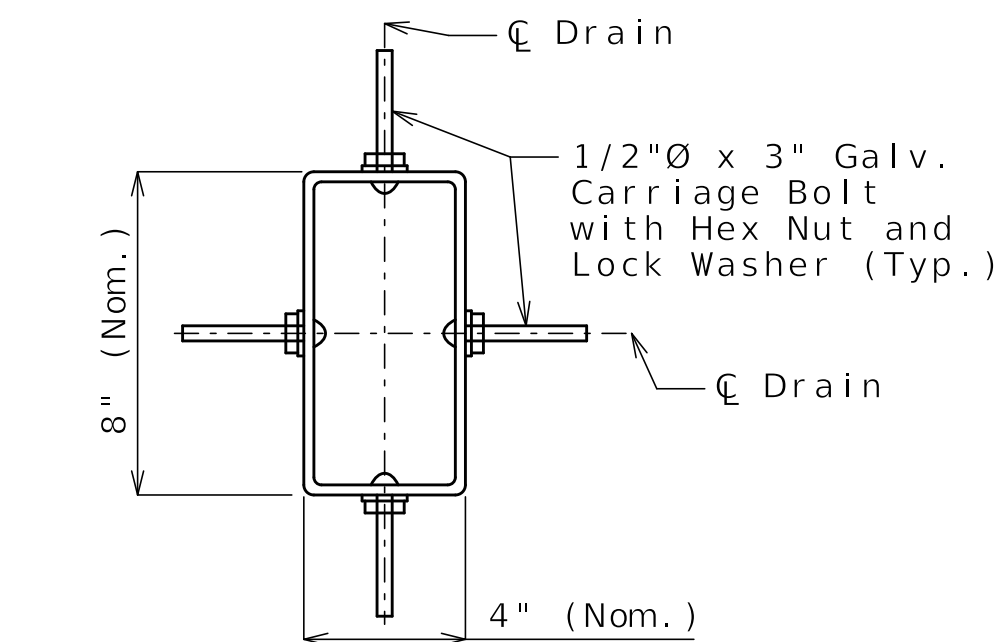
SLAB DRAINS



ELEVATION OF DRAIN



PLAN OF STEEL DRAIN OPTION



PLAN OF FRP DRAIN OPTION

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 AASHTO M 232 (ASTM A153), Class C.

All 1/2"Ø 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" welded sheets of ASTM A709 Grade 36 steel or from 1/4" 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 recommended by the manufacturer to ensure a smooth, chip free cut.



DATE PREPARED
8/10/2026
ROUTE
BU 67
DISTRICT
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MO
SHEET NO.
9

COUNTY
BUTLER

JOB NO.
JSE0106

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A05951

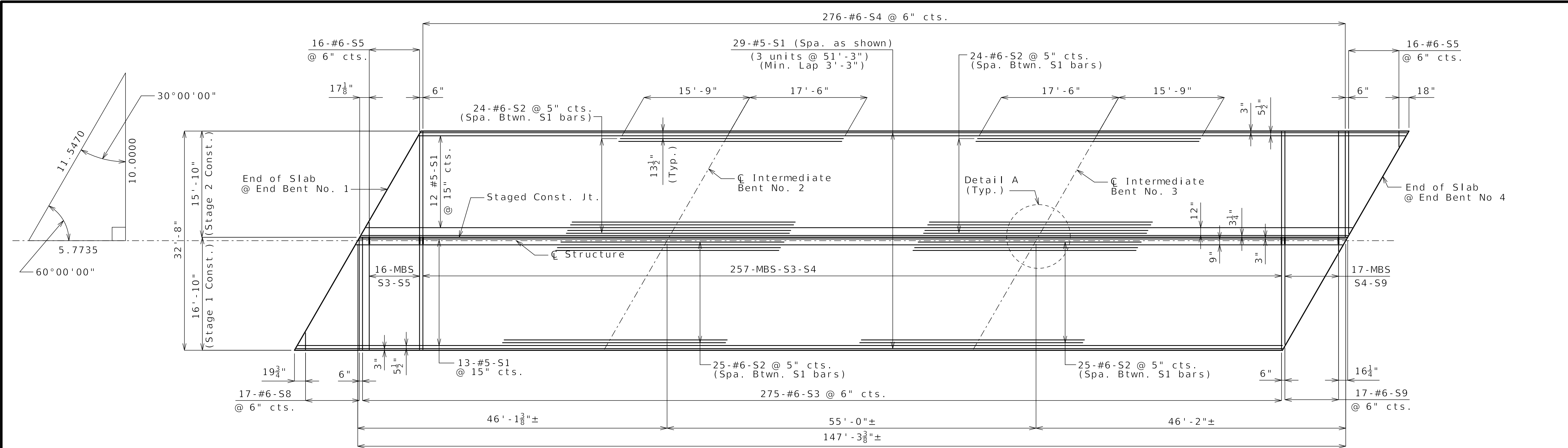
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DATE

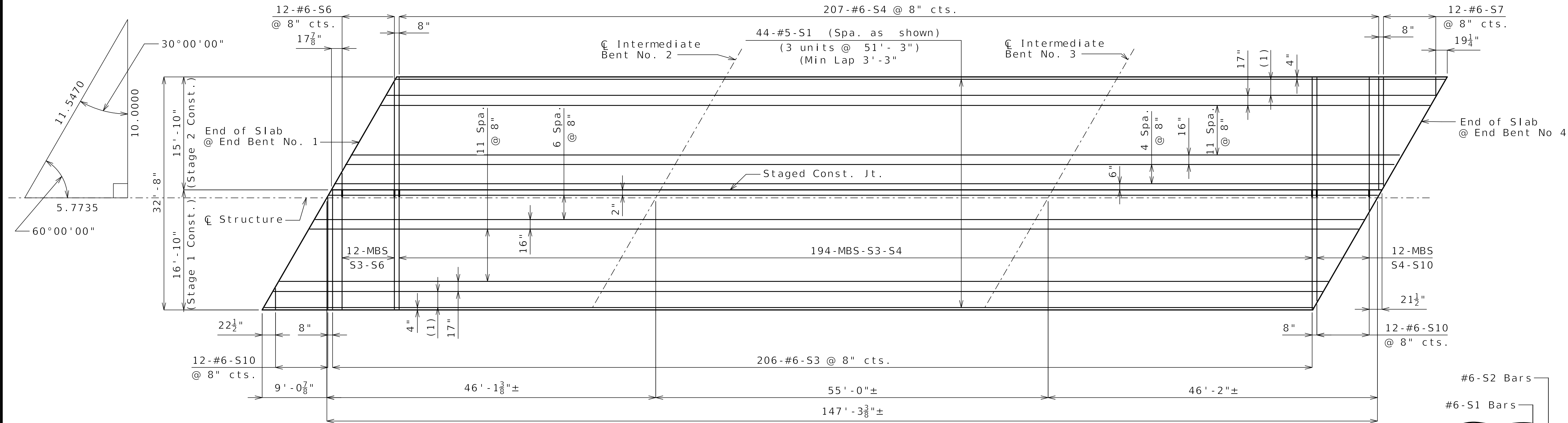
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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JEFFERSON CITY, MO 65102
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MoDOT



PLAN OF SLAB SHOWING TOP REINFORCEMENT



PLAN OF SLAB SHOWING BOTTOM REINFORCEMENT

(1) 3 Spa. @ 9"

Notes:

Longitudinal slab dimensions are measured horizontally.

For Section Thru Slab, see Sheet No. 1.

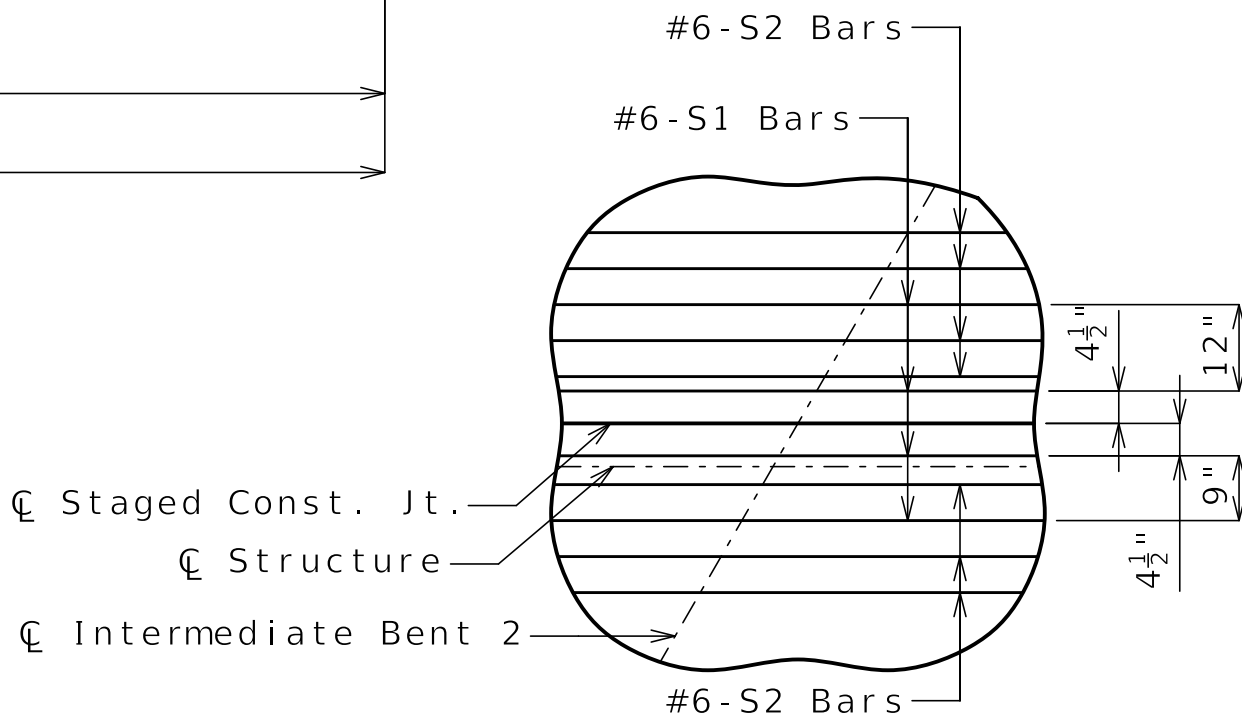
For details and locations of Slab Drains, see Sheet No. 9.

For details and reinforcement of Type D barrier not shown, see Sheets No. 12 & 13.

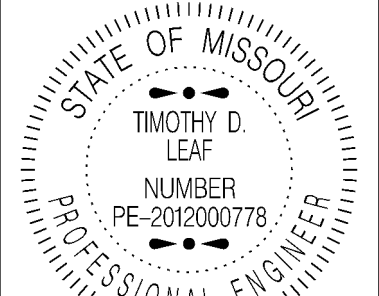
Detailed Dec. 2025
Checked Feb. 2026

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

Sheet No. 10 of 15



Detail A



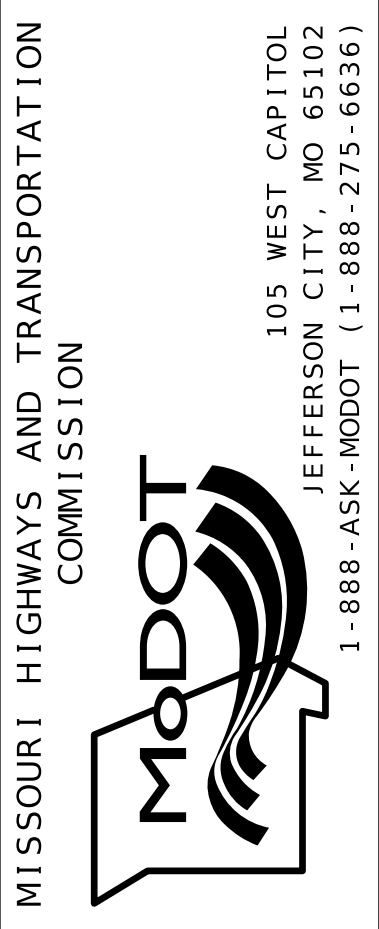
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8/10/2026
ROUTE
BU 67
DISTRICT
BR
COUNTY
BUTLER
JOB NO.
JSE0106
CONTRACT ID.

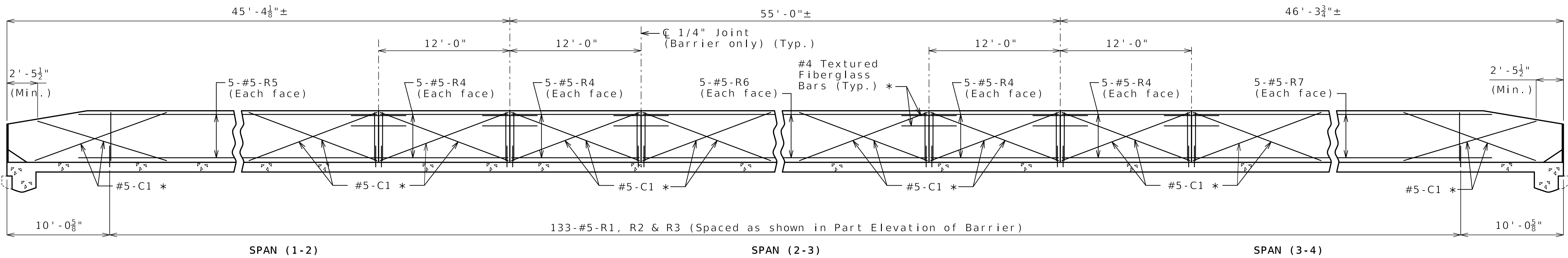
PROJECT NO.
BRIDGE NO.
A05951

DESCRIPTION

DATE

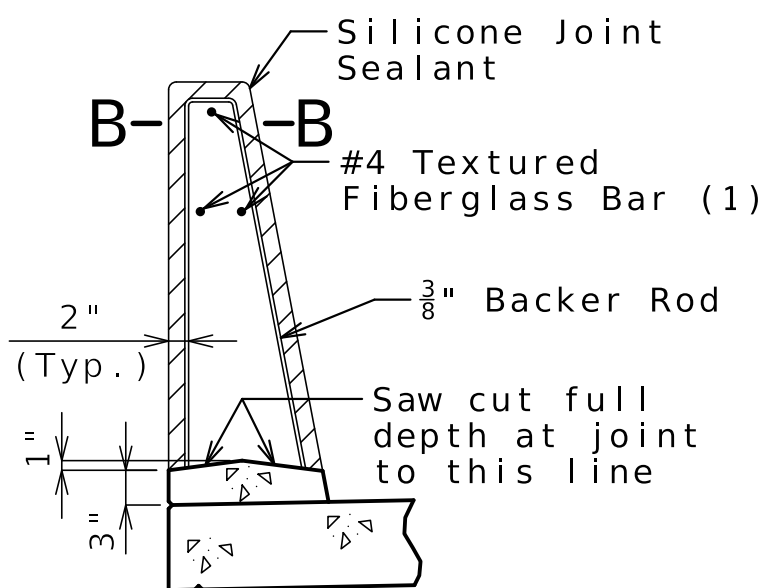
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



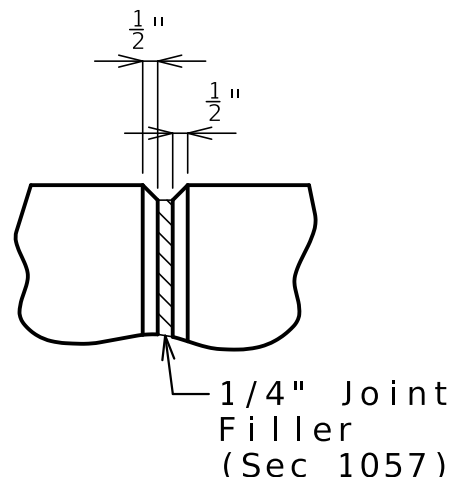


ELEVATION OF BARRIER

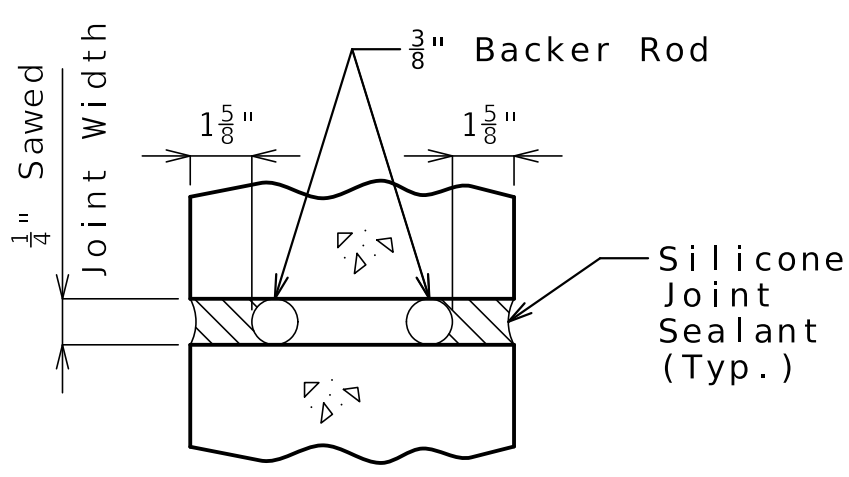
(Left barrier shown, right barrier similar by 180° rotation)
Longitudinal dimensions are horizontal.



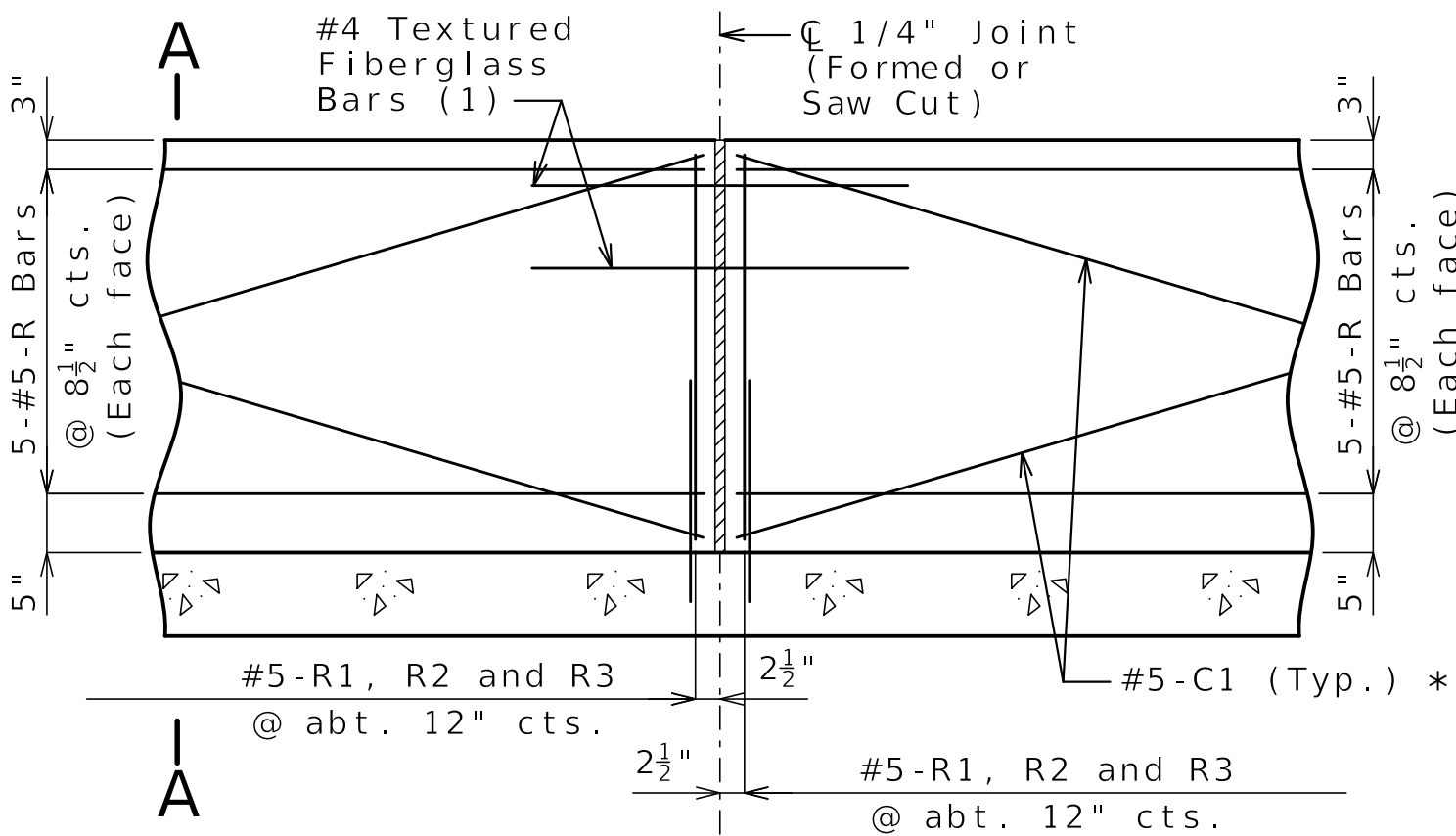
SECTION THRU SAW CUT JOINT



PART ELEVATION AT FORMED JOINT

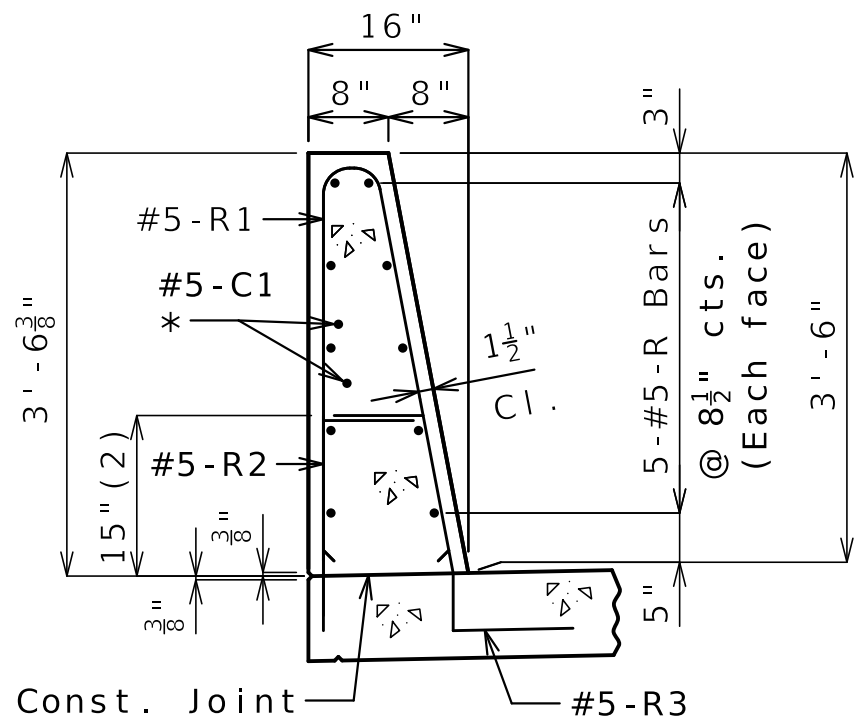


SECTION B-B



PART ELEVATION OF BARRIER

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

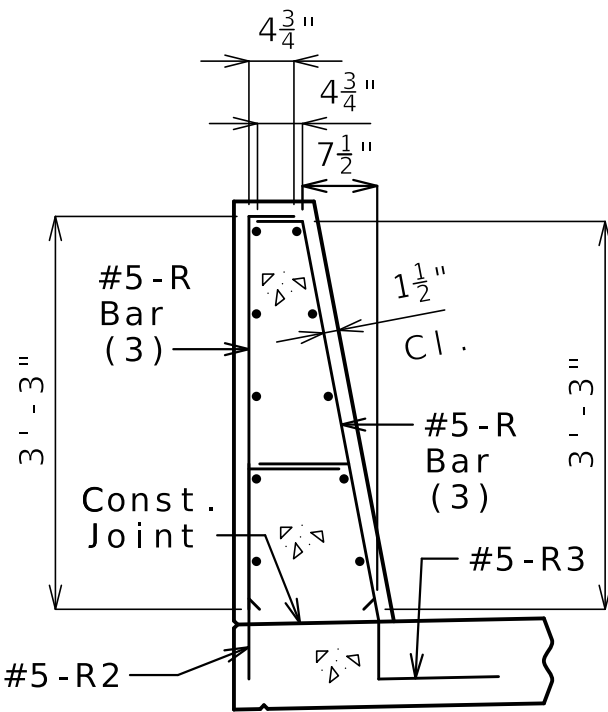


SECTION A-A

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

The cross-sectional area above the slab is 3.52 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 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 D 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 slab to end of slab.

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.

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

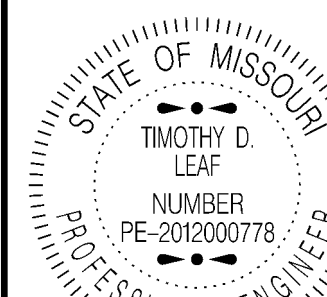
For slip-formed option, both sides of barrier shall have a vertically broomed finish and the top shall have a transversely broomed finish.

TYPE D BARRIER

Sheet No. 11 of 15

Detailed Nov. 2025
Checked Feb. 2026

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



DATE PREPARED
8/10/2026

ROUTE
BU 67

STATE
MO

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SHEET NO.
11

COUNTY
BUTLER

JOB NO.
JSE0106

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A05951

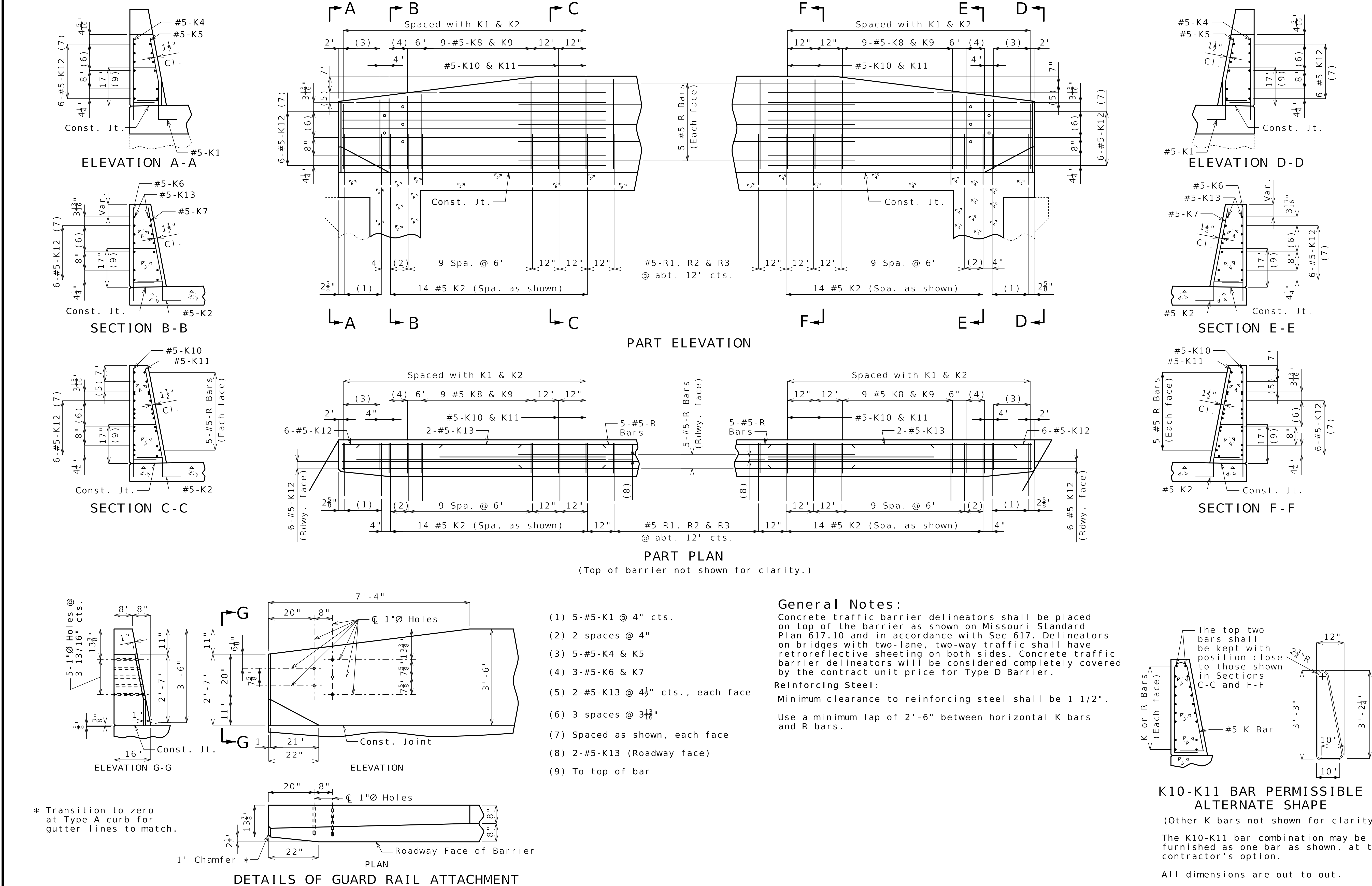
DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

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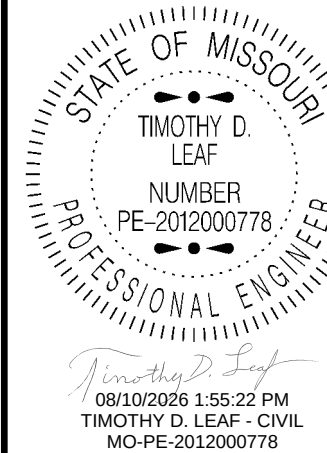


TYPE D BARRIER AT END BENTS
(Left barrier shown, right barrier similar)

Detailed Feb. 2026
Checked Feb. 2026

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

Sheet No. 12 of 15



DATE PREPARED

8/10/2026

ROUTE STATE

BU 67 MO

DISTRICT SHEET NO.

BR 12

COUNTY

BUTLER

JOB NO.

JSE0106

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

A05951

DESCRIPTION

DATE

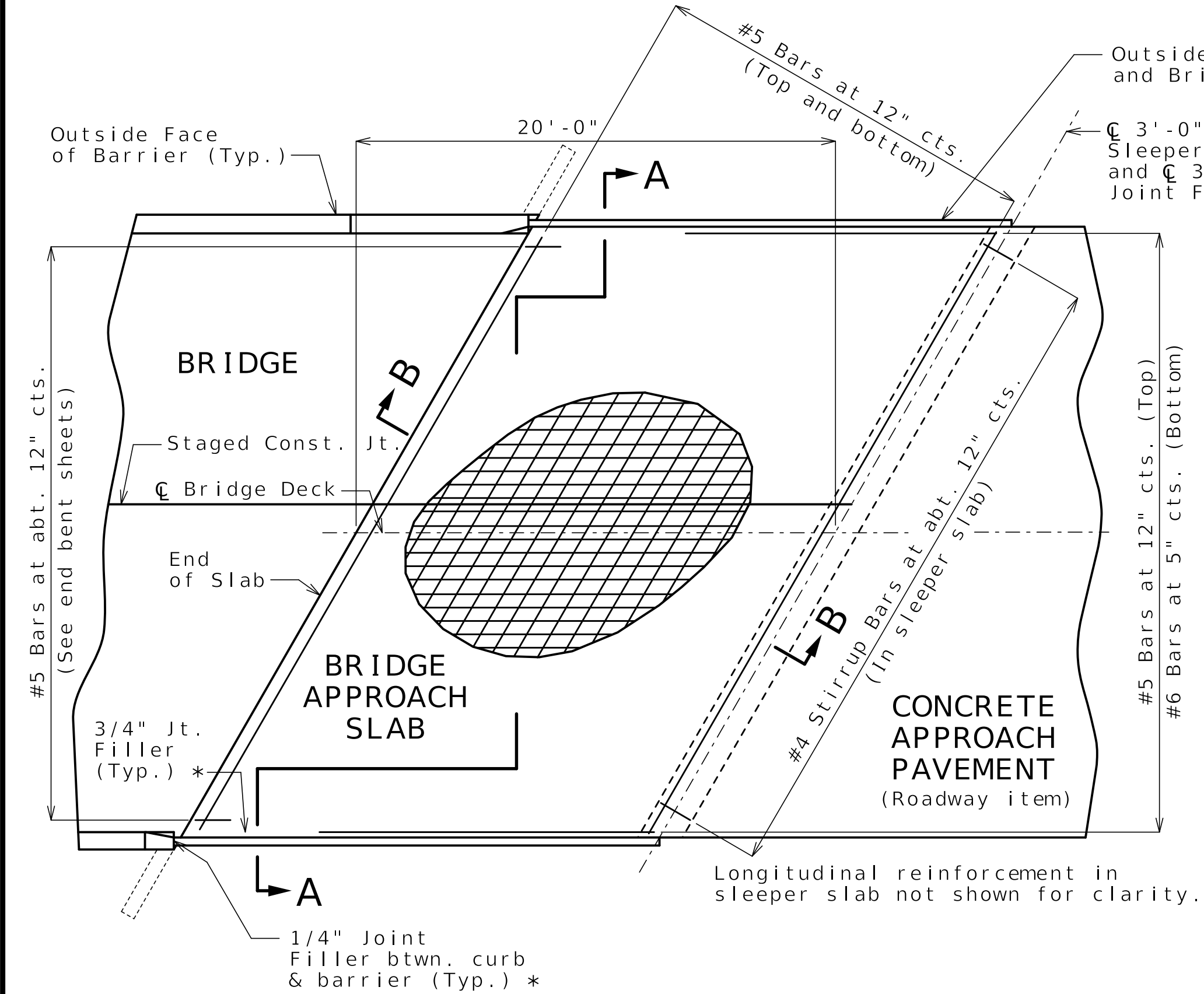
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105 WEST CAPITOL

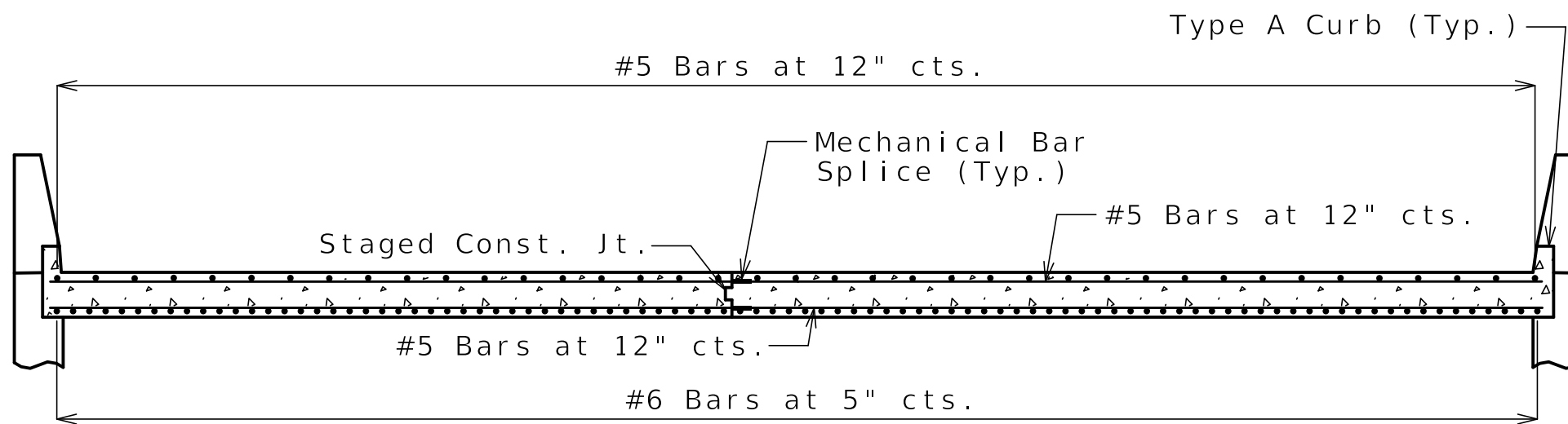
JEFFERSON CITY, MO 65102

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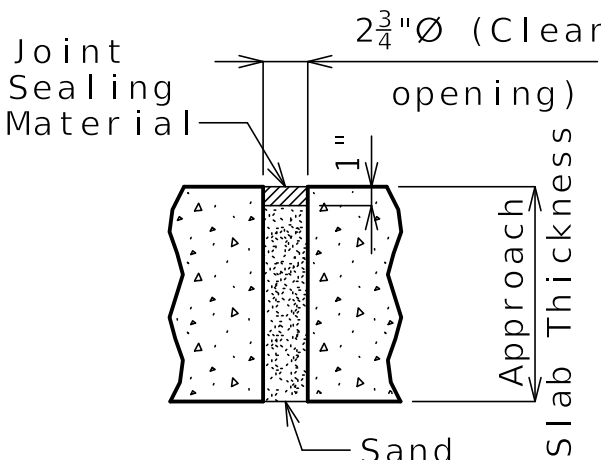
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PART PLAN SHOWING REINFORCEMENT

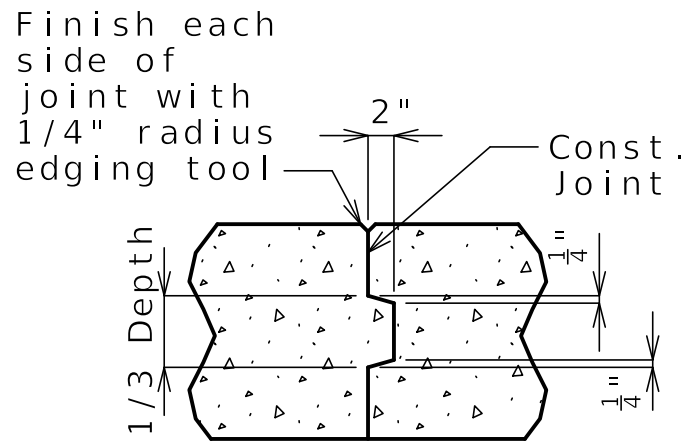


SECTION A-A

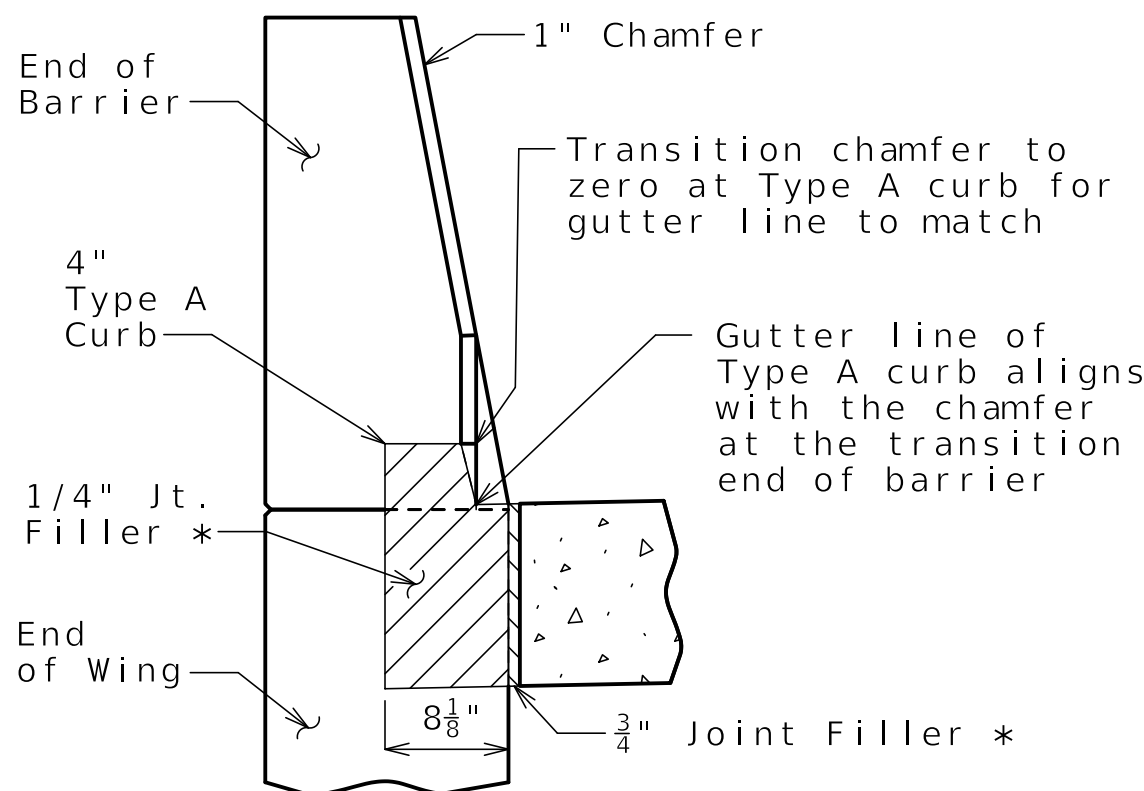


UNDERSEAL ACCESS HOLE DETAIL

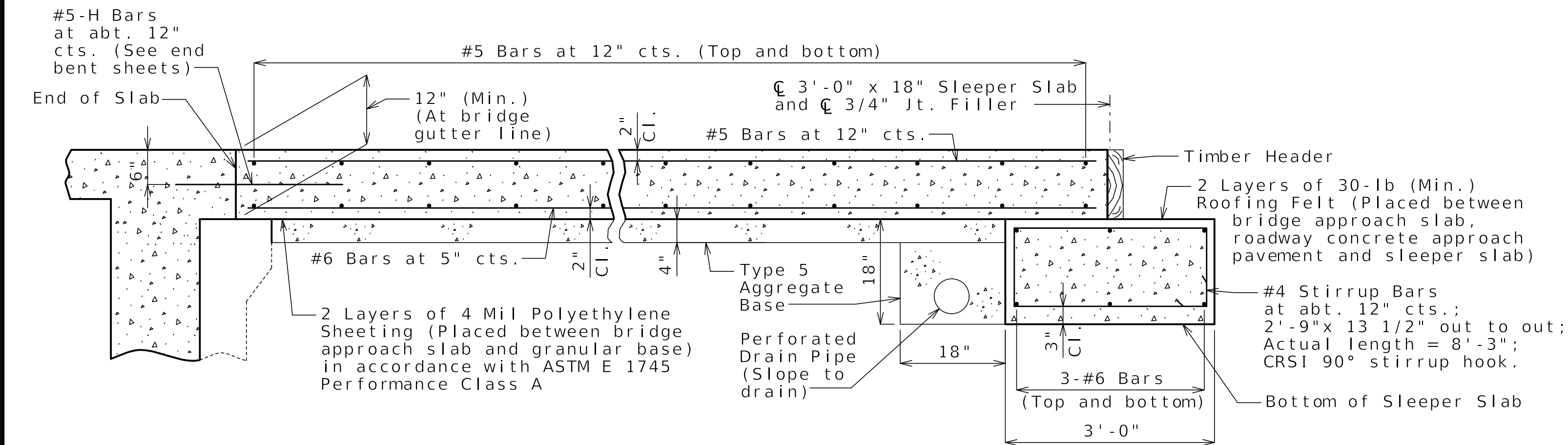
(If required)



CONSTRUCTION JOINT DETAIL



SECTION BETWEEN CURB AND BARRIER



SECTION B-B

BRIDGE APPROACH SLAB (MAJOR)

General Notes:

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

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

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.

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

The reinforcing steel in the bridge approach slab and the sleeper slab shall be continuous. The transverse reinforcing steel may be made continuous by providing a minimum lap splice of 24 inches for #5 bars and 40 inches for #6 bars, or by mechanical bar splice.

Mechanical bar splices shall be in accordance with Sec 710. (Estimated 36 splices per slab)

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

The contractor shall pour and satisfactorily finish the bridge slab before placing the bridge approach slab.

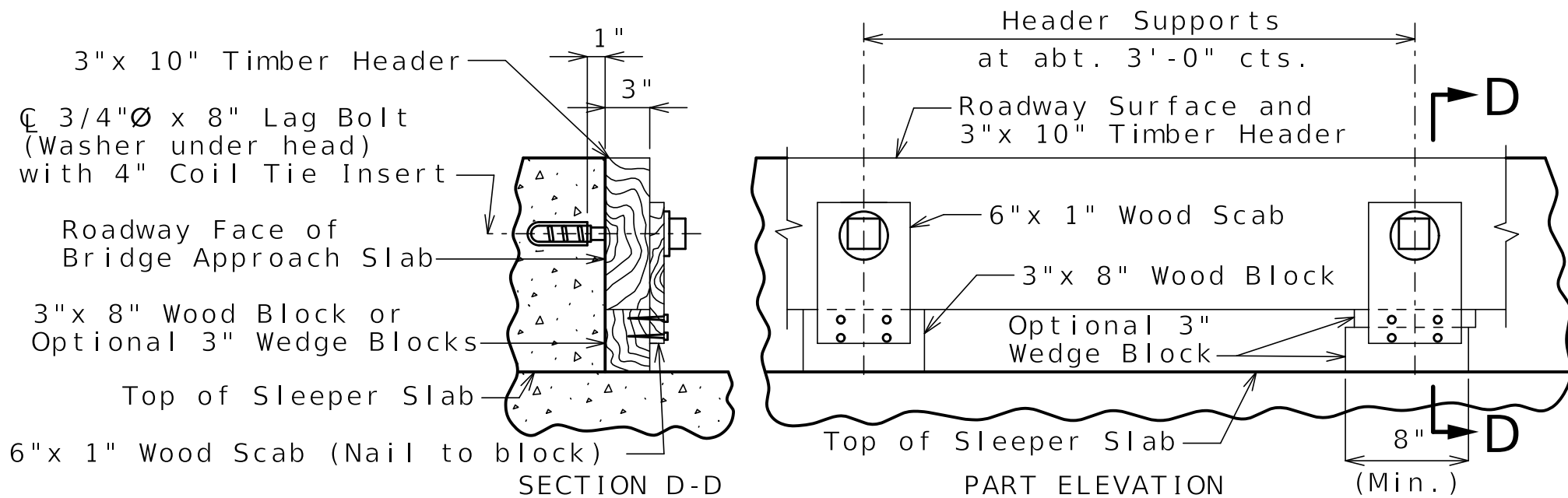
Longitudinal construction joints in approach slab and sleeper slab shall be aligned with longitudinal construction joints in bridge slab.

For concrete approach pavement details, see roadway plans.

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

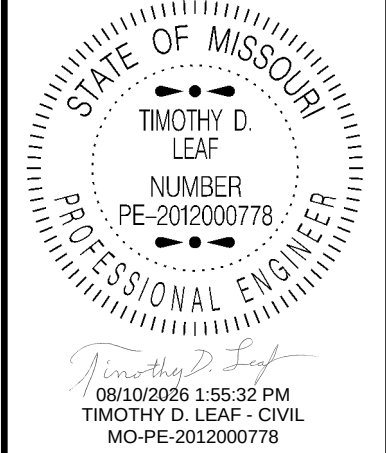
Payment for furnishing all materials, labor and excavation necessary to construct the approach slab, including the timber header, sleeper slab, underdrain, Type 5 aggregate base, joint filler and all other appurtenances and incidental work as shown on this sheet, complete in place, will be considered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

* 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.



DETAILS OF TIMBER HEADER

Remove timber header when concrete pavement is placed.



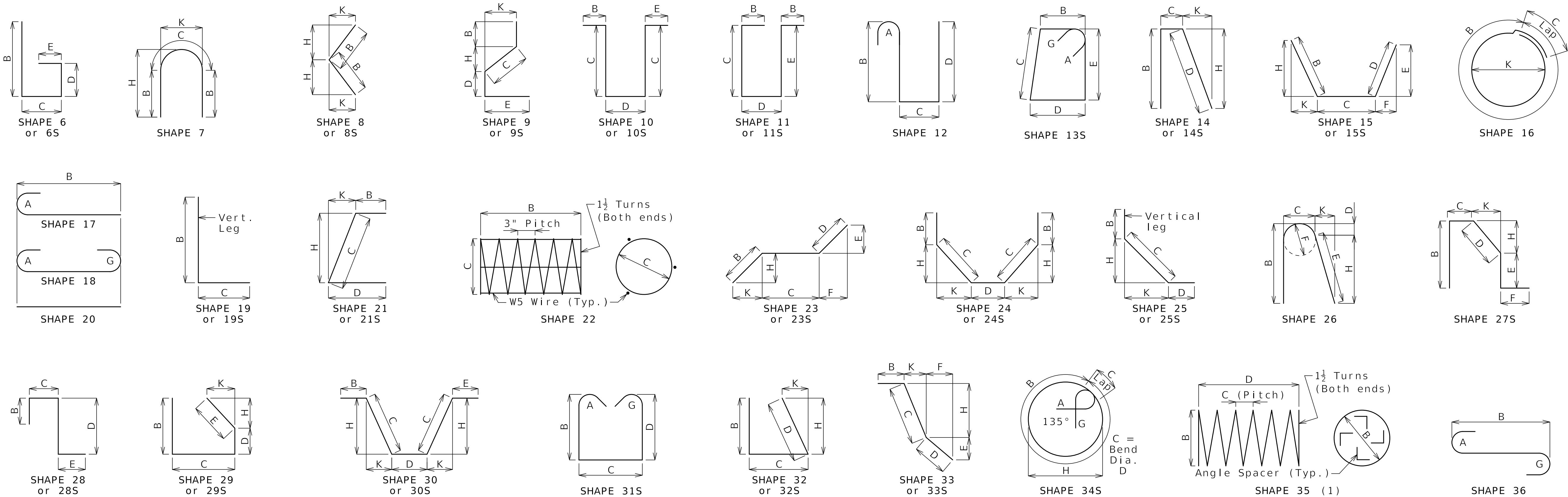
DATE PREPARED 8/10/2026	
ROUTE BU 67	STATE MO
DISTRICT BR	SHEET NO. 13
COUNTY BUTLER	
JOB NO. JSE0106	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. A05951	

DESCRIPTION	DATE

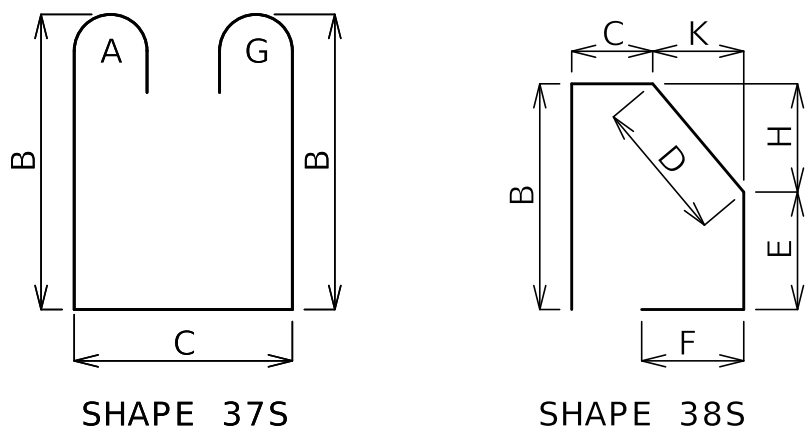
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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Finished Bend Dimensions 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	3 ³ / ₄ "	10"	7"	5"	
#6	1	4 ¹ / ₂ "	12"	8 ¹ / ₄ "	6"	
#7	2	5 ¹ / ₄ "	14"	9 ³ / ₄ "	7"	
	3	7"	15"	11 ¹ / ₂ "	8 ³ / ₄ "	
#8	2	6"	16"	11"	8"	
	3	8"	17"	13 ¹ / ₄ "	10"	
#9	1	9 ¹ / ₂ "	19 ¹ / ₂ "	15 ¹ / ₂ "	11 ³ / ₄ "	
#10	1	10 ³ / ₄ "	22"	17 ¹ / ₂ "	13 ¹ / ₄ "	
#11	1	12"	24 ¹ / ₂ "	19 ¹ / ₂ "	14 ⁷ / ₈ "	
#14	1	18 ¹ / ₄ "	31 ¹ / ₄ "	27 ¹ / ₂ "	21 ⁵ / ₈ "	
#18	1	24"	41 ¹ / ₂ "	36 ¹ / ₄ "	28 ¹ / ₂ "	
Stirrup Pin Bend Shapes (S)						
Size	Case	D	A or G			J
			90°	135°	180°	
#4	2	2"	4 ¹ / ₂ "	4 ¹ / ₂ "	5"	2 ⁷ / ₈ "
	3	3"	5"	5 ¹ / ₄ "	6"	3"
#5	2	2 ¹ / ₂ "	5 ³ / ₄ "	5 ³ / ₄ "	5 ³ / ₄ "	3 ³ / ₄ "
	3	3 ³ / ₄ "	6 ¹ / ₄ "	6 ¹ / ₂ "	7"	3 ⁷ / ₈ "
#6	1	4 ¹ / ₂ "	12"	7 ³ / ₄ "	8 ¹ / ₄ "	4 ⁵ / ₈ "
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.						



BENDING DIAGRAMS

All dimensions are out to out. (1) Shall be a deformed or plain spiral bar or wire.

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.

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)								
	Size	Substructure		Superstructure			Entire Bridge	
		Plain	Coated	Slab		Barrier	Slip Form	
				Plain	Coated			
By Size	W5	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0
	5	0	0	0	11,878	7,607	501	19,986
	6	0	0	0	31,036	0	0	31,036
	7	0	0	0	0	0	0	0
	8	0	0	0	0	0	0	0
	9	0	0	0	0	0	0	0
	10	0	0	0	0	0	0	0
	11	0	0	0	0	0	0	0
	14	0	0	0	0	0	0	0
	18	0	0	0	0	0	0	0
By Type		0	0	0	42,914	7,607	501	51,022

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

BENDING DIAGRAMS AND REINFORCING STEEL TOTALS

STATE OF MISSOURI
TIMOTHY D. LEAF
NUMBER
PE-2012000778
PROFESSIONAL ENGINEER

Timothy D. Leaf
08/10/2026 1:55:41 PM
TIMOTHY D. LEAF - CIVIL
MO-PE-2012000778

DATE PREPARED
8/10/2026

ROUTE
BU 67

DISTRICT
BR

STATE
MO

SHEET NO.
14

COUNTY
BUTLER

JOB NO.
JSE0106

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A05951

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

