DESIGN DESIGNATION

A.A.D.T. - 2025 = 493

A.A.D.T. - 2045 = 544

V = 55 M.P.H.

D = 51.8%FUNCTIONAL CLASSIFICATION- MAJOR COLLECTOR

RTE FF

A.A.D.T. - 2025 = 93

A.A.D.T. - 2045 = 103

D.H.V. = 12.5%

T = 10.9%

V = 55 M.P.H.

LOCATION OF PUTNAM, MERCER

D = 50.5%

FUNCTIONAL CLASSIFICATION- MINOR COLLECTOR

RTE JJ

A.A.D.T. - 2025 **=** 130

A.A.D.T. - 2045 = 143 D.H.V. = 7.09%

T = 13.4%

V = 55 M.P.H.

D = 52.8%

FUNCTIONAL CLASSIFICATION- MAJOR COLLECTOR

RTE OO

A.A.D.T. - 2025 = 253

A.A.D.T. - 2045 = 286D.H.V. = 9.17%

V = 55 M.P.H.

D = 50.0%

0

 \boxtimes

FUNCTIONAL CLASSIFICATION- MAJOR COLLECTOR

NO RIGHT OF WAY ACQUISITION

CONVENTIONAL SYMBOLS (USED IN PLANS)

BUILDINGS AND STRUCTURES C==0 **==** GUARD RAIL •••• GUARD CABLE CONCRETE RIGHT-OF-WAY MARKER STEEL RIGHT-OF-WAY MARKER LOCATION SURVEY MARKER UTILITIES FIBER OPTICS -FO- -FO-

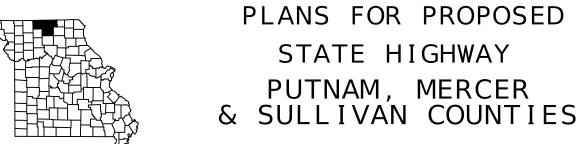
FIBER OPTICS	-ru- -ru-
OVERHEAD CABLE TV	-OTV OTV
UNDERGROUND CABLE TV	-UTV- -UTV-
OVERHEAD TELEPHONE	-OT- OT
UNDERGROUND TELEPHONE OVERHEAD POWER	– UT – UT – – OE – OE –
UNDERGROUND POWER	- UE UE -
SANITARY SEWER	- S S-
STORM SEWER	-SS- -SS-
GAS	—G— — G
WATER	—₩— —₩
MANHOLE	SAN
FIRE HYDRANT	C HAD
WATER VALVE	****
WATER METER	^{₩M} ⊕
DROP INLET	
DITCH BLOCK	=
GROUND MOUNTED SIGN	S I GN
LIGHT POLE	
H-FRAME POWER POLE	
TELEPHONE PEDESTAL	PED

NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES

FENCE CHAIN LINK WOVEN WIRE GATE POST

BENCHMARK

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION





NOT TO SCALE

LOCATION (& SULL	DF PUTNAM, ME IVAN COUNTIE	RCER S					_		P0833	2	
	DOLLTE	N097	31 DGE REDI	ECV			₹ R	OUTE F. 0	F BRID .054 M	GE REDEC	<u> 7</u>
4		0.0620		CK V	Ø.						, /
	STA. PA			ار ا ا	<u>EG1</u>		2,7	N S PACE			/EC1
	Y. 200	·,		,	28 P			55×50×			PROJ 58+1)
	77. 78. X				54,0			27.60	>		~/ "
Α.		.60			1.62 7.67			V			STA.
\times \times	GIV P.			Iowa			964				
EDECK	623.PO/E	4	South Lineville (w	Powersville		THIN	LAKE 3 NDERHEAD	CC 4 129	OD N	
REI	623+90/ECT	Saline	1 thing 1	ercer	M	139 E		_ / ~ (5)	2 YY		TOON
1 ES	9		P (65)		Z	6	Ē	Jnionville 2	Y	149 Vivonia	T66N
3361 IDGE MILI		WW B	13	avanna 2	2	2 erne C 58			Hartfo 136	Glendale	
A26361 BRIDGE 65 MILE		Pah CA		AA NO	<u> </u>		_	NAM .	w w	Graysville FF	T65N
E E E 065		CC LAKE	2	(136) C		KK (K	HH	Lemons [F 1 -	Martinstown Worth	
П 0.		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	rinceton 2		N	ewtown EE		Pollock	AB	AA 3 0	
<u> </u>		3	Mill 65 S		5 KK	_ \	BB 5	M B	Union Ridge CA	- 4	T64N
ROUTI	PROJECT	Modena			Harris			Boynton	(YY	Dy	
STA.			ERCER 4	JJ	8 <u>ww</u>			N	3 Green Castle	4 O	T 60N
			Spickard B		[139 III	- IN	6 5	RA J 5	Green City FF	5	T63N
	PROJECT 242+44.17	A A	6 Y		Y	PP	Milan E	4 HI		K	
END STA.	242+44.11	37 6	indati	J f	sgood 15	W Cre	ocust ek CA 3		C Mystic H	BB DD	T62N
EDECK		e Brimson	$\frac{1}{2}$	T T	2 3	Reger 2 4	26	CC	С	Y 5	
		SP.	28 TRENTO	Dunlap ³ Ga	* L	mphreys	T	NN V	129	3_2	
ES ES		6 Edinburg 4		tral V	/ 139 JJ 7	DD Z		VANU {	10		T61N
1111 .		190 6	Missouri C	ollege E	T_{\bullet}	(\ \	Browning	00	Winigan		
MI MI		ww	8 Z	M	E	IM	5			3	T CON
NO2542 JJ BRIDGE 0.048 MIL	45/6	F	GRUNDY 5				5 KK	Shelby	PP 11	5 Goldsi	T60N
		<u> </u>	<u> </u>	, I	<u> </u>	- 1		1 5	1 -		_
	\$\langle \gamma^3\rangle	R25W	24W	23W	22W	21W	20W	1 9 W	18W	1 7 W	R16W
ROUTE	··	~	٣	~	~	~	~	~	~	₾	~
2√ 2											

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

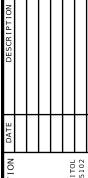
DESCRIPTION	SHEET NUMBER
TITLE SHEET	1
TYPICAL SECTIONS (TS) (4 SHEETS)	2
QUANTITIES (QU) (6 SHEETS)	3
PLAN-PROFILE (PP)	4 - 7
REFERENCE POINTS (RP)	8
COORDINATE POINTS (CP)	9
SPECIAL SHEET (SS)	10-13
TRAFFIC CONTROL SHEETS (TC)	14-17
EROSION CONTROL (EC)	18-21
PAVEMENT MARKING (PM)	22-25
BRIDGE DRAWINGS (B)	
N09731	1 - 10
A26361	1 - 11
P08332	1 - 11
N02542	1 - 11

DONALD THOMAS SAKO NUMBER PE-28475 PE-28475 THIS SHEET HAS BEALED AND DATED ELECTRONICALLY.	

SIGNED, SEALED AND DATED ELECTRONICALLY.							
DATE P	REPARED						
10/7/2025							
ROUTE	STATE						
F/JJ/00 MO							
DISTRICT	SHEET NO.						
NW 1							
COUNTY							
VAR.							
LOD NO							

JOB NO.
JNW0014
CONTRACT ID.
PROJECT NO.

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	BRIDGE NO.									
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BEGIN END	623+90.75 627+35.54	
APPARENT LENGTH EQUATIONS AND EXCEPTIONS: TOTAL CORRECTIONS	344.79 NONE 0.00	FEET
RTE FF		
BEGIN END	55+32.50 58+17.67	
APPARENT LENGTH EQUATIONS AND EXCEPTIONS: TOTAL CORRECTIONS	285.17 NONE	FEET
RTE JJ	0.00	FEET
BEGIN END	239+91.00 242+44.17	
APPARENT LENGTH EQUATIONS AND EXCEPTIONS: TOTAL CORRECTIONS	253.17 NONE 0.00	FEET
RTE OO		
BEGIN END	 285+41.62 288+69.60	
APPARENT LENGTH EQUATIONS AND EXCEPTIONS:	327.98 NONE	FEET
TOTAL CORRECTIONS	0.00	FEET

NET LENGTH OF PROJECT

FOR INFORMATION ONLY ESTIMATED DISTURBED ACRES

STATE LENGTH

RTE E

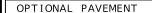




1.211.11 FEET

0.229 MILES

1.24 ACRES



10.0" HMA

2" BITUMINOUS PAVEMENT MIXTURE PG58-28H (BP-1)
OVER 8" BITUMINOUS PAVEMENT MIXTURE PG64-22 (BASE)
ON 4" TYPE 1 AGGR. FOR BASE

OR

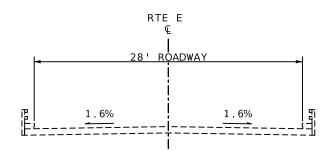
8" JPCP

ON 4" TYPE 1 AGGR. FOR BASE

OPTIONAL BRIDGE APPROACH SLAB(MINOR)

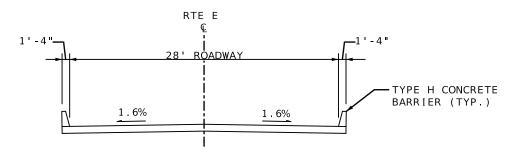
12" MIN. HMA OR REINFORCED PCC

(1) TRANSITION FROM EXIST. TO 12' STA. 623+90.75 TO STA. 624+40.75 TRANSITION FROM 12' TO EXIST. STA. 626+74.73 TO STA. 627+35.54

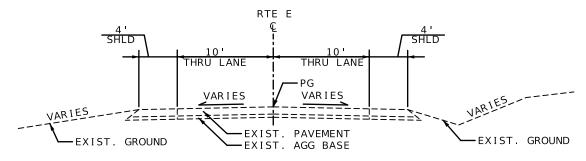


EXISTING TYPICAL SECTION - BRIDGE A2636

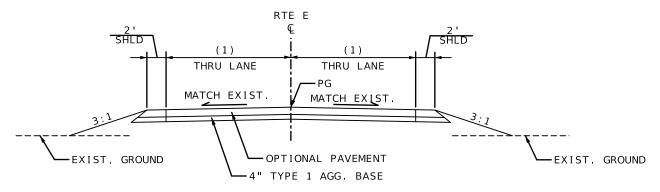
STA. 624+59.75 TO STA. 626+54.25



TYPICAL SECTION - BRIDGE A26361 STA. 624+59.75 TO STA. 626+54.25

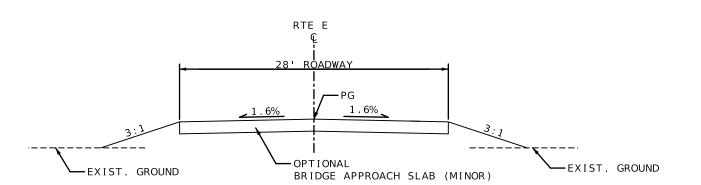


EXISTING TYPICAL SECTION



TYPICAL ROADWAY SECTION

STA. 623+90.75 TO STA. 624+40.25 STA. 626+73.75 TO STA. 627+35.54



APPROACH SLAB SECTION

STA. 624+40.25 TO STA. 624+60.25 STA. 626+53.75 TO STA. 626+73.75

RTE E

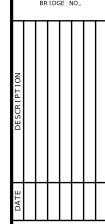
TYPICAL SECTIONS SHEET 1 OF 4



DATE PREPARED				
10/7/2025				
ROUTE	STATE			
FF/JJ/00 MO				
DISTRICT	SHEET NO.			
NW 2				
COUNTY				
١/٨	D			

COUNTY
VAR.
JOB NO.
JNW0014
CONTRACT ID.

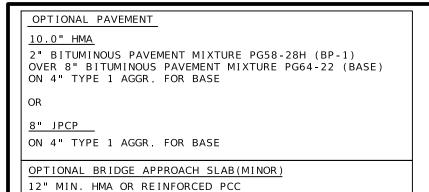
PROJECT NO.



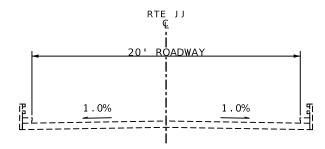


JARVER. LLC.
1509 NW TIFFANY SPRINGS
AARKWAY, SUITE 200
ANSAS CITY, MO 64153
HOME: (816) 298-6465
SERIFICATE OF AUTHORITY
ONC. 2008013090



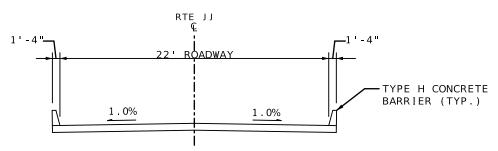


(1) TRANSITION FROM EXIST. TO 11'
STA. 239+91.00 TO STA. 240+41.00
TRANSITION FROM 11' TO EXIST.
STA. 241+94.17 TO STA. 242+44.17



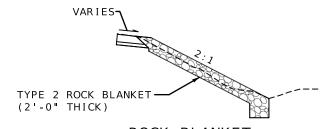
EXISTING TYPICAL SECTION - BRIDGE N02541

240+61.00 TO STA. 241+74.17



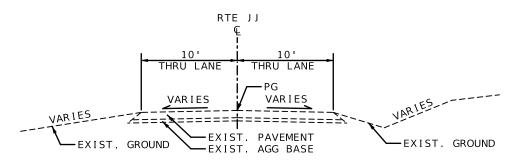
TYPICAL SECTION - BRIDGE N02542

STA. 240+61.00 TO STA. 241+74.17

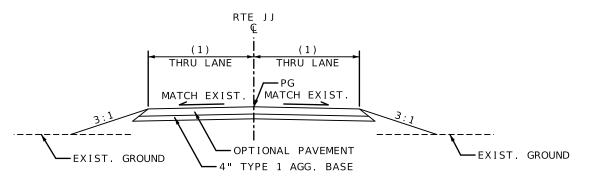


ROCK BLANKET

STA. 241+74.17 TO STA. 241+90.00

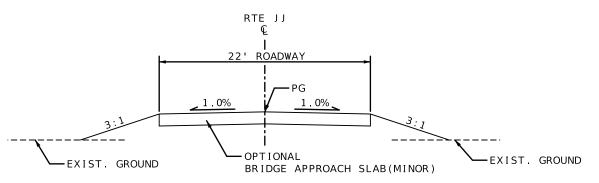


EXISTING TYPICAL SECTION



TYPICAL ROADWAY SECTION

STA. 239+91.00 TO STA. 240+41.00 STA. 241+94.17 TO STA. 242+44.17



APPROACH SLAB SECTION

STA. 240+41.00 TO STA. 240+61.00 STA. 241+74.17 TO STA. 241+94.17

RTE JJ

TYPICAL SECTIONS SHEET 3 OF 4



DATE PREPARED						
10/7/2025						
ROUTE	STATE					
/FF/JJ/00	MO					
DISTRICT	SHEET NO.					
NW 2						
COLL	MITW					

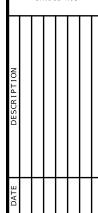
VAR.

JOB NO.

JNW0014

CONTRACT ID.

PROJECT NO.



COMMISSION
COMMISSION

105 WEST CAPITOL

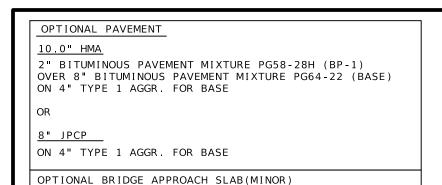
105 WEST CAPITOL

105 WEST CAPITOL

105 WEST CAPITOL

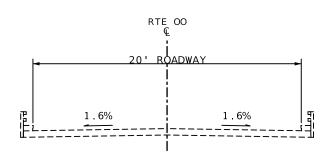
NOTE. LLC.
09 NW TIFFANY SPRINGS
NW TIFFANY SUITE 200
NSAS CITY. MO 64153
ONE: (816) 298-6465
NTIFICATE OF AUTHORITY
2008013090





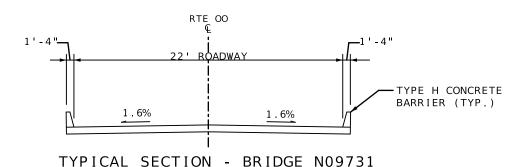
(1) TRANSITION FROM EXIST. TO 11'
STA. 285+41.62 TO STA. 285+76.10
TRANSITION FROM 11' TO EXIST.
STA. 288+19.60 TO STA. 288+69.60

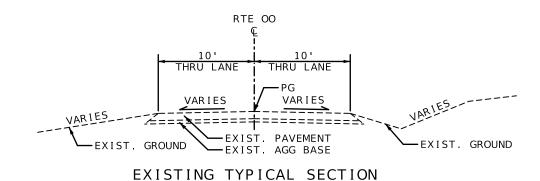
12" MIN. HMA OR REINFORCED PCC

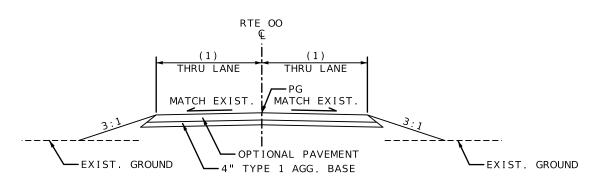


EXISTING TYPICAL SECTION - BRIDGE N0973 STA. 285+96.10 TO STA. 287+99.60

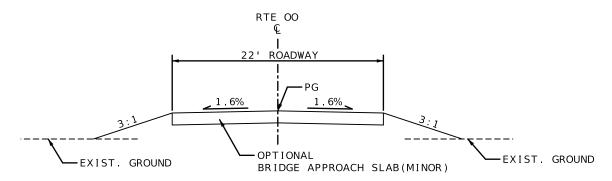
STA. 285+96.10 TO STA. 287+99.60



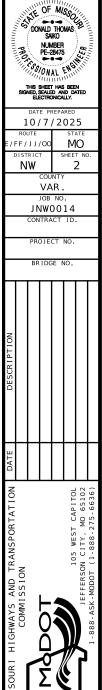




TYPICAL ROADWAY SECTION STA. 285+41.62 TO STA. 285+76.10 STA. 288+19.60 TO STA. 288+69.60



APPROACH SLAB SECTION STA. 285+76.10 TO STA. 285+96.10 STA. 287+99.60 TO STA. 288+19.60



DARVER, LLC.
7509 NW TIFFANY SPRINGS
7504 NW TIFFANY SOUTE 200
6ANSAS CITY, MO 64153
PHONE: (816) 298-6465
CERTIFICATE OF AUTHORITY
ON. 2008013090

GARVER

NOT TO SCALE

TYPICAL SECTIONS SHEET 4 OF 4

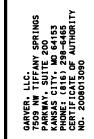
RTE OO

			REMOVAL	OF IMPRO	OVEMENTS		
SHEET	ROUTE	STA	STA	LOCATION	DESCRIPTION	UNIT	AMOUNT
426361	- RTE E					•	
4	RTE E	623+90.75	624+60.25	LT/RT	PAVEMENT	SY	182
4	RTE E	624+51.23		LT	OBJECT MARKER	EA	1
4	RTE E	624+51.41		RT	OBJECT MARKER	EA	1
4	RTE E	626+63.04		LT	OBJECT MARKER	EA	1
4	RTE E	626+63.48		RT	OBJECT MARKER	EA	1
4	RTE E	626+53.75	627+35.54	LT/RT	PAVEMENT	SY	216
					TOTAL	LS	1
08332	- RTE F	F					
5	RTE FF	55+32.50	56+02.50	LT/RT	PAVEMENT	SY	164
5	RTE FF	55+61+.92		LT	OBJECT MARKER	EA	1
5	RTE FF	55+81.63		LT	OBJECT MARKER	EA	1
5	RTE FF	56+01.43		LT	OBJECT MARKER	EA	1
5	RTE FF	55+61.17		RT	OBJECT MARKER	EA	1
5	RTE FF	55+80.80		RT	OBJECT MARKER	EA	1
5	RTE FF	56+01.24		RT	OBJECT MARKER	EA	1
5	RTE FF	57+48.73		LT	OBJECT MARKER	EA	1
5	RTE FF	57+67.04		LT	OBJECT MARKER	EA	1
5	RTE FF	57+48.20		RT	OBJECT MARKER	EA	1
5	RTE FF	57+66.10		RT	OBJECT MARKER	EA	1
5	RTE FF	57+47.67	58+17.67	LT/RT	PAVEMENT	SY	166
5	RTE FF	57+90.35		RT	OBJECT MARKER	EA	1
5	RTE FF	57+89.32		LT	OBJECT MARKER	EA	1
			•	•	TOTAL	LS	1
102542	- RTE J	J				•	
6	RTE JJ	239+91.00	240+61.00	LT/RT	PAVEMENT	SY	162
6	RTE JJ	240+20.96		RT	OBJECT MARKER	EA	1
6	RTE JJ	240+20.87		LT	OBJECT MARKER	EA	1
6	RTE JJ	240+41.61		RT	OBJECT MARKER	EA	1
6	RTE JJ	240+42.23		LT	OBJECT MARKER	EA	1
6	RTE JJ	240+61.59		RT	OBJECT MARKER	EA	1
6	RTE JJ	240+61.48		LT	OBJECT MARKER	EA	1
6	RTE JJ	241+74.17	242+44.17	LT/RT	PAVEMENT	SY	161
6	RTE JJ	241+74.36		RT	OBJECT MARKER	EA	1
6	RTE JJ	241+74.15		LT	OBJECT MARKER	EA	1
6	RTE JJ	241+94.31		RT	OBJECT MARKER	EA	1
6	RTE JJ	241+92.61		LT	OBJECT MARKER	EA	1
6	RTE JJ	242+15.60		RT	OBJECT MARKER	EA	1
6	RTE JJ	242+13.31		LT	OBJECT MARKER	EA	1
	•		•		TOTAL	LS	1
109731	- RTE C	00					
7	RTE OO	285+41.62	285+96.10	LT/RT	PAVEMENT	SY	128
7	RTE OO	285+53.35		RT	OBJECT MARKER	EA	1
7	RTE OO	285+59.48		LT	OBJECT MARKER	EA	1
7	RTE OO	285+74.37		RT	OBJECT MARKER	EA	1
7	RTE OO	285+79.83		LT	OBJECT MARKER	EA	1
7	RTE OO	285+93.50		RT	OBJECT MARKER	EA	1
7	RTE OO	285+99.62		LT	OBJECT MARKER	EA	1
7	RTE OO	287+99.60	288+69.60	LT/RT	PAVEMENT	SY	162
7	RTE OO	287+96.36		RT	OBJECT MARKER	EA	1
7	RTE OO	288+02.50	1	LT	OBJECT MARKER	EA	1
7	RTE OO	288+16.02	1	RT RT	OBJECT MARKER	EA	1
7	RTE OO	288+22.28		LT	OBJECT MARKER	EA	1
7	RTE OO	288+36.34		RT	OBJECT MARKER	EA	1
7	RTE OO	288+42.21		LT	OBJECT MARKER	EA	1
,		200172.21					
					TOTAL	LS	1



	DATE PREPARED								
	10/7/2025								
	ROU	JTE			ST	ATE			
	FF/					0			
[DIST		Τ	S	HEE.	T NO).		
	Ν					3			
			COU	NTY	•				
	VAR.								
	JOB NO.								
	JNW0014								
	CONTRACT ID.								
		PR	OJE	СТ	NO.				
L									
	BRIDGE NO.								
							l		
							l		







					PAVEMENT		
SHEET	ROUTE	BEGIN	END	LOCATION	OPT I ONAL PAVEMENT	TYPE 1 AGGREGATE FOR BASE (4")	REMARKS
SIILLI	1.0012	STA.	STA.	Locktron	(SY)	(SY)	TTEIN TITLES
A26361	- RTE E						
4	RTE E	623+90.75	624+40.25	LT/RT	137.3	137	
4	RTE E	626+73.75	627+35.54	LT/RT	169.5	170	
4	RTE E	627+00.49		LT		58	GRAVEL ENTRANCE
4	RTE E	627+03.43		RT		37	GRAVEL ENTRANCE
				TOTAL	306.8	402	
P08332	- RTE F	F					
5	RTE FF	55+32.50	55+82.50	LT/RT	115.2	115	
5	RTE FF	57+67.67	58+17.67	LT/RT	117.0	117	
	-			TOTAL	232.2	232	
N02542	- RTE J	J					
6	RTE JJ	239+91.00	240+41.00	LT/RT	113.4	113	
6	RTE JJ	241+94.17	242+44.17	LT/RT	112.1	112	
				TOTAL	225.5	225	
N09731	- RTE OC)					
7	RTE OO	285+41.62	285+76.10	LT/RT	78.9	79	
7	RTE OO	288+19.60	288+69.60	LT/RT	113.0	113	
				TOTAL	191.9	192	
			PROJ	ECT TOTAL	956.4	1051	
				PAY TOTAL	956.4	1051	

		LINEAR	R GRADING CLAS	S 2	
SHEET	ROUTE	BEGIN STA.	END STA.	LOCATION	LENGTH STA:
A26361	- RTE E				
4	RTE E	623+90.75	624+40.25	Ę.	0.5
4	RTE E	626+73.75	627+35.54	Ę	0.6
				TOTAL	1.1
P08332	- RTE F	F			
5	RTE FF	55+32.50	55+82.50	Ę	0.5
5	RTE FF	57+67.67	58+17.67	Ę	0.5
				TOTAL	1.0
N02542	- RTE J	J			
6	RTE JJ	239+91.00	240+41.00	Ę	0.5
6	RTE JJ	241+94.17	242+44.17	Ę	0.5
				TOTAL	1.0
N09731	- RTE OC)			
7	RTE OO	285+41.62	285+76.10	Ę	0.3
7	RTE OO	288+19.60	288+69.60	Ę	0.5
				TOTAL	0.8
				PROJECT TOTAL	3.9
				PAY TOTAL	4.0

	MISC. SEEDING - COOL SEASON GRASSES													
		14150.	DEEDTING	COOL JEAS										
					COOL SEASON	MODIFIED TYPE 2D								
					MIXTURES	EROSION CONTROL								
SHEET	ROUTE	BEGIN	END	LOCATION		BLANKET								
		STA.	STA.		(ACRE)	(SY)								
A26361 - RTE E														
12 RTE E 623+90.25 624+59.75 LT/RT 0.01 35														
12	RTE E	626+54.25	627+35.54	LT/RT	0.01	45								
TOTAL					0.02	80								
P08332	- RTE F	F												
18	RTE FF	55+32.50	56+02.50	LT/RT	0.04	170								
18	RTE FF	57+47.67	58+17.67	LT/RT	0.02	118								
TOTAL					0.06	288								
N02542	- RTE J	J												
24	RTE JJ	239+91.00	240+61.00	LT/RT	0.03	159								
24	RTE JJ	241+74.17	242+44.17	LT/RT	0.02	73								
TOTAL					0.05	232								
N09731	- RTE OC)												
30	RTE OO	285+41.62	286+01.18	LT/RT	0.01	69								
30	RTE OO	287+94.47	288+69.60	LT/RT	0.03	141								
		·	0.04	210										
		·	0.17	810.0										
			•	USE	1 LUMP SUM	810.0								

NOTE: SEEDING ACRES FOR INFORMATION ONLY



DATE PE	REPARED
10/30	/2025
ROUTE	STATE
E/FF/JJ/00	MO
DISTRICT	SHEET NO.
NW	3
COU	NTY
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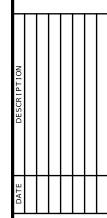
VAR .

JOB NO.

JNW0014

CONTRACT ID.

PROJECT NO.





JARVER, LLC.
ARKWAY, SUITE 200
ARKWAY, SUITE 200
(ANSAC ITY, MO 64153
HUNE: (816) 298-6465
ERTIFICATE OF AUTHORITY
NO. 2008013090



SUMMARY OF QUANTITIES
SHEET 2 OF 6

					PAVEMENT		
SHEET	ROUTE	BEGIN	END	LOCATION	OPT I ONAL PAVEMENT	TYPE 1 AGGREGATE FOR BASE (4")	REMARKS
SIILLI	1.0012	STA.	STA.	Locktron	(SY)	(SY)	TTEIN TITLES
A26361	- RTE E						
4	RTE E	623+90.75	624+40.25	LT/RT	137.3	137	
4	RTE E	626+73.75	627+35.54	LT/RT	169.5	170	
4	RTE E	627+00.49		LT		58	GRAVEL ENTRANCE
4	RTE E	627+03.43		RT		37	GRAVEL ENTRANCE
				TOTAL	306.8	402	
P08332	- RTE F	F					
5	RTE FF	55+32.50	55+82.50	LT/RT	115.2	115	
5	RTE FF	57+67.67	58+17.67	LT/RT	117.0	117	
	-			TOTAL	232.2	232	
N02542	- RTE J	J					
6	RTE JJ	239+91.00	240+41.00	LT/RT	113.4	113	
6	RTE JJ	241+94.17	242+44.17	LT/RT	112.1	112	
				TOTAL	225.5	225	
N09731	- RTE OC)					
7	RTE OO	285+41.62	285+76.10	LT/RT	78.9	79	
7	RTE OO	288+19.60	288+69.60	LT/RT	113.0	113	
				TOTAL	191.9	192	
			PROJ	ECT TOTAL	956.4	1051	
				PAY TOTAL	956.4	1051	

		LINEAR	GRADING CLAS	SII	
SHEET	ROUTE	BEGIN STA.	END STA.	LOCATION	LENGTH STA:
A26361	- RTE E				
4	RTE E	623+90.75	624+40.25	Œ.	0.5
4	RTE E	626+73.75	627+35.54	Ę	0.6
				TOTAL	1.1
P08332	- RTE F	F			
5	RTE FF	55+32.50	55+82.50	Ę.	0.5
5	RTE FF	57+67.67	58+17.67	Ę	0.5
				TOTAL	1.0
N02542	- RTE J	J			
6	RTE JJ	239+91.00	240+41.00	Ę.	0.5
6	RTE JJ	241+94.17	242+44.17	Ę	0.5
				TOTAL	1.0
N09731	- RTE OC)			
7	RTE OO	285+41.62	285+76.10	Ę.	0.3
7	RTE OO	288+19.60	288+69.60	Ę	0.5
				TOTAL	0.8
				PROJECT TOTAL	3.9
	•			PAY TOTAL	4.0

			SEEDING	& MULCHI	NG							
			COOL SEASON	MODIFIED TYPE 2D								
					MIXTURES	EROSION CONTROL						
SHEET	ROUTE	BEGIN	END	LOCATION		BLANKET						
		STA.	STA.		(ACRE)	(SY)						
A26361	- RTE E											
12 RTE E 623+90.75 624+59.75 LT/RT 0.01 35												
12	RTE E	626+54.25	627+35.54	LT/RT	0.01	45						
				TOTAL	0.02	80						
P08332	- RTE F	F										
18	RTE FF	55+32.50	56+02.50	LT/RT	0.04	170						
18	RTE FF	57+47.67	58+17.67	LT/RT	0.02	118						
				TOTAL	0.06	288						
N02542	- RTE J	J										
24	RTE JJ	239+91.00	240+61.00	LT/RT	0.03	159						
24	RTE JJ	241+74.17	242+44.17	LT/RT	0.02	73						
				TOTAL	0.05	232						
N09731	- RTE OC)										
30	RTE OO	285+41.62	286+01.18	LT/RT	0.01	69						
30	RTE OO	287+94.47	288+69.60	LT/RT	0.03	141						
·			•	TOTAL	0.04	210						
			0.17	810								
				PAY TOTAL	1.0	810						



DATE PREPARED

10/7/2025

ROUTE

E/FF/JJ/OO MO

DISTRICT SHEET NO.

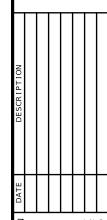
NW 3

COUNTY

VAR.

JOB NO.
JNW0014
CONTRACT ID.

PROJECT NO.





DARVER, LLC.
7509 NW TIFFANY SPRINGS
ARKWAY, SUITE 200
KANSAS CITY, MD 64153
HUDNE: (816) 298-6465
CERTIFICATE OF AUTHORITY
ND. 2008013090



		TEMPOI	RARY EROS	ION CONTRO	DL	
SHEET	ROUTE	BEGIN STA.	END STA.	LOCATION	SILT FENCE (LF)	SEDIMENT REMOVAL (CY)
A26361	- RTE E			-		•
12	RTE E	623+91	624+62	LT	76	1
12	RTE E	623+91	624+62	RT	72	1
12	RTE E	626+53	627+37	LT	97	2
12	RTE E	626+53	627+36	RT	76	1
				TOTAL	321	5
P08332	- RTE F	F				
18	RTE FF	55+33	56+03	LT	105	2
18	RTE FF	55+30	56+04	RT	118	2
18	RTE FF	57+50	58+19	LT	75	1
18	RTE FF	57+49	58+19	RT	88	1
				TOTAL	386	6
N02542	- RTE J	J				
24	RTE JJ	239+91	240+63	LT	81	1
24	RTE JJ	239+91	240+60	RT	86	1
24	RTE JJ	241+73	242+46	LT	82	1
24	RTE JJ	241+91	242+44	RT	62	1
				TOTAL	311	4
N09731	- RTE OC)				
30	RTE OO	285+50	285+99	LT	66	1
30	RTE OO	285+50	285+86	RT	47	1
30	RTE OO	288+04	288+70	LT	122	2
30	RTE OO	287+95	288+69	RT	78	1
				TOTAL	313	5
			PRO	JECT TOTAL	1331	20
				PAY TOTAL	1331	20

				PAVEMEN	IT MARKING		
BEGIN	END				MARKIN	PAVEMENT NG PAINT P BEADS	
STATION	STATION	ROUTE	LENGTH	4" SOLID	4" INT.	4" DOUBLE SOLID	4" SOLID
				WHITE	YELLOW	YELLOW	YELLOW
				(FT)	(FT)	(FT)	(FT)
620+90.75	630+35.54	E	944.79	1890	236		
55+32.50	61+17.67	FF	885.17		75	1170	300
239+91.00	245+44.17]]	853.17		150	506	600
282+41.62	291+69.60	00	927.98	1856		1856	
		PI	ROJECT TOTAL	3746	461	3532	900
			PAY TOTAL	3746		4893	

			PERMANE	NT EROSION	CONTROL		
					TYP	PE 2	PERM EROSION
					ROCK B	SLANKET	CONTROL
SHEET	ROUTE	BEGIN	END	LOCATION	FURNISHING	PLACING	GEOTEXTILE
		STA.	STA.		(CY)	(CY)	(SY)
A26361	- RTE E						
4	RTE E	624+59.75	624+76.65	LT/RT	52	52	78
4	RTE E	626+39.23	626+54.25	LT/RT	37	37	55
				TOTAL	89	89	133
P08332	- RTE FF						
5	RTE FF 56+02.50		56+20.13	LT/RT	47	47	71
5	RTE FF	57+09.29	57+47.67	LT/RT	131	131	196
				TOTAL	178	178	267
N02542	- RTE JJ						
6	RTE JJ	240+61.00	240+77.91	LT/RT	59	59	88
6	RTE JJ	241+59.66	241+90.00	LT/RT	58	58	87
				TOTAL	117	117	175
N09731-	RTE OO						
7	RTE OO	285+87.87	286+18.97	LT/RT	85	85	128
7	RTE OO	287+62.55	288+04.63	LT/RT	161	161	242
				TOTAL	246	246	370
			PI	ROJECT TOTAL	630	630	945
	•		•	PAY TOTAL	630	630	945

MOB	BILIZ	AT I ON	
1	LUMP	SUM	

CONTRACTOR FURNISHED SURVEYING & STAKING
1 LUMP SUM



DATE PREPARED

10/7/2025

ROUTE STATE

E/FF/JJ/OO MO

DISTRICT SHEET NO.

NW 3

COUNTY

VAR.

JOB NO.
JNWO014
CONTRACT ID.

PROJECT NO.



ISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION
105 WEST CAPITO
IEFFERSON CITY, MO 6510

GARVER, LLC.
7509 UN TIFFANY SPRINGS
PARKWAY, SUITE 200
KANSAS CITY, MD 64153
PHONE: (816) 298-6465
CERTIFICATE OF AUTHORITY
ND. 2008013090



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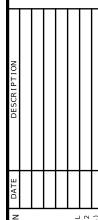
ROUN	ID PIP	E POST	AND FOO	TING	DATA	ΓABLE	
NOM.SIZE	WEI	GHT	STUB	FO	OTING	CONCRETE	
(IN.)	LBS/FT LBS/IN		LENGTH	DIA. DEPTH		C.Y.	
21/2	2½ 5.79 0.48		4'- 3½"	12"	4~6"	0.13	
4	10.79	0.90	5'- 31/3"	18"	5~6"	0.36	

		S٦	RUCTU	RAL ST	TEEL	POST	AND F	N I TOO	G DA	TA TABI	LE						
		POST				FOOTING											
POST DES.	NOM.	WEI	GHT	STUB	DIA.	. LEVEL GROUND		6:1 G	RADE	4:1 GR	4:1 GRADE		:1 GRADE				
NO.	SIZE	LBS/FT	LBS/IN	LENGTH		DEPTH	C.Y.	DEPTH	C.Y.	DEPTH	C.Y.	DEPTH	C.Y.				
1	W6	9.0	0.75	3'-0"	15"	3'-0"	0.14	3'-2"	0.15	3'-3"	0.16	3'-6"	0.17				
2	W6	15.0	1.25	4'-0"	24"	4'-0"	0.47	4'-2"	0.50	4'-3"	0.51	4'-6"	0.54				
3	W8	18.0	1.50	4'-6"	28"	4'-6"	0.71	4'-8"	0.73	4'-9"	0.74	5'-0"	0.78				
4	W10	22.0	1.83	5'-0"	36"	5'-0"	1.31	5'-2"	1.36	5'-3"	1.39	5'-6"	1.45				
5	W10	26.0	2.17	5'-0"	36"	5'-0"	1.31	5'-3"	1.37	5'-5"	1.43	5'-9"	1.52				
6	W12	35.0	2.92	5'-6"	36"	5'-6"	1.44	5'-9"	1.52	5'-11"	1.56	6'-3"	1.65				

SUMMARY OF QUANTITIES
SHEET 4 OF 6



ELECTRO	ONICALLY.									
	DATE PREPARED									
10/7/2025										
ROUTE	STATE									
E/FF/JJ/00	MO									
DISTRICT	SHEET NO.									
NW	3									
COU	NTY									
VA										
	NO.									
, , , , , ,	0014									
CONTRA	CT ID.									
PROJE	CT NO.									









							5	TAND	ARD S	S I GN	ASSEN	/IBL I E	S					
						SIGN	, TYPI	E, DES	IGNAT	ION, S	SIZE &	NUMB	R OF	EACH				
	STATION		OM3 - R	OM3 - L														
SIGN NO.	OR LOG MILE	LOCATION																
ļ	26261	D.T.E. E.																
	26361 - 624+20	RIE E RT	1								-							
2	624+40	RT	1															
<u> </u>	624+60	RT	1															
45	624+20 624+40	LT LT		1						-	 				-	-		
6	624+60	LT		1														
7	626+61	RT	1															
	626+61 8332 - F	LT RTF FF		1														1
1	55+59	RT	1															
2	55+79	RT	1															
34	55+99 55+59	RT LT	1	1														
<u>(5)</u>	55+79	LT		1														
6	55+99	LT		1														
⑦ ⑧	57+51 57+71	RT RT	1															-
9	57+91	RT	1															
10	57+51	LT		1														
(1) (12)	57+71 57+91	LT LT		1														
)2542 - F																	
1	240+17	RT	1															
	240+37	RT	1															
3 4	240+57 240+17	RT LT	1	1														
(5)	240+37	LT		1														
6	240+57	LT	1	1														
⑦ ⑧	241+78 241+98	RT RT	1															
9	242+18	RT	1															
10	241+78	LT		1														
(1) (2)	241+98 242+18	LT LT		1														-
	N09731																	
1	285+50	RT	1															
② ③	285+70 285+90	RT RT	1															-
4	285+56	LT		1														
	285+76	LT		1														
	285+96 288+00	LT RT	1	1														-
<u>®</u>	288+20	RT	1															
9	288+40	RT	1															
(1)	288+06 288+26	LT LT		1														-
(1)	288+26	LT		1														
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		TOTALS	22	22														

			SIGN	SUMMARY			E: 10-01-2016
						QUARE FEE	
	SIGN				FLAT SHEET		STRUCTURAL
STANDARD OR SPECIAL					FLUORESCENT		
SIGN DESIGNATION		EACH	SIZE	SH	SHF*	ST	STF*
	NO.			ITEM NO.	ITEM NO.	ITEM NO.	ITEM NO.
				9035004A	9035069A	9035011A	9035071A
OM3 - R		22	12"X36"				
OM3 - L		22	12"X36"	66			
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		Ь—	TOTALS	132			

SUMMARY OF QUANTITIES SHEET 5 OF 6



10/7/2025

ROUTE STATE
E/FF/JJ/OO MO
DISTRICT SHEET NO.
NW 3

COUNTY

JOB NO.
JNW0014
CONTRACT ID.

SIGN	C 1 7E	AREA		OTAL QTY REA RELO	TOTAL	C I CN		SIGN	C 1 7 E	AREA	OTV	TOTAL		TOTAL			ITEM	TOTAL	EFFECTIVE: 07-01-2025
SIGN	IN.	SQ. FT			SQ FT	NO.	DESCRIPTION	SIGN	IN.					SQ FT	NO.	DESCRIPTION	NUMBER	OTY	DESCRIPTION
		34.11		WARNING			DESCRIT TION			34	271011		IDE SI		1101	BESCHIFTON	6122008	Q I I	IMPACT ATTENUATOR 40 MPH (SAND BARRELS
WO1 - 1L	48X48	16.00					TURN (SYMBOL LEFT)	E05-1	36X48	12.00						GORE EXIT	6122009		IMPACT ATTENUATOR 45 MPH (SAND BARRELS
WO1-1R	48X48	16.00					TURN (SYMBOL RIGHT)	E05-2	48X36	12.00						EXIT OPEN	6122010		IMPACT ATTENUATOR 50 MPH (SAND BARRELS
WO1-2L	48X48						CURVE (SYMBOL LEFT)	E05-2a		12.00						EXIT CLOSED	6122012		IMPACT ATTENUATOR 55 MPH (SAND BARRELS
WO1 - 2R	48X48						CURVE (SYMBOL RIGHT)	GO20 - 1	60X24	+						ROAD WORK NEXT XX MILES	6122014		IMPACT ATTENUATOR 60 MPH (SAND BARRELS
WO1 - 3L	48X48						REVERSE TURN (SYMBOL LEFT)	GO20 - 2	48X24	+						END ROAD WORK	6122017		IMPACT ATTENUATOR 65 MPH (SAND BARRELS
WO1 - 3R WO1 - 4L	48X48 48X48						REVERSE TURN (SYMBOL RIGHT) REVERSE CURVE (SYMBOL LEFT)	GO20 - 4 GO20 - 4a	36X18							PILOT CAR FOLLOW ME PILOT CAR IN USE WAIT & FOLLOW	6122019 6122020		IMPACT ATTENUATOR 70 MPH (SAND BARRELS REPLACEMENT SAND BARREL
WO1 - 4E	48X48						REVERSE CURVE (SYMBOL RIGHT)	GO20 - 4a								PILOT CAR IN USE WAIT & FOLLOW	6122020		IMPACT ATTENUATOR (RELOCATION)
WO1 - 4bL	48X48						DOUBLE ARROW REVERSE CURVE (SYMBOL LEFT)	GO20 - 5 a F		+						WORK ZONE (PLAQUE)	6122040		WORK ZONE CRASH CUSHION (NARROW)
WO1 - 4bR	48X48						DOUBLE ARROW REVERSE CURVE (SYMBOL RIGHT)	MO4 - 8a	24X18	+						END DETOUR	6122041		WORK ZONE CRASH CUSHION (RELOCATION)
WO1-4cL	48X48	16.00					TRIPLE ARROW REVERSE CURVE (SYMBOL LEFT)	MO4 - 9L	48X36	12.00						DETOUR (LEFT)	6123001		TRUCK MOUNTED ATTENUATOR (TMA)
WO1-4cR	48X48						TRIPLE ARROW REVERSE CURVE (SYMBOL RIGHT)	MO4 - 9R	48X36	+						DETOUR (RIGHT)	6161012		BUOYS (BOATS KEEP OUT)
WO1 - 6		12.50					HORIZONTAL ARROW (SYMBOL)	MO4 - 9P	48X12	+						STREET NAME (PLAQUE)	6161013		BUOYS (NO WAKE)
WO1-6a	72X36						HORIZ. ARROW (SYMBOL ON PERMANENT BARRICADE)	MO4 - 10L	48X18							DETOUR ARROW (LEFT)	6161014		SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)
WO1 - 7 WO1 - 7a	60X30 72X36						DOUBLE HEAD HORIZONTAL ARROW (SYMBOL) DOUBLE HEAD HORIZ. ARROW (SYMBOL ON PERM. BARR.)	MO4 - 10R	48X18	6.00		DECIII	ATORY	S I GNS		DETOUR ARROW (RIGHT)	6161020 6161022		CHANNELIZER (DRUM-LIKE) CHANNELIZER (CONE)
WO1-7a	18X24						CHEVRON (SYMBOL)	R1-1	I 48X48	13.25	1 1	NEGUL.	T TOK I	T	<u> </u>	STOP	6161025		CHANNELIZER (CONE) CHANNELIZER (TRIM-LINE)
WO1 - 8a	30X36						CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)	R1 - 2	48TR I	6 93						YIELD	6161026		CHANNELIZER (VERTICAL PANEL)
WO3 - 1	48X48						STOP AHEAD (SYMBOL)	R1-2a	36X36							TO ONCOMING TRAFFIC (PLAQUE)	6161030	26	3-TYPE 3 MOVEABLE BARRICADES
WO3 - 2	48X48	16.00					YIELD AHEAD (SYMBOL)	R1-3P	30X12	2.50						ALL WAY (PLAQUE)	6161033		DIRECTION INDICATOR BARRICADE
WO3 - 3	48X48	16.00					SIGNAL AHEAD (SYMBOL)	R2-1	36X48	12.00						SPEED LIMIT XX	6161040		FLASHING ARROW PANEL
WO3 - 4	48X48						BE PREPARED TO STOP	R3 - 1	48X48	+						NO RIGHT TURN (SYMBOL)	6161047		TYPE 3 OBJECT MARKER
WO3 - 5	48X48						SPEED LIMIT AHEAD	R3-2	48X48	+						NO LEFT TURN (SYMBOL)	6161055		SEQUENTIAL FLASHING WARNING LIGHT
WO4 - 1L	48X48				_		MERGE (SYMBOL FROM LEFT)	R3 - 3	36X36	9.00						NO TURNS	6161070		TUBULAR MARKER
WO4-1R WO4-1aL	48X48 48X48						MERGE (SYMBOL FROM RIGHT) MERGE (LEFT)	R3 - 4 R3 - 7L	48X48 30X30							NO U-TURN (SYMBOL) LEFT LANE MUST TURN LEFT	6161095		RADAR SPEED ADVISORY SYSTEM CHANGEABLE MESSAGE SIGN,
WO4 - 1 a R	48X48						MERGE (RIGHT)	R3 - 7R	30X30							RIGHT LANE MUST TURN RIGHT	6161096		COMMISSION FURNISHED/RETAINED
WO5 - 1	48X48						ROAD/BRIDGE/RAMP NARROWS	R4 - 1	36X48							DO NOT PASS	0101030		CHANGEABLE MESSAGE SIGN WITHOUT COMM.
WO5 - 3	48X48						ONE LANE BRIDGE	R4 - 2	36X48	+						PASS WITH CARE	6161098A		INTERFACE, CONTRACTOR FURNISHED/RETAIN
WO5 - 5	48X48	16.00					NARROW LANES	R4-7a	36X48	12.00						KEEP RIGHT (HORIZONTAL ARROW)			CHANGEABLE MESSAGE SIGN WITH COMM.
WO6 - 1	48X48						DIVIDED HIGHWAY (SYMBOL)	R4-8a	36X48	12.00						KEEP LEFT (HORIZONTAL ARROW)	6161099		INTERFACE, CONTRACTOR FURNISHED/RETAIN
WO6 - 2	48X48						DIVIDED HIGHWAY END (SYMBOL)	R5 - 1	30X30	+					<u> </u>	DO NOT ENTER	6162000A		WORK ZONE TRAFFIC SIGNAL SYSTEM
WO6 - 3	48X48						TWO WAY TRAFFIC (SYMBOL)	R5 - 1a	36X24							WRONG WAY	6162002		TEMPORARY LONG-TERM RUMBLE STRIPS
WO7 - 3a	30X24						NEXT XX MILES (PLAQUE) BUMP	R6-1L	54X18							ONE WAY ARROW (LEFT)	61736000		TEMPORARY TRAFFIC BARRIER,
WO8 - 1 WO8 - 2	48X48 48X48						DIP	R6-1R R6-2L	54X18 24X30						<u> </u>	ONE WAY ARROW (RIGHT) ONE WAY (LEFT)	61/36UUL		CONTRACTOR FURNISHED/RETAINED TEMP. TRAFFIC BARRIER ANCHORED,
WO8 - 3	48X48						PAVEMENT ENDS	R6 - 2R	24X30							ONE WAY (RIGHT)	6173700B		CONTRACTOR FURNISHED/RETAINED
WO8 - 4	48X48						SOFT SHOULDER	R9 - 9	24X12							SIDEWALK CLOSED	01757002		TEMP. TRAFFIC BARRIER STIFFNESS TRANSI
WO8 - 5	48X48						SLIPPERY WHEN WET (SYMBOL)									SIDEWALK CLOSED AHEAD,	6173706		CONTRACTOR FURNISHED/RETAINED
WO8 - 6	48X48	16.00					TRUCK CROSSING	R9-11L	24X18	3.00						(ARROW LEFT) CROSS HERE			TEMP. TRAFFIC BARRIER HEIGHT TRANSITION
WO8-6c	48X48	16.00					TRUCK ENTRANCE									SIDEWALK CLOSED AHEAD,	6174000A		CONTRACTOR FURNISHED/RETAINED
WO8 - 7	36X36						LOOSE GRAVEL	R9-11R		3.00						(ARROW RIGHT) CROSS HERE	6175010A		RELOCATING TEMPORARY TRAFFIC BARRIER
WO8 - 7a	36X36						FRESH OIL / LOOSE GRAVEL	R10-6		6.00						STOP HERE ON RED (45^ ARROW)	6175011B		RELOCATING TEMP. TRAFFIC BARRIER ANCHOR
WO8 - 9	48X48						LOW SHOULDER	R11-2	48X30	10.00	4	40.00			29	ROAD CLOSED XX MILES ALIEAD	6175013		RELOCATING TEMP. TRAFFIC BARRIER STIFF
WO8 - 11 WO8 - 12	48X48 48X48				_		UNEVEN LANES NO CENTER LINE	R11-3a	60830	12.50	3	37.50			61 61:	ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY	6175020A		RELOCATING TEMP. TRAFFIC BARRIER HEIGHT TEMPORARY RAISED PAVEMENT MARKER
WO8 - 15		16 00					GROOVED PAVEMENT	R11-3a		12.50		50.00			62	ROAD CLOSED TO THRU TRAFFIC	9029400		TEMPORARY TRAFFIC SIGNALS
WO8-15 WO8-15P							MOTORCYCLE (PLAQUE)	CONST - 3A				23.00			1 22	FINE SIGN	9029401		TEMPORARY TRAFFIC SIGNALS AND LIGHTING
		16.00					SHOULDER DROP-OFF (SYMBOL LEFT)	CONST - 32								SPEEDING/PASSING (PLATE)			
WO8 - 17R	48X48	16.00					SHOULDER DROP-OFF (SYMBOL RIGHT)				M:	ISCELL	ANEOU	JS SIGI	NS				
WO8 - 17P	30X24	5.00					SHOULDER DROP-OFF (PLAQUE)	CONST - 5								POINT OF PRESENCE			
W10-1	42RND.						RAILROAD CROSSING	CONST - 8								WORK ZONE NO PHONE ZONE			
WO12-1		4.00					DOUBLE DOWN ARROW (SYMBOL)	4——		32.00	_	160.00	+			RTE E CLOSED AHEAD			
WO12-2	24X18	16.00 3.00					LOW CLEARANCE (SYMBOL)	MO4 - 13 MO4 - 13		32.00		128.00				RTE FF CLOSED AHEAD RTE JJ CLOSED AHEAD			
W012-2x W012-2a		14.00					LOW CLEARANCE (PLAQUE) OVERHEAD LOW CLEARANCE (FEET AND INCHES)	MO4 - 13 MO4 - 13		32.00		128.00				RTE OO CLOSED AHEAD			TEMPORARY TRAFFIC CONTROL
		50.00					LOW CLEARANCE XX FT XX IN XX MILES AHEAD	14104-13	30,40	32.00	-	120.00			31 - 4	NTE GO CEOSED ANEAD			PAY TOTAL 1 LUMP SUM
WO12-5		50.00					WIDTH RESTRICTION XX FT XX IN XX MILES AHEAD	1	1									_	!
WO13-1		6.25					ADVISORY SPEED (PLAQUE)											NOTE:	ALL TEMPORARY TRAFFIC CONTROL ITEMS
WO16-2		5.00					XXX FEET (PLAQUE)											SUM T	NCLUDED IN PAY ITEM 616-99.01 LUMP EMPORARY TRAFFIC CONTROL. UNLESS
WO16-3		5.00					X MILE (PLAQUE)											OTHER	WISE NOTED, QUANTITIES SHOWN ARE MATE ONLY AND SUBJECT TO CHANGE BASED
WO20-1	48X48						ROAD/BRIDGE/RAMP WORK AHEAD	!							ļ			ON FI	ELD CONDITONS.
WO20 - 2		16.00		10.00		20.00	DETOUR AHEAD	616 10	1	l .		TOTAL							
WO20-3 WO20-4		16.00		8.00	+	∠∪,20a	ROAD CLOSED AHEAD/ROAD CLOSED 500 FT ONE LANE ROAD AHEAD	616-10 CONSTR		N CICN		TOTAL 800	4						
WO20-4 WO20-5		16.00			+		RIGHT/CENTER/LEFT LANE CLOSED AHEAD	616-10		N DIGN	دا	600	<u> </u>	TOTAL	1				
WO20-5a		16 00			+		2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD	RELOCA		IGNS				IJIAL	1				
WO20 - 6a		16.00			+		RIGHT/CENTER/LEFT LANE CLOSED			. 0.10				1					
WO20 - 7a		16.00			1		FLAGGER (SYMBOL)	1											
WO21-2	36X36	9.00					FRESH OIL	1											
WO21 E	101/10	16.00	T			1	CHOILIDED MODE / CHOILIDED MODE VHEVD	1											

SHOULDER WORK / SHOULDER WORK AHEAD

TURN OFF 2-WAY RADIO AND PHONE

BLASTING ZONE AHEAD

WET PAINT (ARROW PIVOTS)

END BLASTING ZONE

WO21-5 48X48 16.00

WO22-2 42X36 10.50

WO22-3 42X36 10.50

GO22-1 21X15 2.19

48X48 16.00

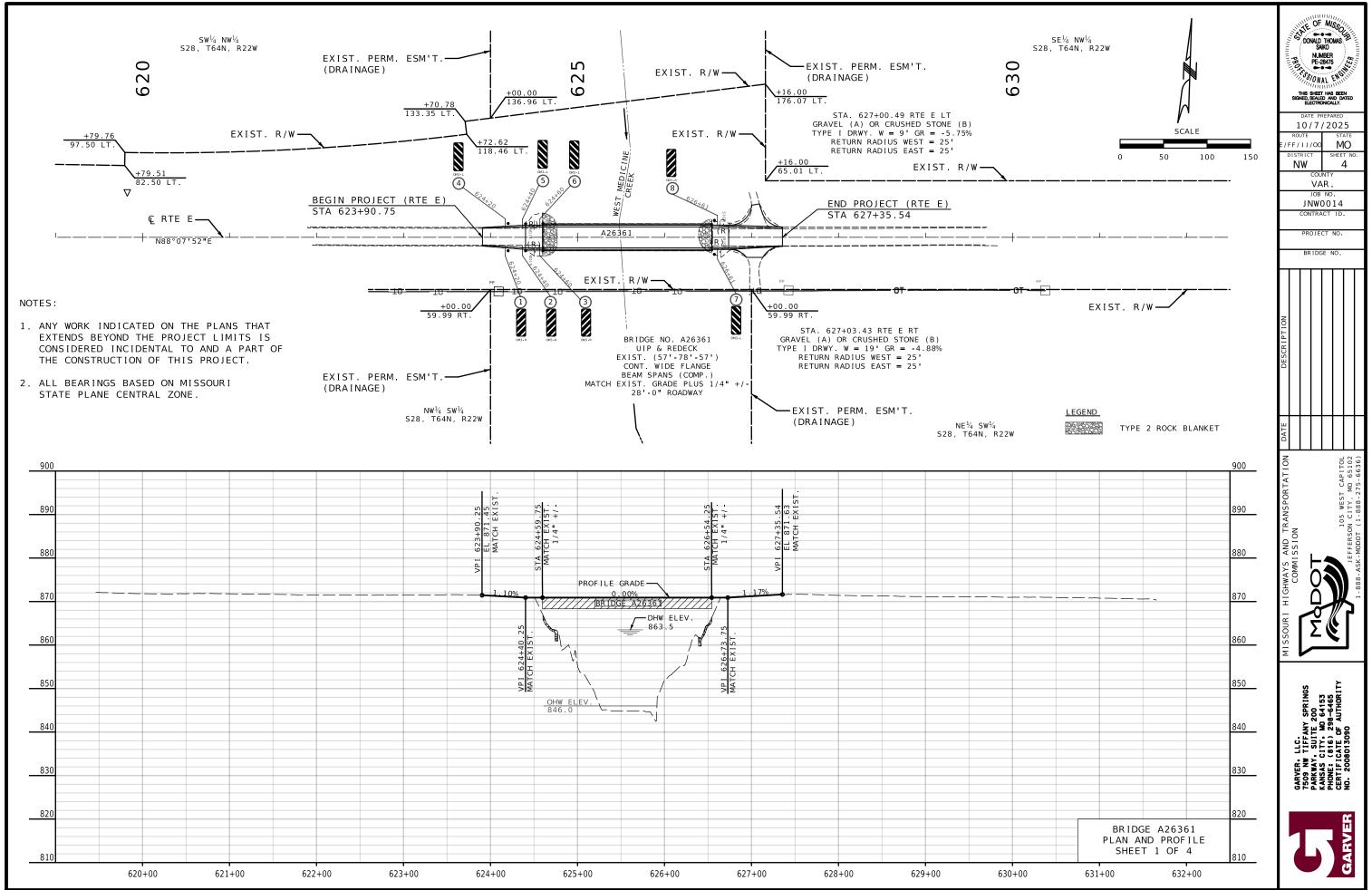
DONALD THOMAS SAIKO
NUMBER
PE-28475 NUMBER PE-28475 PS/ONAL ENGINEER THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY. 10/7/2025 /FF/JJ/00 MO SHEET NO 3 NW VAR. JNW0014

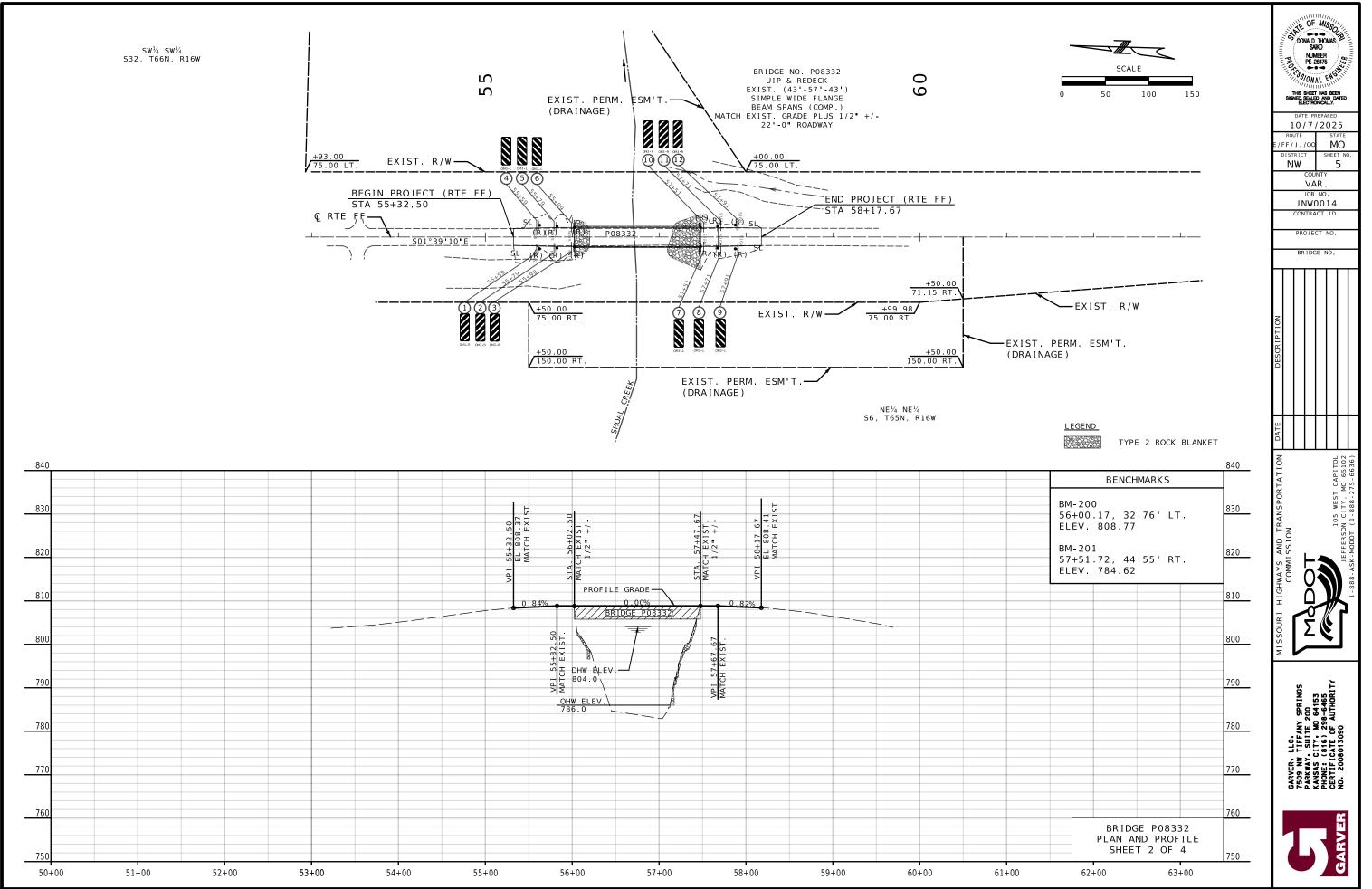
GARVER, LLC. 7509 NW TIFFANY SPRINGS PARKWAY, SUITE 200 KANSAS CITY, MO 64153 PHONE: (816) 298-6465 CERTIFICATE OF AUTHORITY NO. 2008013090

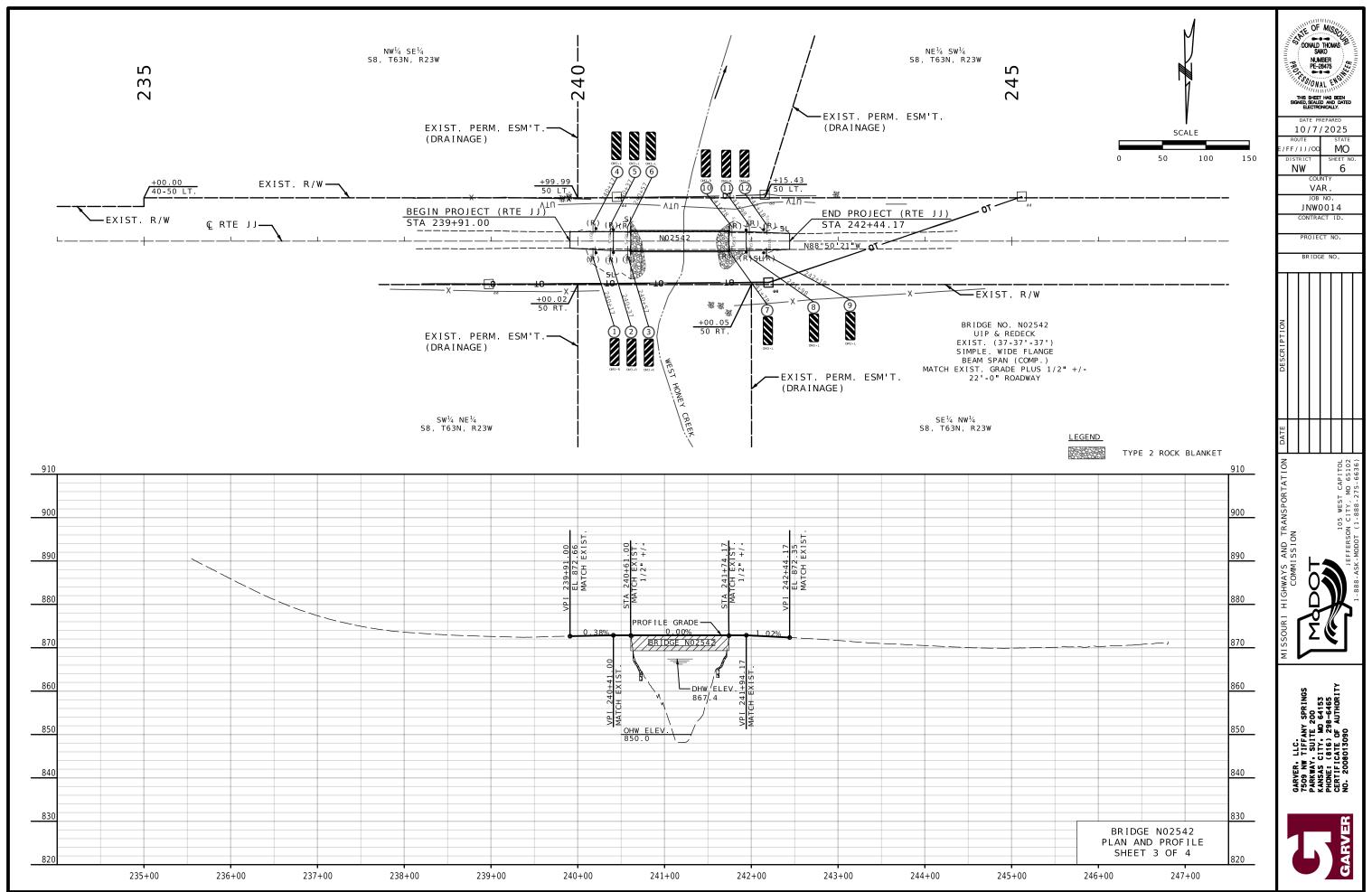


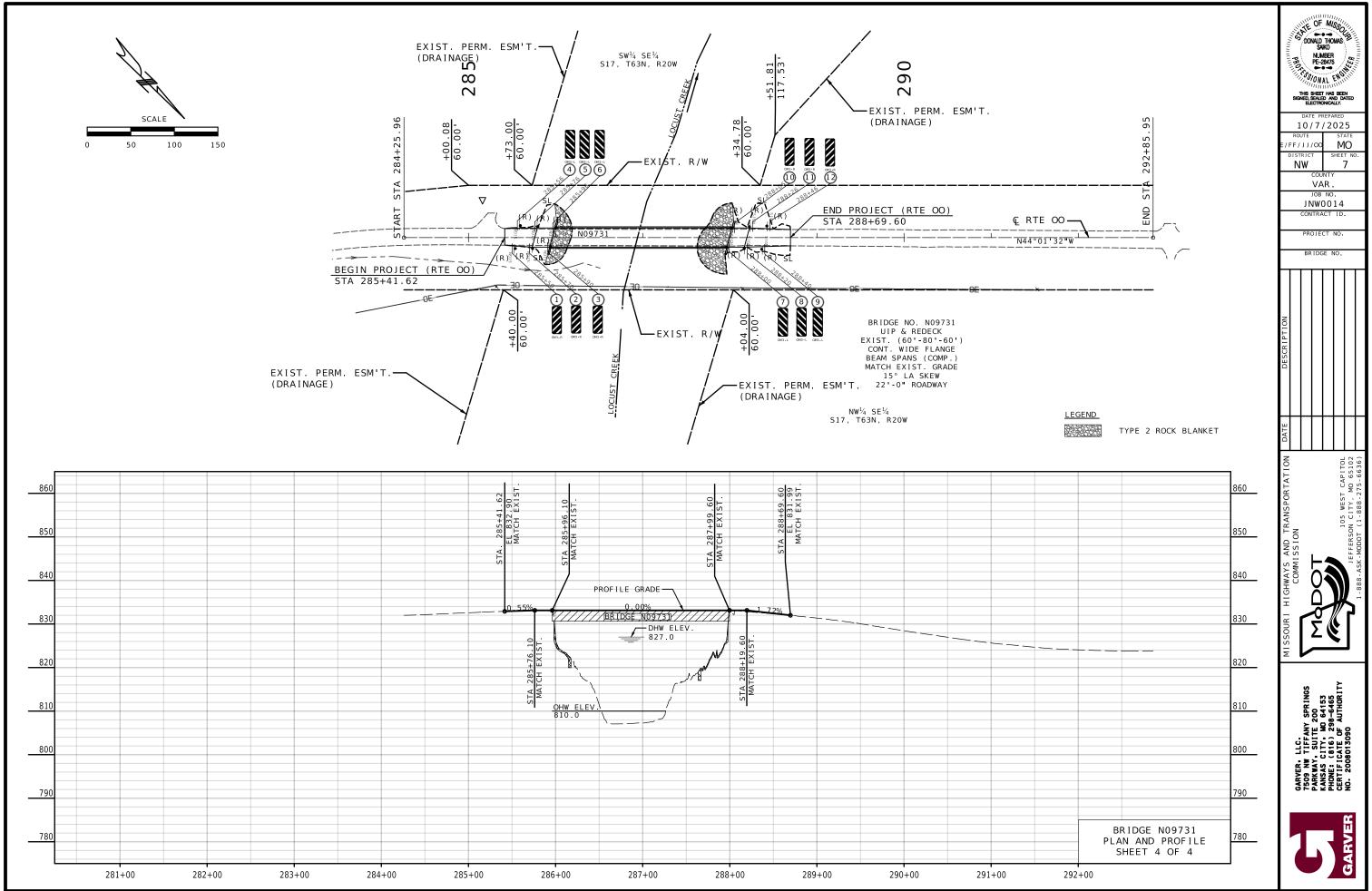
CONTRACTOR FURNISHED/RETAINED RELOCATING TEMPORARY TRAFFIC BARRIER RELOCATING TEMP. TRAFFIC BARRIER ANCHORED RELOCATING TEMP. TRAFFIC BARRIER STIFFNESS RELOCATING TEMP. TRAFFIC BARRIER HEIGHT TEMPORARY RAISED PAVEMENT MARKER TEMPORARY TRAFFIC SIGNALS

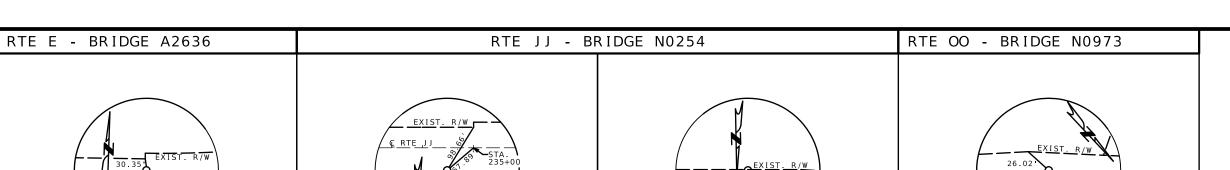
TEMP. TRAFFIC BARRIER STIFFNESS TRANSITION



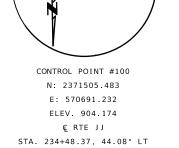


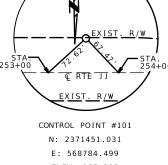


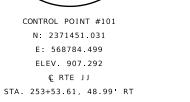


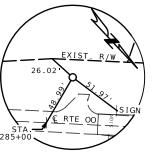


CONTROL POINT #100 N: 2387683.853 E: 604972.359 ELEV. 867.499 € RTE E STA. 619+82.83, 52.30' LT





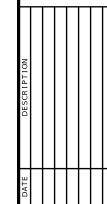




CONTROL POINT #101 N: 2366100.306 E: 665599.821 ELEV. 829.112 © RTE OO STA. 285+16.07, 43.48' LT



LLLOIR	AHOALI.
10 / 7	REPARED / 2025
ROUTE E/FF/JJ/OO	STATE
DISTRICT	SHEET NO.
NW	8
cou VA	
	NO. 0014
CONTRA	CT ID.





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	COORDINATE SYSTEM LINNEUS LDP								
HORIZONTAL DATUM	NAD 83 (2011) (EPOCH 2010)								
VERTICAL DATUM	NAVD 88								
GEOID MODEL	18								
ELEVATIONS									
DETERMINED BY									
PROJECT PROJECTION	FACTOR								
REFERENCE CONTROL INFORMATION									
COORDINATE SYSTEM	LINNEUS LDP								

COORDINATE STSTE	M LIMNEUS LL)P						
CONTROL STATION								
DESIGNATION	MODOT MILAN CORS							
CORS_ID	MOML							
PID	DN6087							
LATITUDE	N 40°12'37.7	N 40°12'37.76061"						
LONGITUDE	W 93°06'57.87621"							
NORTHING (M)	-4,870,613.0230							
EASTING (M)	-265,153.656							
ZONE	CENTRAL							
PROJECT AVERAGE	GRID FACTOR	0.99993152						

EXAMPLE OF PROJECT COORDINATE TO S.P.C.

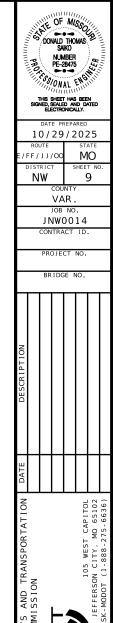
PROJECT NORTHING X AVERAGE GRID FACTOR
= STATE PLANE NORTHING
PROJECT EASTING X AVERAGE GRID FACTOR
= STATE PLANE EASTING

EXAMPLE: CONTROL POINT # 1 N 2,387,683.8530 X 0.99993152 = N 2,387,520.3444 E 604,972.3590 X 0.99993152 = E 604,930.9305

LINEAR UNIT CONVERSION

1 METER = 3.280833333 US SURVEY FEET (USFT)

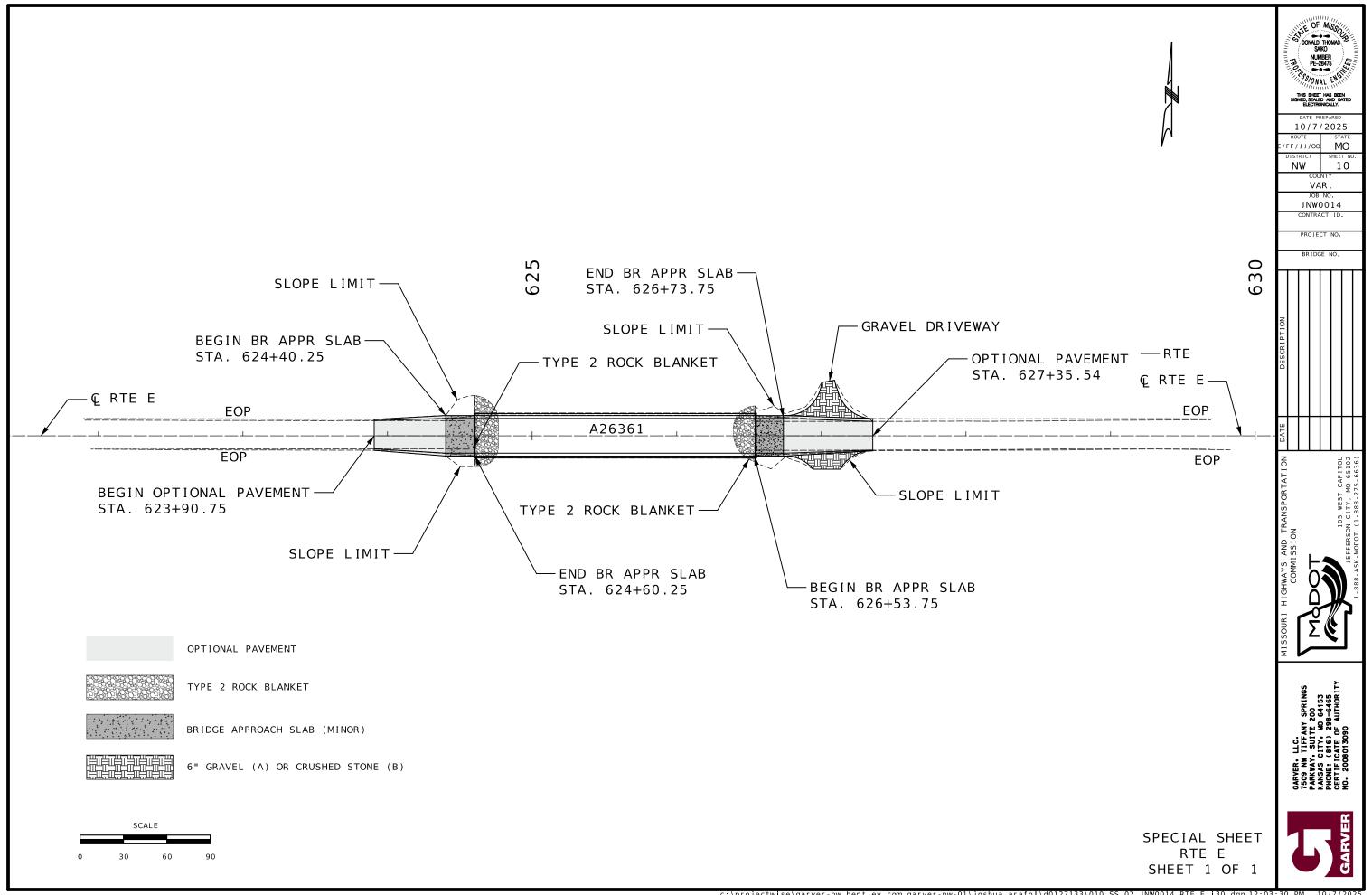
	COORDINATE POINT LISTING											
				MOD I	FIED STATE PLANE (GRO	OUND)						
			OFFSET	NOR TH I NG	EASTING	ELEVATION	7	GPK				
SHEET NO	STATION	LOCATION	(USFT)	(US SURVEY FT)	(US SURVEY FT)	(US SURVEY FT)	DESCRIPTION	POINT ID				
PROJECT	CONTROL P	OINTS										
4	619+82.83	RTE E	52.30' LT	2,387,683.8530	604,972.3590	867.4990	CONTROL POINT NO. 100					
6	234+48.37	RTE JJ	44.08' LT	2,371,505.4830	570,691.2320	904.1740	CONTROL POINT NO. 100					
6	253+53.61	RTE JJ	48.99' RT	2,371,451.0310	568,784.4990	907.2920	CONTROL POINT NO. 101					
7	285+16.07	RTE OO	43.48' LT	2,366,100.3060	665,599.8210	829.1120	CONTROL POINT NO. 101					
AL I GNMEN	TS											
4	623+90.75	RTE E	0	2,387,644.8985	605,382.1200		BEGIN PROJECT RTE E					
4	627+35.54	RTE E	0	2,387,656.1426	605,726.7276		END PROJECT RTE E					
5	55+32.50	RTE FF	0	2,444,284.2746	788,183.5910		BEGIN PROJECT RTE FF					
5	58+17.67	RTE FF	0	2,443,999.2265	788,191.8162		END PROJECT RTE FF					
6	239+91.00	RTE JJ	0	2,371,472.4062	570,147.8221		BEGIN PROJECT RTE JJ					
6	242+44.17	RTE JJ	0	2,371,477.5348	569,894.7071		END PROJECT RTE JJ					
7	285+41.62	RTE OO	0	2,366,148.8950	665,613.3237		BEGIN PROJECT RTE OO					
7	288+69.60	RTE OO	0	2,366,384.7244	665,385.3827		END PROJECT RTE OO					

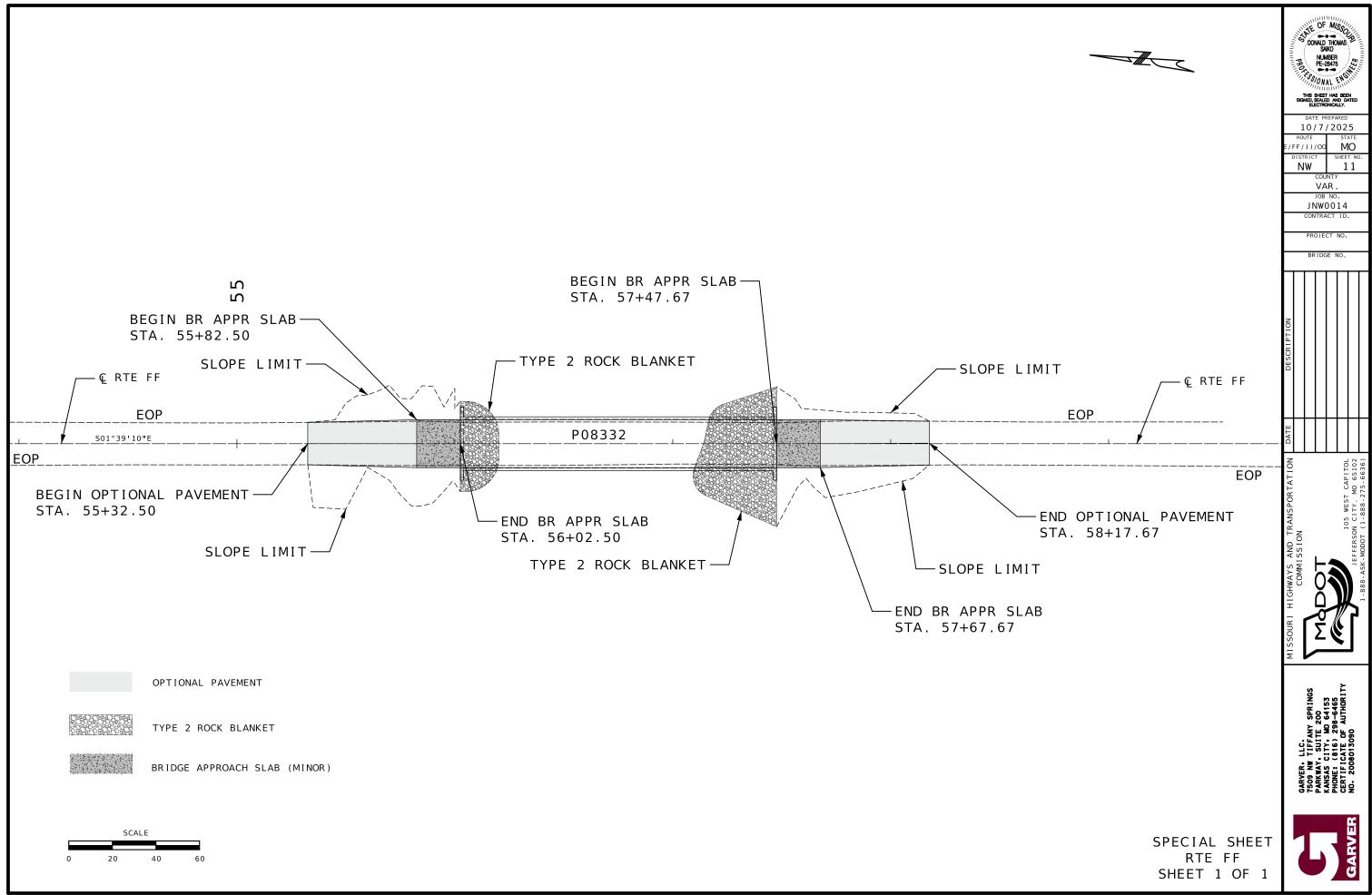


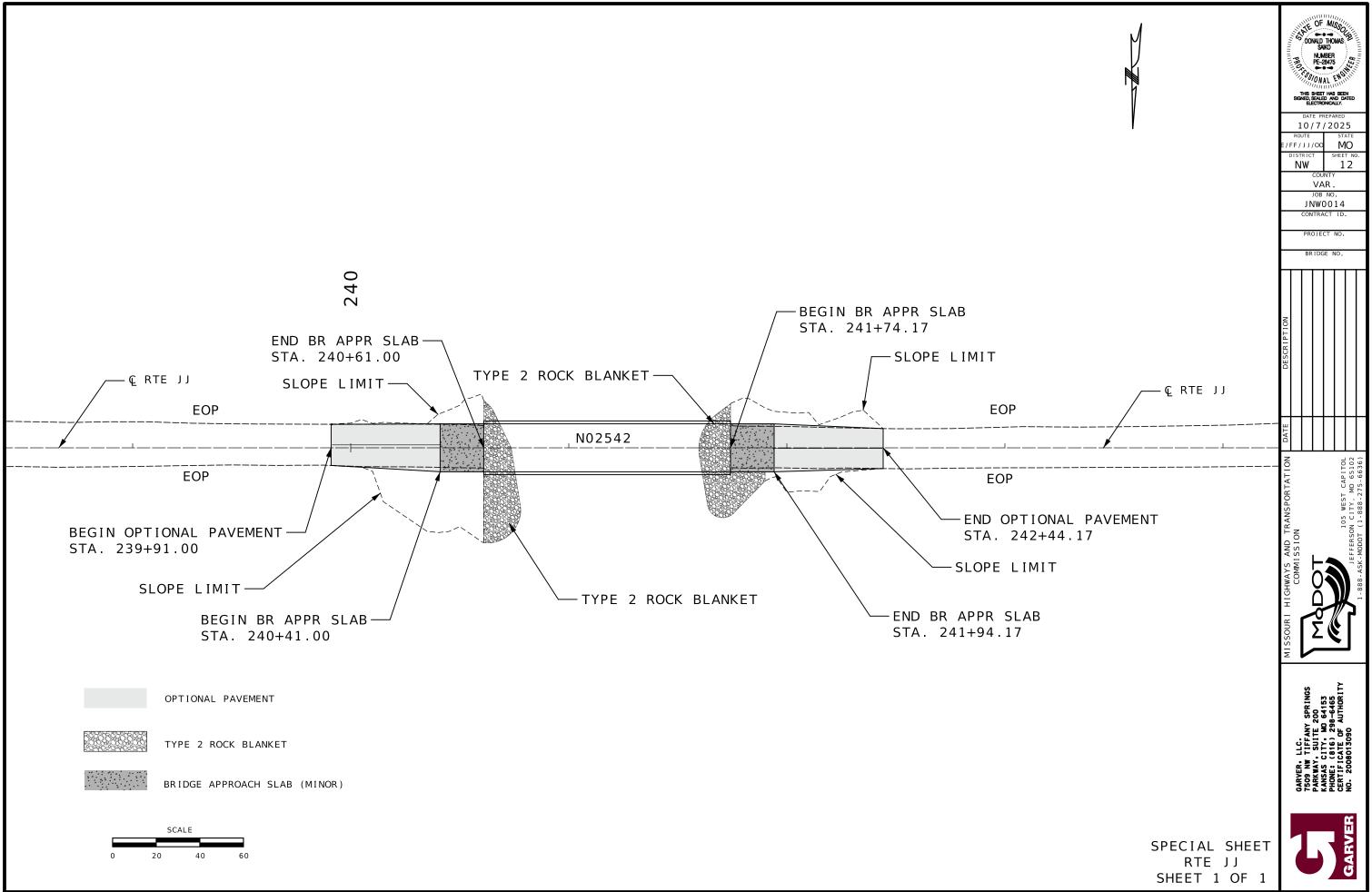
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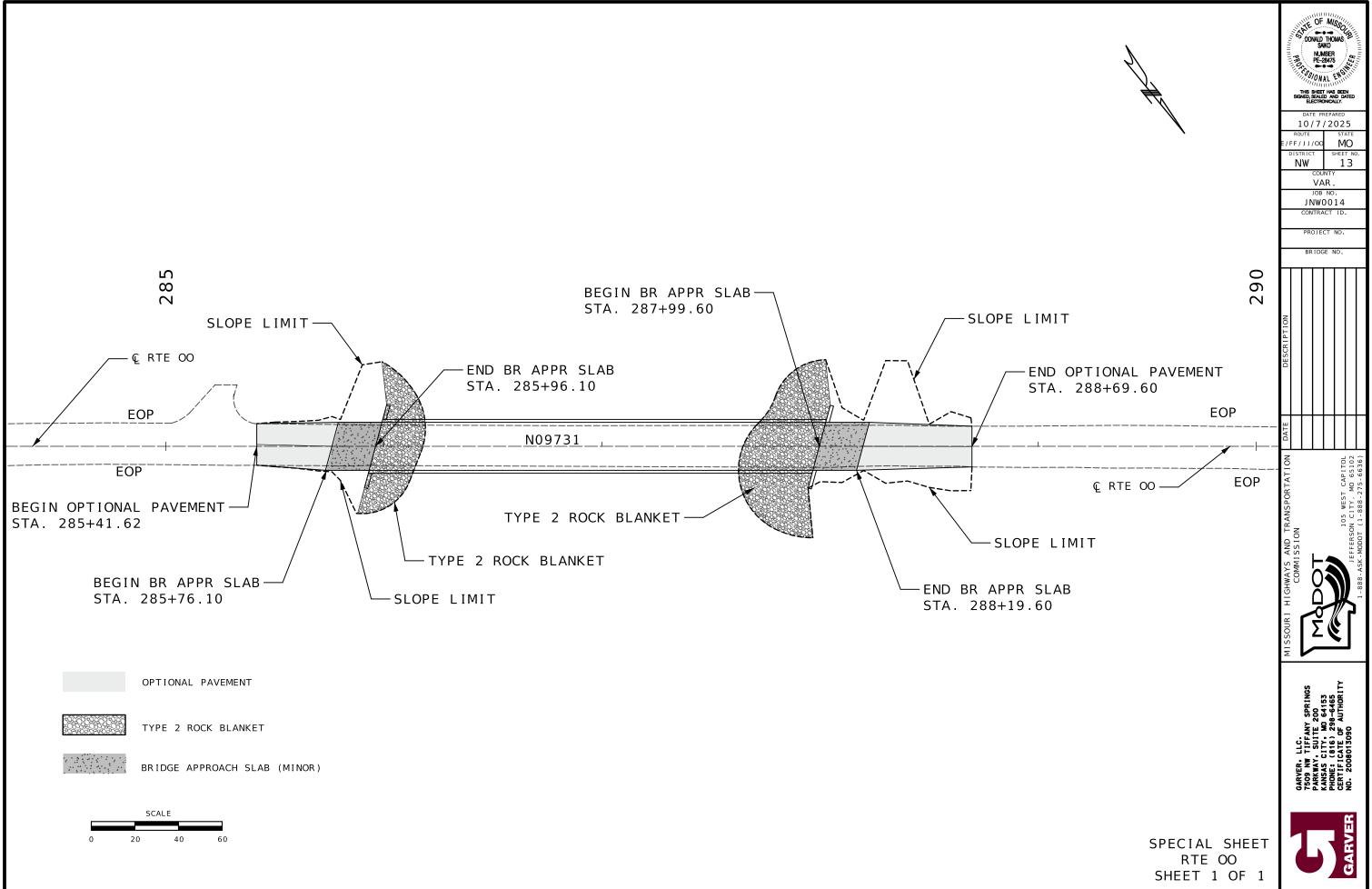


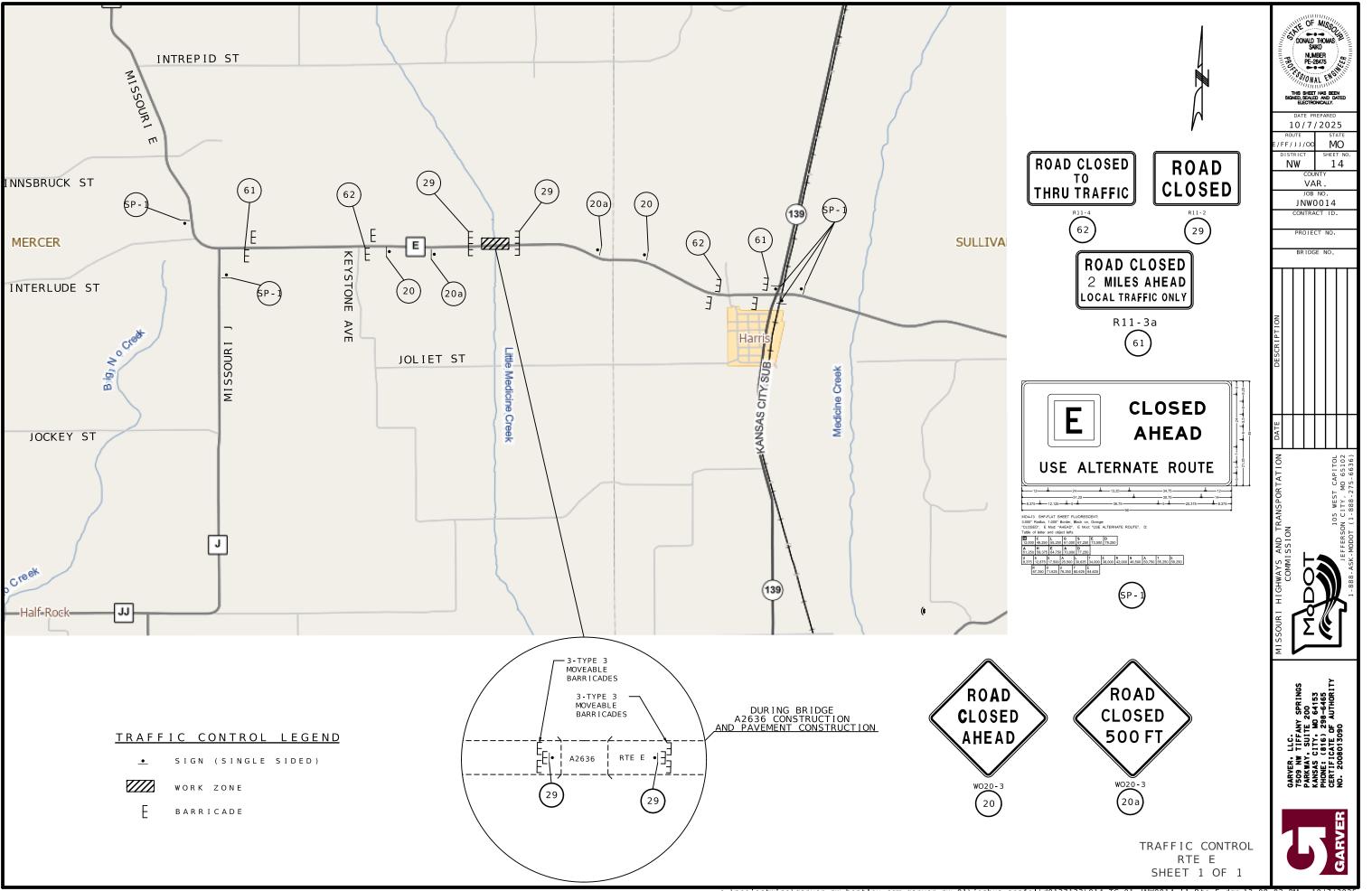


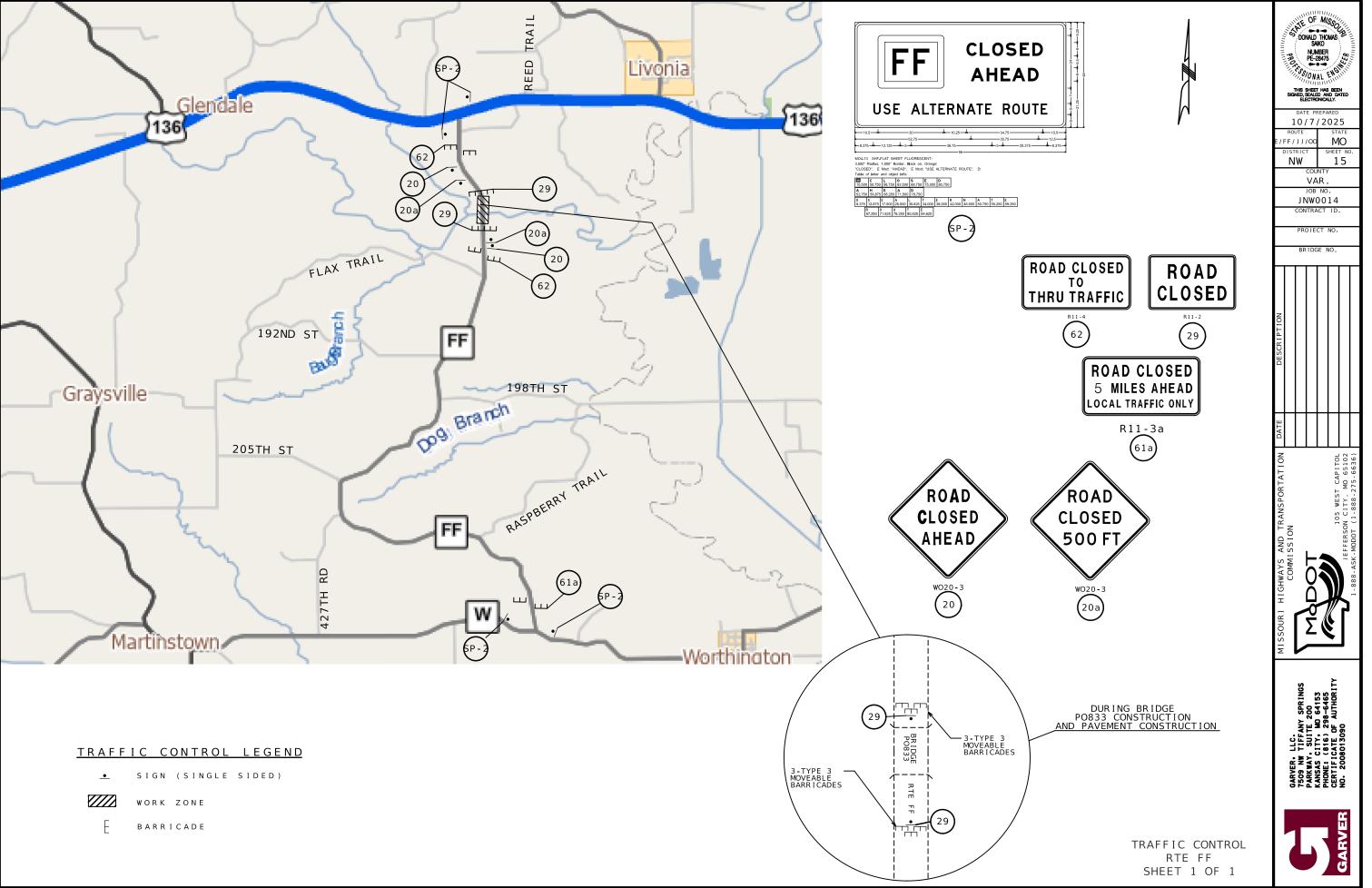


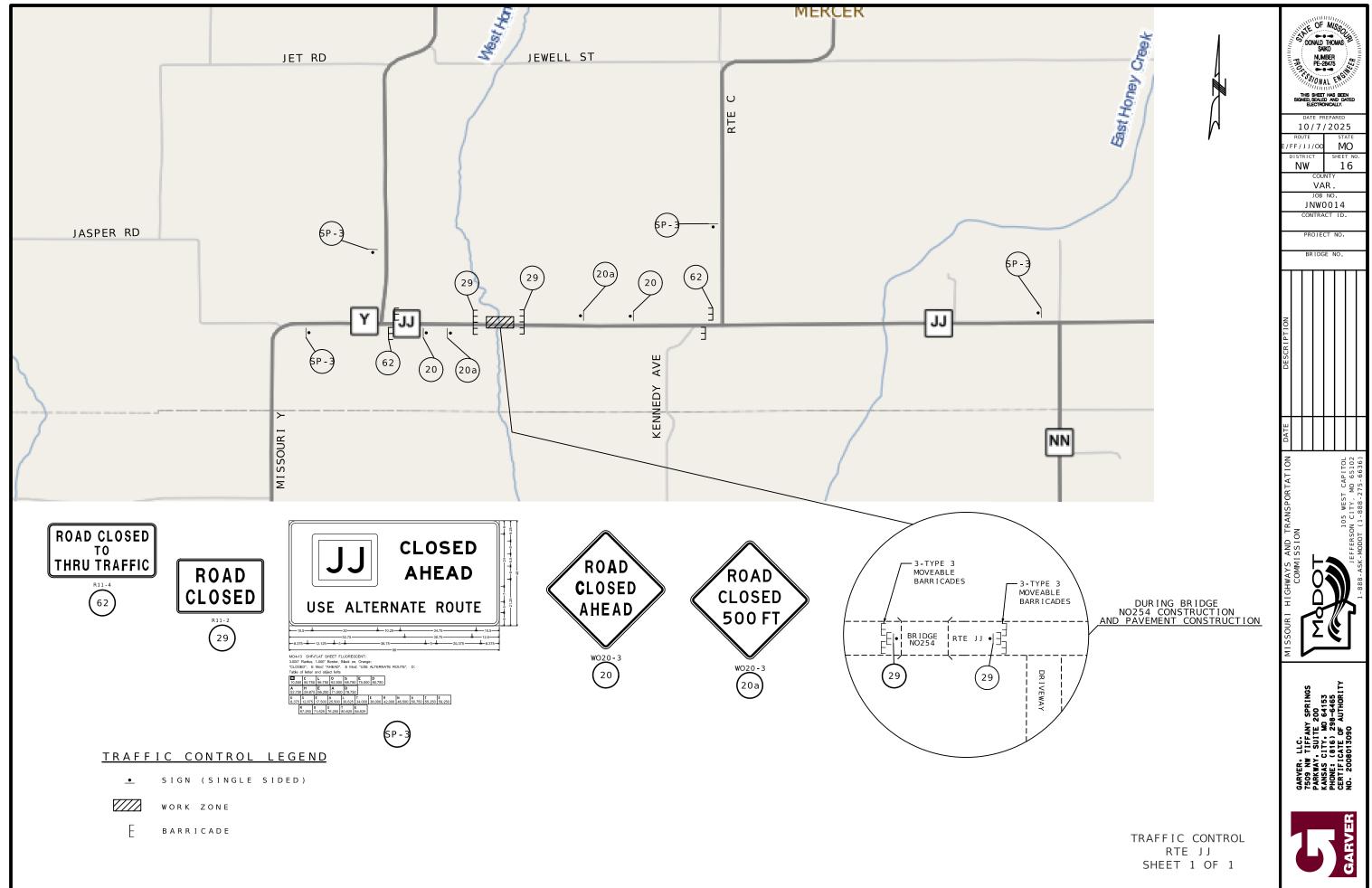


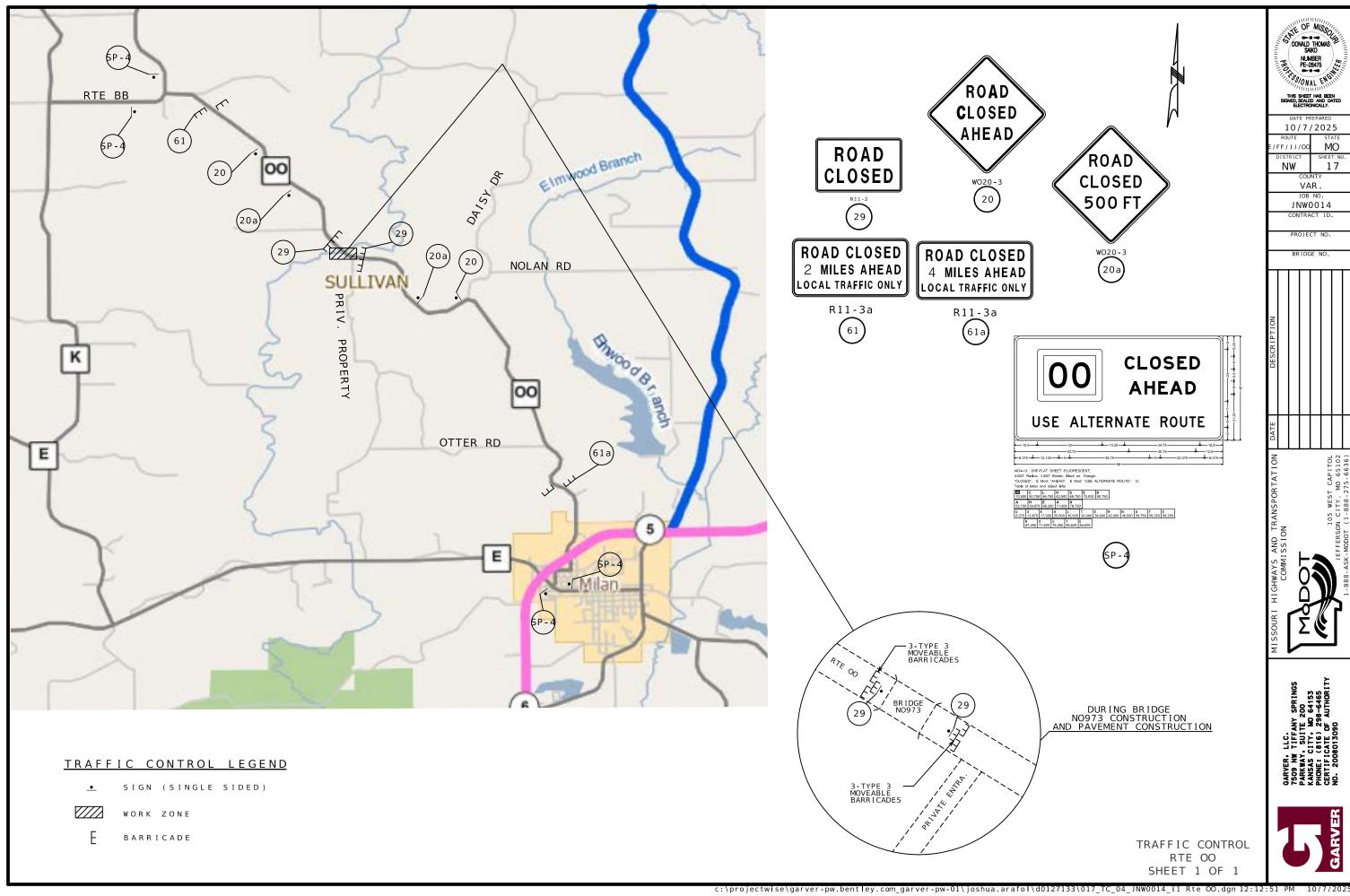










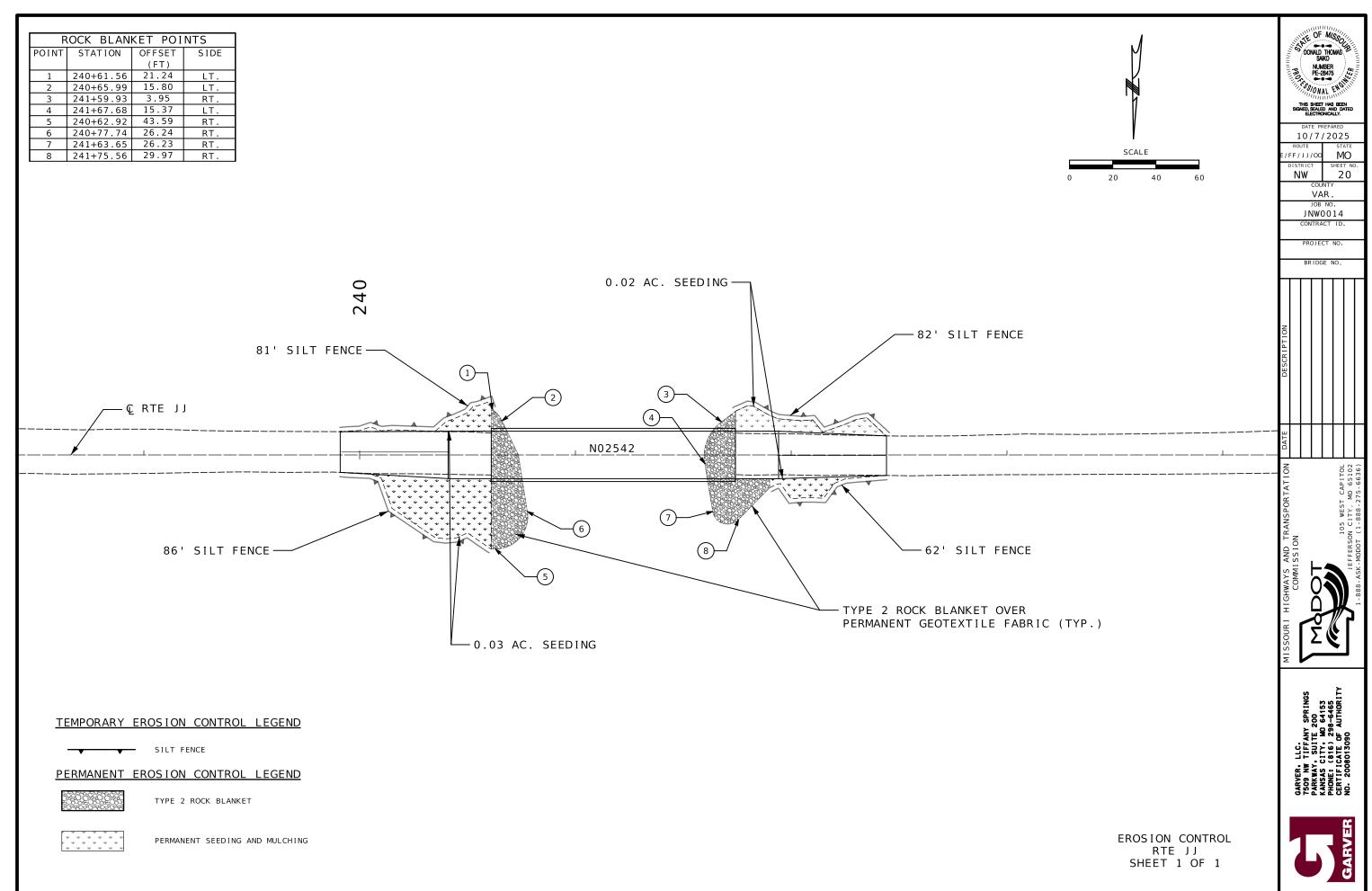


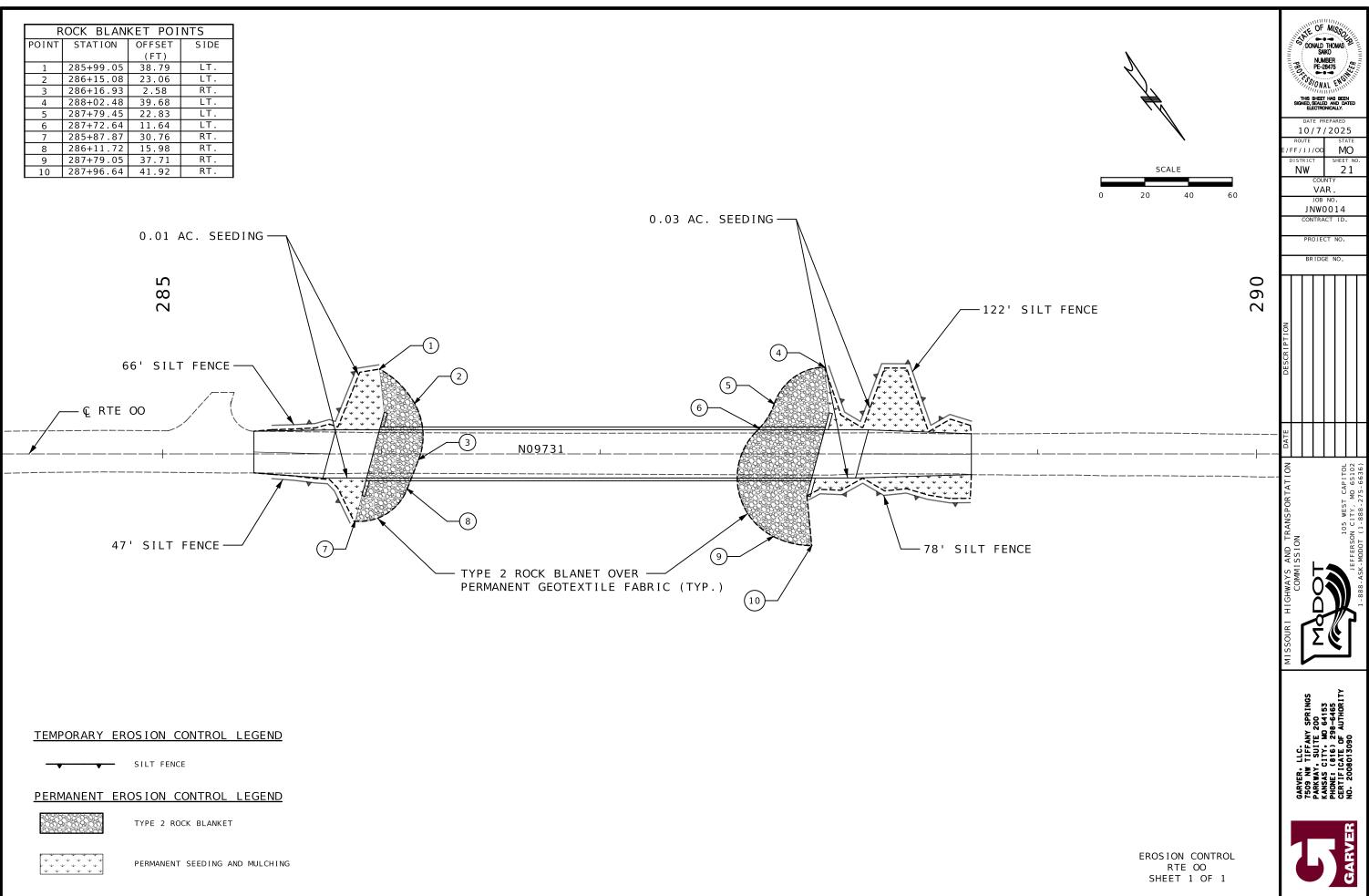
	COUNTY VAR. JOB NO. JNW0014 CONTRACT ID.
0.01 AC. SEEDING 0.01 AC. SEEDING 72' SILT FENCE 1	MODOT
TEMPORARY EROSION CONTROL LEGEND SILT FENCE PERMANENT EROSION CONTROL LEGEND TYPE 2 ROCK BLANKET PERMANENT SEEDING AND MULCHING EROSION CONTROL	CARVER, LLC. 7509 NW TIFFANY SPRINGS PARKWYY, SUITE 200 KANSAS CITY, MD 64153 PHONE: (816) 298-6465 CERTIFICATE OF AUTHORITY NO. 2008013090

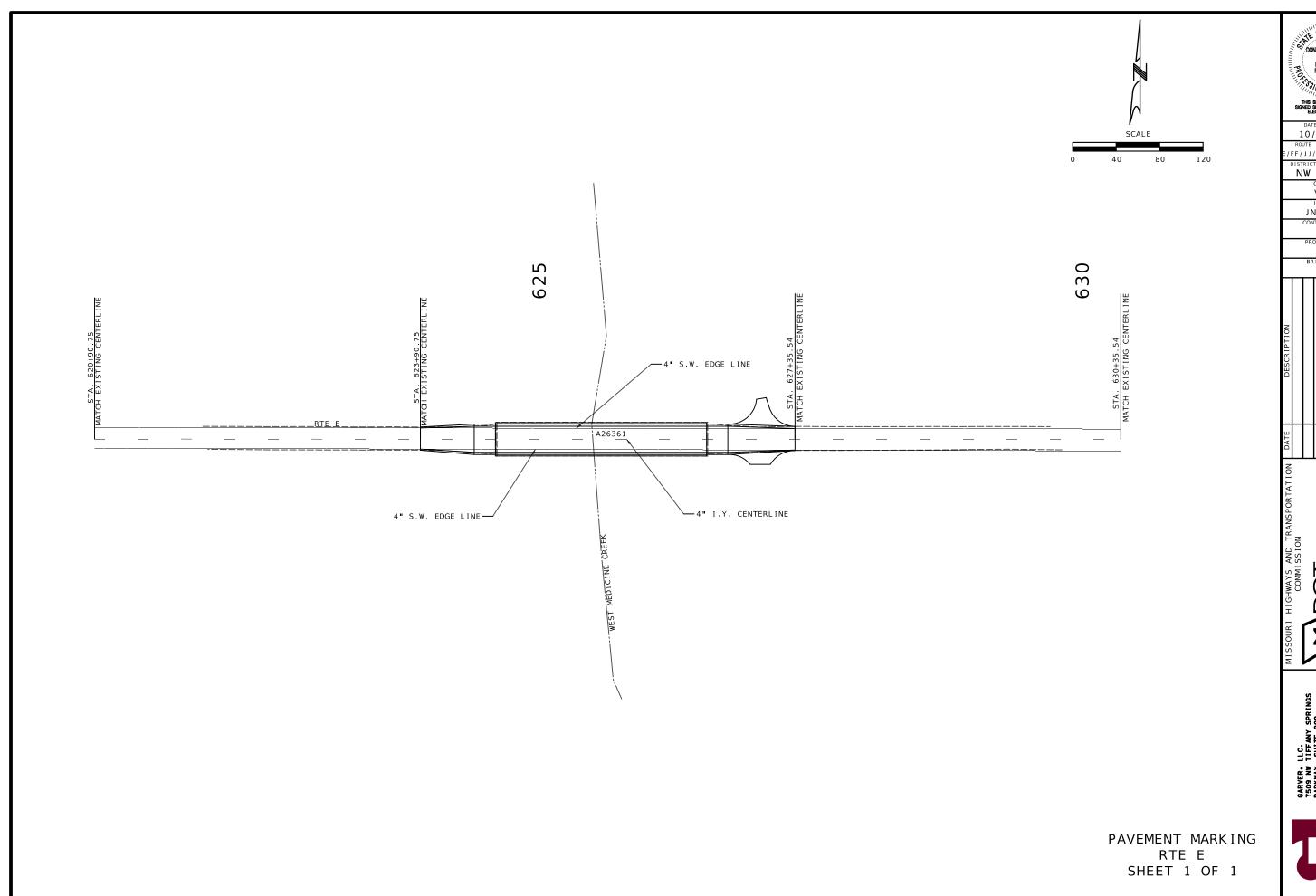
ROCK BLANKET POINTS POINT STATION (FT) OFFSET (SIDE (FT) 1 56+05.13 19.41 LT. LT. 2 56+20.13 4.41 LT. A.41 LT. 3 57+16.51 10.72 LT. LT. 4 57+23.18 18.12 LT. LT. 5 56+05.13 21.93 RT. RT. 6 56+20.13 6.93 RT. RT. 7 57+09.93 11.18 RT. RT. 8 57+15.26 23.85 RT. RT.	SCALE 0 20 40 60	DONALD THOMAS SAKO MUMBER PE-29475 PE-2947
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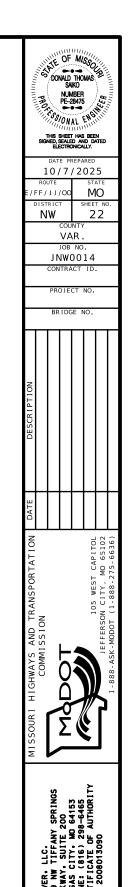
PERMANENT SEEDING AND MULCHING

EROSION CONTROL RTE FF SHEET 1 OF 1

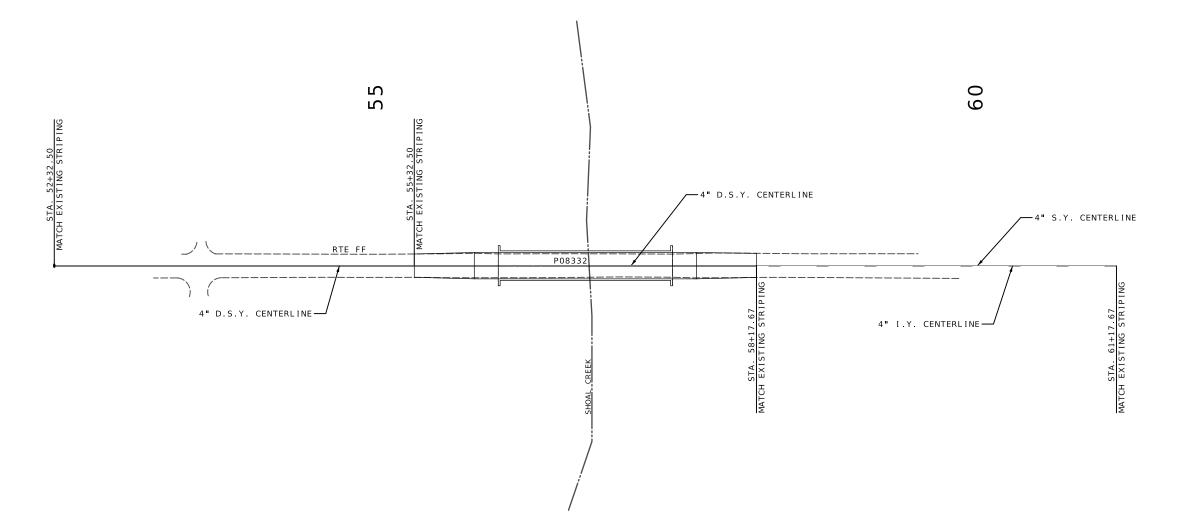














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10/7/2025				
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NW	23			
COUNTY				
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JOB NO.				
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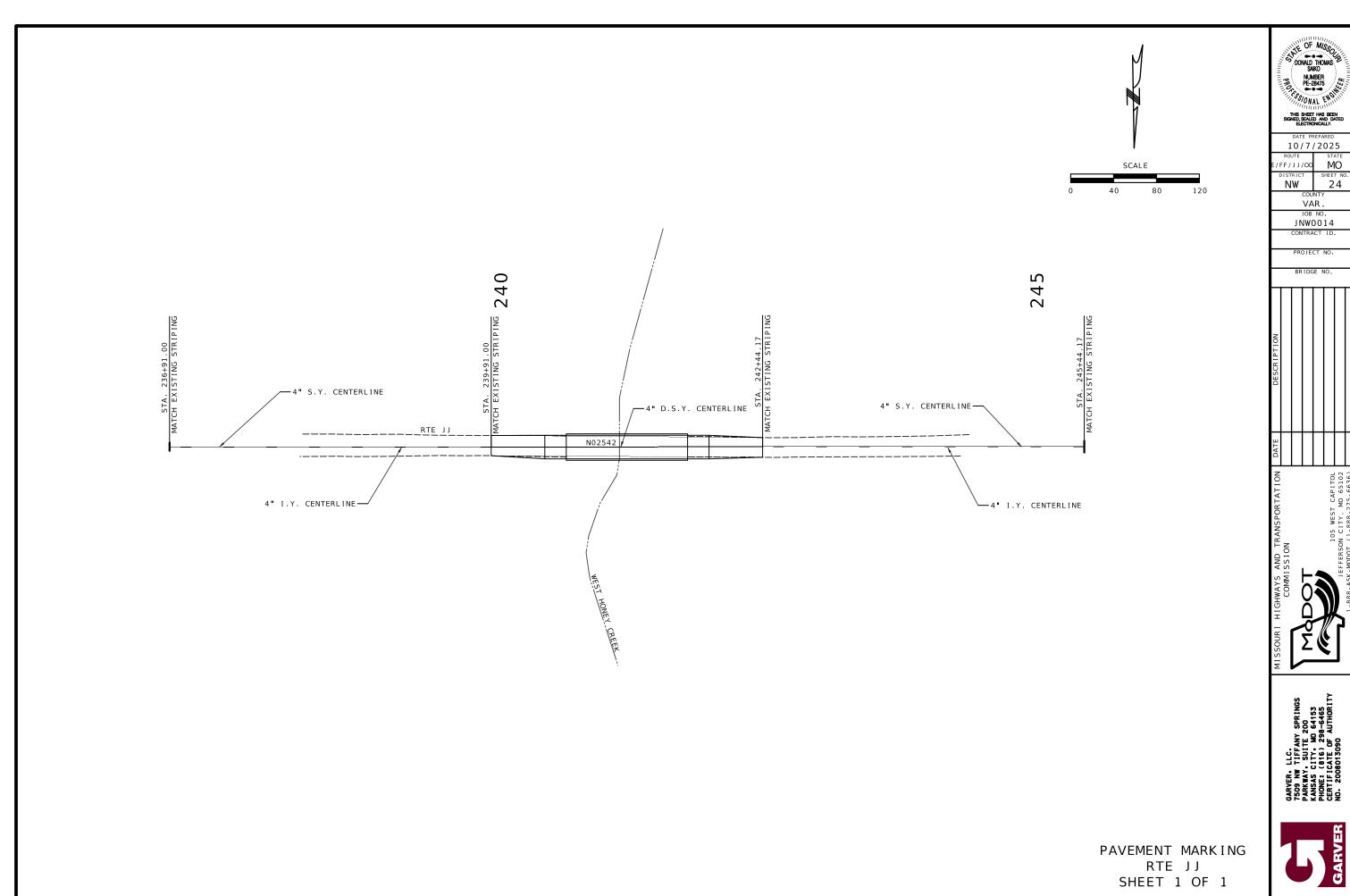


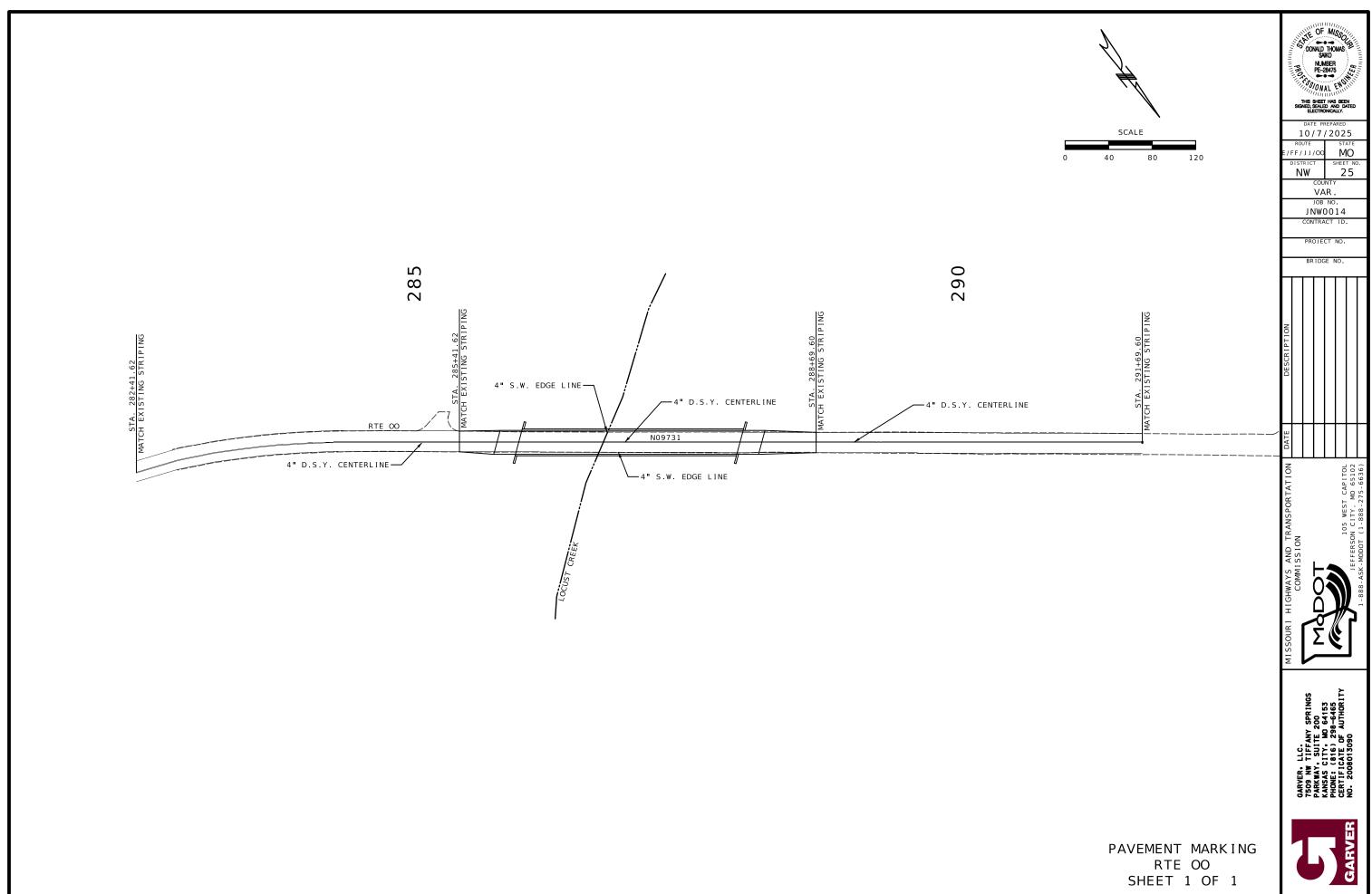


GARVER, LLC.
7560 WN TIFFANY SPRINGS
PARKWAY, SUITE 200
KANSAS CITY, MO 64153
PHONE: (816) 298-6465
CERTIFICATE OF AUTHORITY
NO. 2008013090



PAVEMENT MARKING RTE FF SHEET 1 OF 1



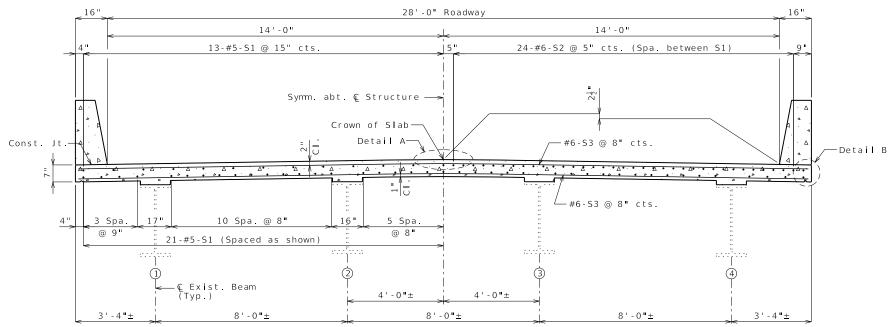


SEC/SUR 28 TWP 64N RGE 22W

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 (57'- 78'- 57') CONTINUOUS COMPOSITE WIDE FLANGE BEAM SPANS



HALF SECTION NEAR MIDSPAN

HALF SECTION NEAR INT. BENT

General Notes:

Design Specifications:

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

Design Loading:

H15-44 (1969) (Existing) H520-44 (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)
Class B-2 Concrete (End Bents & Superstructure, except Barrier)
Reinforcing Steel (ASTM A615 Grade 60)

f'c = 4,000 psi
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:

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.

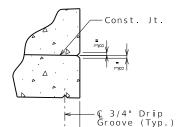
The area exposed by the removal of concrete and not covered with new concrete shall be coated with an approved qualified special mortar in accordance with Sec 704.

Rubblized concrete from the existing bridge deck that qualifies as clean fill may be placed on spill slopes at end bents above ordinary high water line (Roadway item).

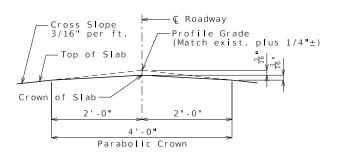
For adjusted beam deflection due to the weight of the new deck and barriers, see Bridge Electronic Deliverables.

Traffic Handling

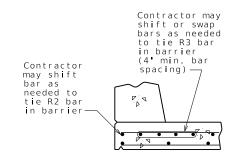
Structure to be closed during construction. Traffic to be maintained on other routes during construction. See roadway plans for traffic control.



DETAIL B



DETAIL A



OPTIONAL SHIFTING TOP BARS AT BARRIER

TYPICAL SECTION THRU SLAB

I t em		Total
Removal of Miscellaneous ACM (Non-Friable)	sq. foot	19
Class 1 Excavation	cu. yard	40
Temporary Shoring	lump sum	1
Removal of Existing Bridge Deck	sq. foot	5966
Bridge Approach Slab (Minor)	sq. yard	127
Slab on Steel	sq. yard	659
Type H Barrier	linear foot	423
Slab Drain	each	34
Non-Destructive Testing	linear foot	48
Vertical Drain at End Bents	each	2

Non-destructive testing to be performed on top flange cover plates of all beams.

Estimated	Quantities	for	Slab	on :	St	e e I
	I t em					Total
Class B-2 Concrete			(cu. ya	r d	162
Reinforcing Steel	(Epoxy Coated)			pou	nd	52,650

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 E OVER WEST MEDICINE CREEK

ROUTE E FROM ROUTE J TO ROUTE 139
ABOUT 1.9 MILES WEST OF ROUTE 139
BEGINNING STATION 624+59.75± (MATCH EXISTING)

DEREK S.
BUTLER

WANTER
PR-2019009889

THIS SHEET HAS BEEN
SIGNED, SALED AND DATED
ELECTRONICALLY

DATE PREPARED

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10/6/2025				
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COUNTY				
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JOB	NO.			

MERCER
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JNWO 0 1 4
CONTRACT ID.

PROJECT NO.

BRIDGE NO.

A26361

ATE DESCRIPTION

I HIGHWAYS AND TRANSPORTATION
COMMISSION

DOT

105 WEST CAPITOL
JEFFERSON CITY, MO 65102

/FR, LLC.

3 NW THAN SPRINGS

5 NW THAN SPRINGS

5 SAS CITY, MO 64153

FIE: (B16) 298-6465

2008013090

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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 received for weldings for the form welders will not be required for welding of the form

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.

Removal of Existing Deck and Pouring and Finishing Slab:

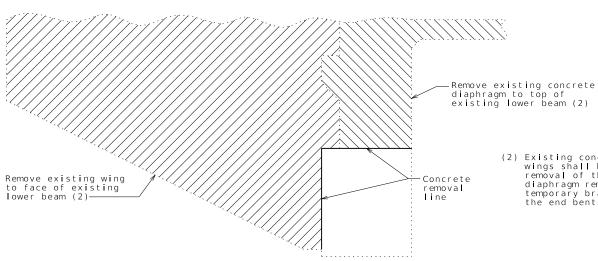
The contractor shall provide bracing necessary for lateral and torsional stability of the beams prior to removal of the existing concrete diaphragms and during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not weld on or drill 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

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:

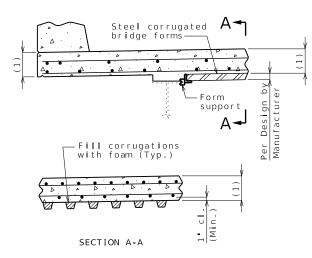
(1) Slab is to be considered a uniform thickness as shown on the plans. Haunching will vary. See front sheet for slab thickness.



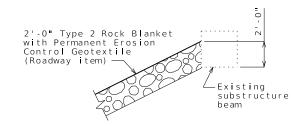
(2) Existing concrete diaphragms and wings shall be removed prior to removal of the deck. Prior to diaphragm removal, provide temporary bracing of the beams at the end bents. See General Notes.

ELEVATION OF END BENTS SHOWING CONCRETE REMOVAL

The cost of concrete removal as shown will be considered completely covered by the contract unit price for Removal of Existing Bridge Deck.



OPTIONAL STAY-IN-PLACE FORM DETAILS



ROCK BLANKET ON SPILL SLOPES

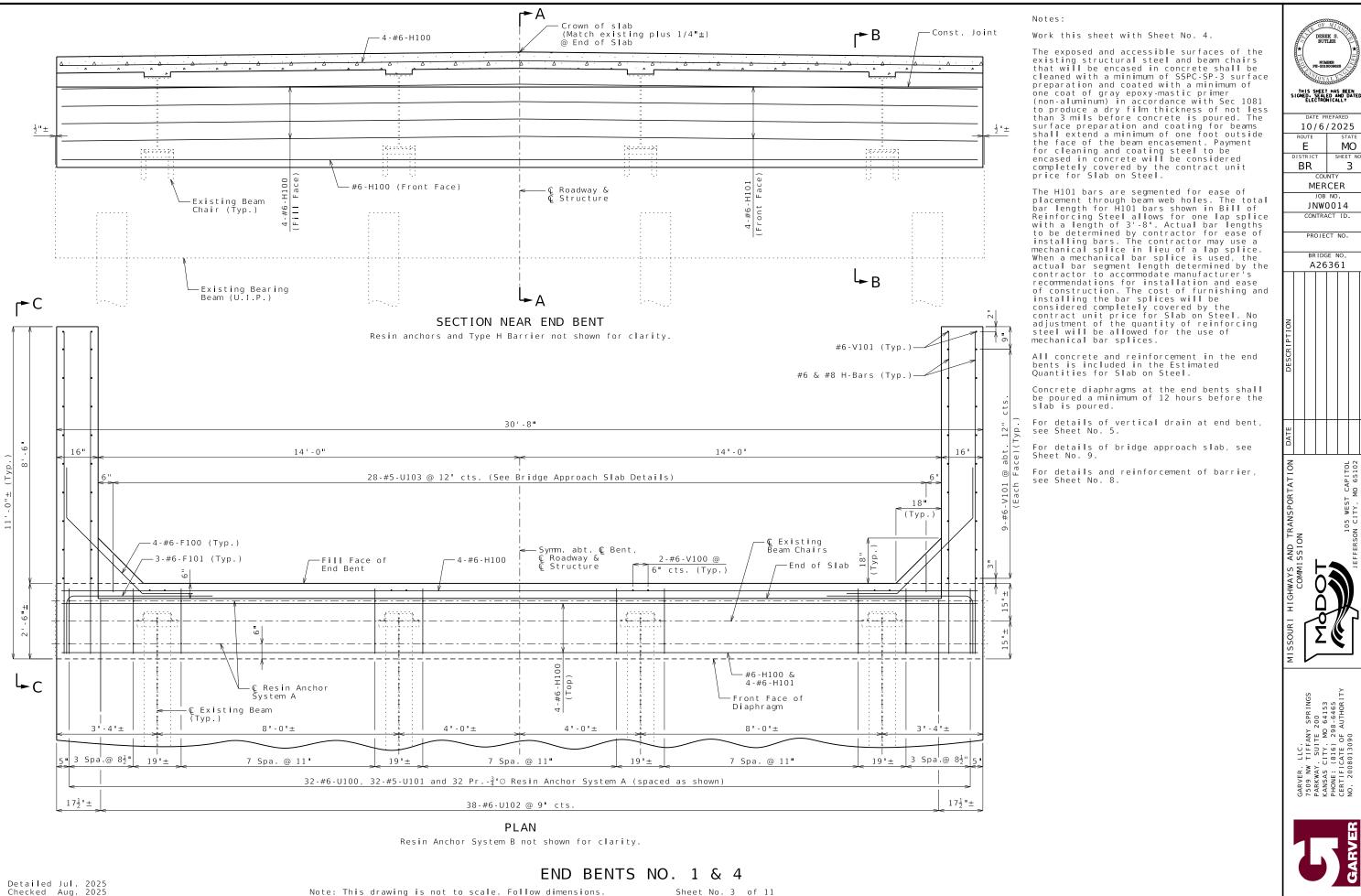


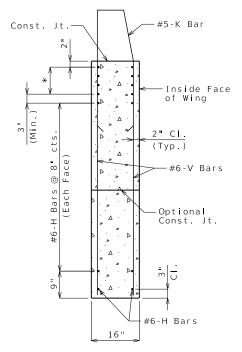
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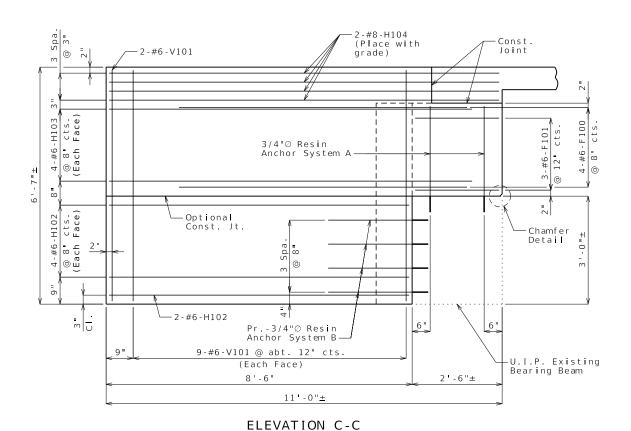






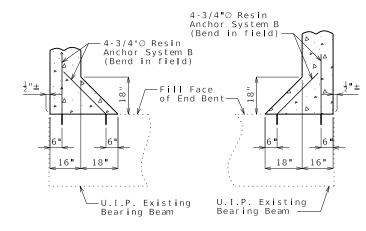
TYPICAL SECTION THRU WING

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



SECTION A-A

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



PART SECTIONS SHOWING RESIN ANCHORS IN WINGS AND WING BRACES

© 1 1/16"∅ holes in each beam (1) -Front Face of Diaphragm

DETAIL OF WEB HOLES AT END BENTS

(1) Cost of field drilling holes in existing wide flange beam webs will be considered completely covered by the contract unit price for Slab on Steel.

Notes:

Work this sheet with Sheet No. 3.

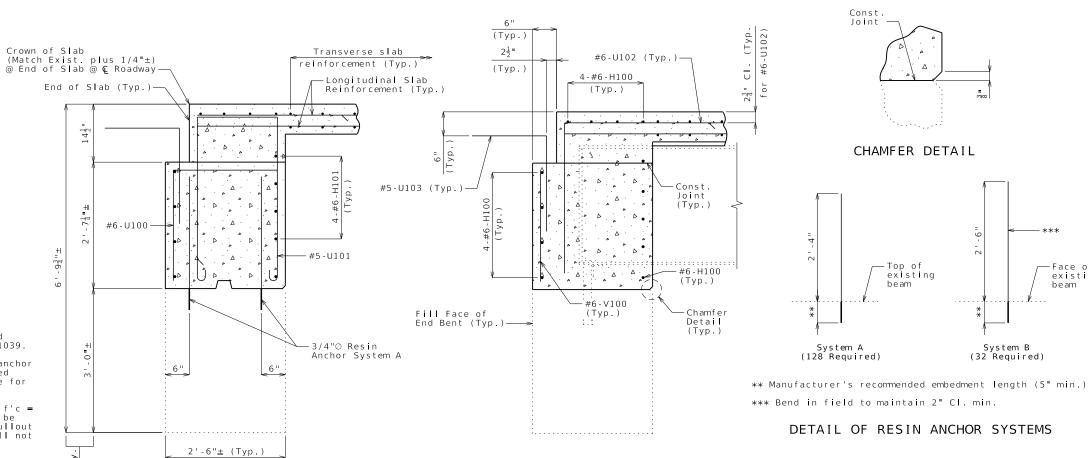
The contractor shall use one of the qualified resin anchor systems in accordance with Sec 1039.

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 pullout strength in accordance with Sec 1039 but shall not be less than 5 inches.

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

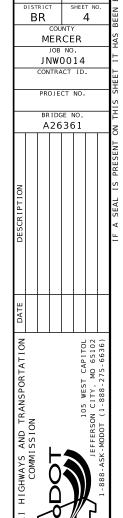
Detailed Jul. 2025 Checked Aug. 2025



Sheet No. 4 of 11

END BENTS NO. 1 & 4

SECTION B-B



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10/6/2025

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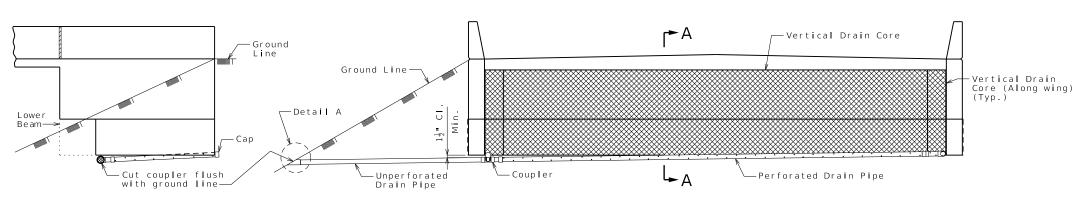
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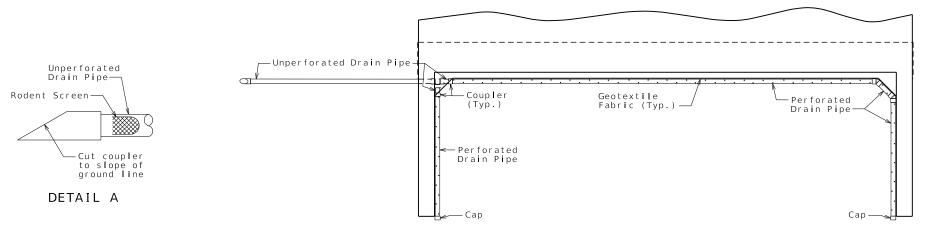
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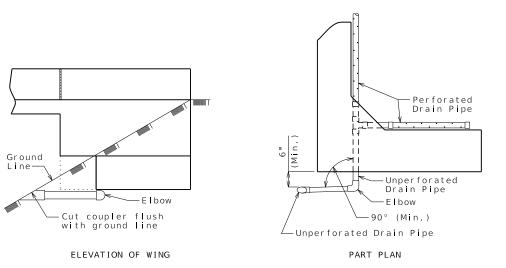
ELEVATION OF WING

Detailed Jul. 2025 Checked Aug. 2025

ELEVATION OF END BENT

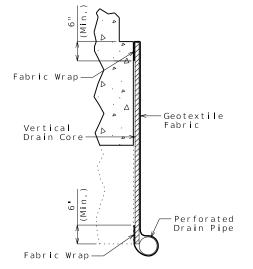


PLAN OF END BENT



OPTIONAL TURNED DRAIN

(Use only when straight drain is not practical.)



PART SECTION A-A

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.



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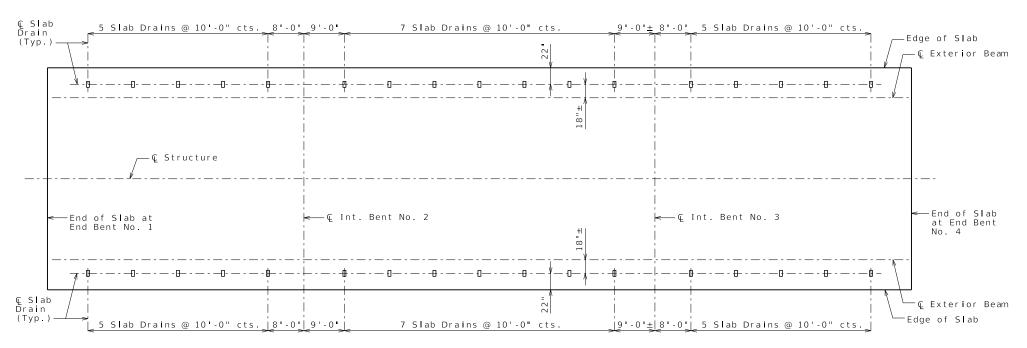
PROJECT NO

BRIDGE NO A26361

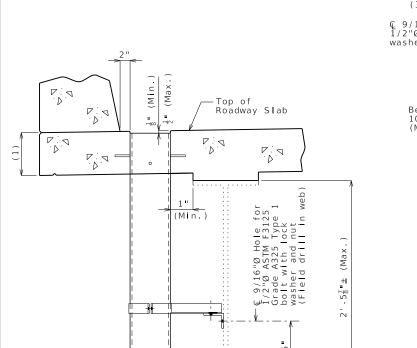
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VERTICAL DRAIN AT END BENTS



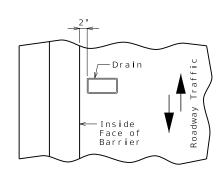
PLAN OF SLAB SHOWING SLAB DRAIN LOCATIONS



PART SECTION NEAR DRAIN

Ç 9/16"Ø Hole in angle for 1/2"Ø bolt with 2 hardened Angle (1/4" min. -1/2" max. thickness) washers, lock washer, and nut (3" min. legs) x 2" long © 9/16"Ø Holes for 1/2"Ø bolt with lock . ——Bottom F∣ange washer and nut (Typ.) ⊋ 9/16"Ø Hole for 1/2"Ø ASTM F3125 Grade A325 Type 1 bolt with Drair lock washer and nut (Field drill in web) Bent Strip 10 Gage $L2\times2\times\frac{1}{4}$ $\frac{9}{16}$ " Slot in L2x2x $\frac{1}{4}$

PART SECTION SHOWING BRACKET ASSEMBLY



PART PLAN OF SLAB AT DRAIN

SLAB DRAINS

PLAN OF FRP DRAIN OPTION

8" (Nom.)

ELEVATION OF DRAIN

PLAN OF STEEL DRAIN OPTION

€ Drain-

€ Drain—

Bottom of Roadway Slab

-1/2"Ø x 3" Rod (ASTM A709 Grade 36)

or 1/2"Ø x 3"± Shear Connector (Typ.)

- © Drain

-1/2"Ø x 3" Galv. Carriage Bolt with Hex Nut and Lock Washer (Typ.)

€ 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 AASHTO M 232 (ASTM A153), Class C.

All 1/2"Ø bolts shall be ASTM A307

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

(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.



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED

10/6/2025

ROUTE STATE
E MO

ISTRICT SHEET NO.
BR 6

COUNTY
MERCER
JOB NO.
LNW0014

JOB NO.
JNW0014
CONTRACT ID.

PROJECT NO

BRIDGE NO.
A26361

COMMISSION

COMMISSION

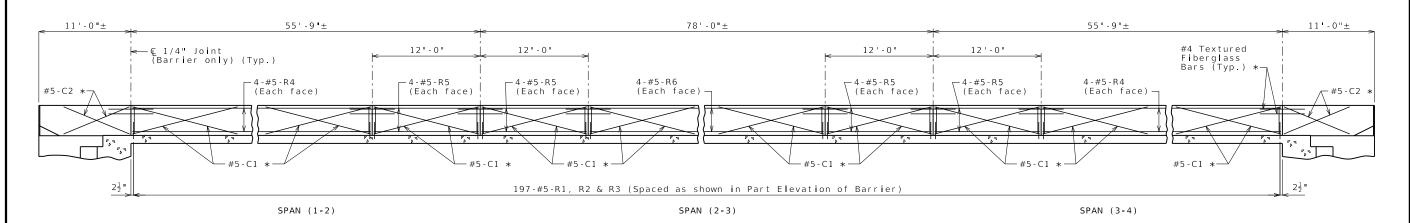
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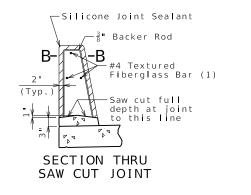
AARVEK, LLC.
S109 NW TIFFANY SPRINGS
ARKWAY, SUITE 200
ANSAS CITY, MO 64153
HONE: (816) 298-6465
TERTIFICATE OF AUTHORITY
TO. 2008013090



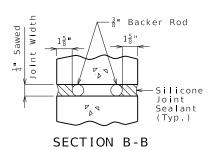


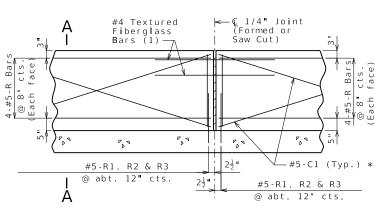
ELEVATION OF BARRIER

(Left barrier shown, right barrier similar)
Longitudinal dimensions are horizontal.





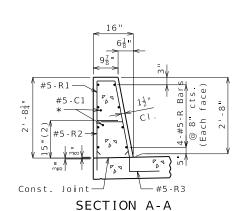






slip-formed option only

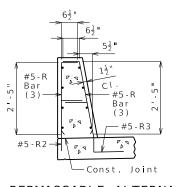
Detailed Jul. 2025 Checked Aug. 2025



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 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 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 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.



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MERCER

JOB NO.

JNW0014

CONTRACT ID.

BRIDGE NO.
A26361

ION DATE DESCRIPTION

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105 WEST CAPITOL

LEFFERSON CITY, MO 65102

VVEK, LLC.

KWWAY, SUITE 200

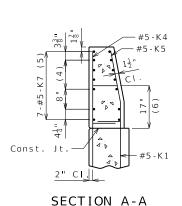
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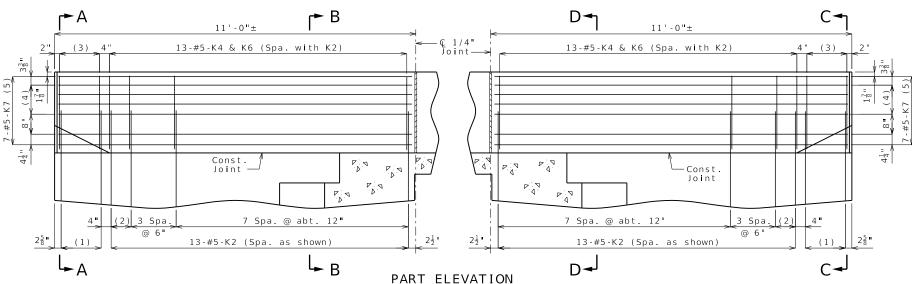
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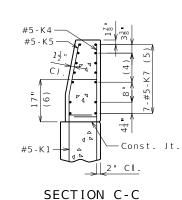
TIFICATE OF AUTHORITY

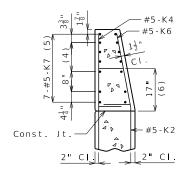


TYPE H BARRIER







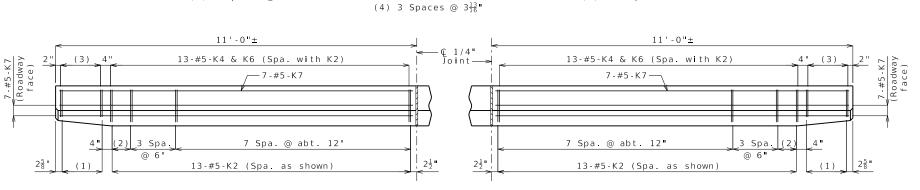


SECTION B-B



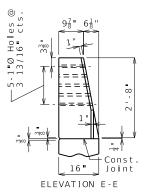
- (3) 5-#5-K4 and 5-#5-K5, spaced with K1
- (6) To top of bar

(5) Spaced as shown, each face

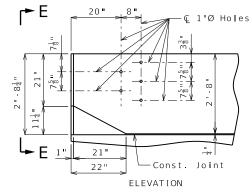


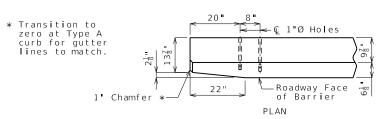
#5-K6 2" CI.|| || 2" CI SECTION D-D

PART PLAN



Detailed Jul. 2025 Checked Aug. 2025





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:

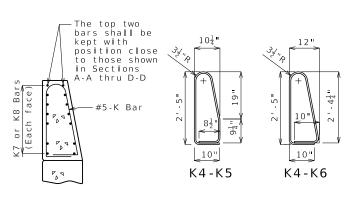
Minimum clearance to reinforcing steel shall be 1 1/2".

Use a minimum lap of 2'-6" between K7 bars and R bars.

TYPE H BARRIER AT END BENTS

(Left barrier shown, right barrier similar)

Note: This drawing is not to scale. Follow dimensions. Sheet No. 8 of 11



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.



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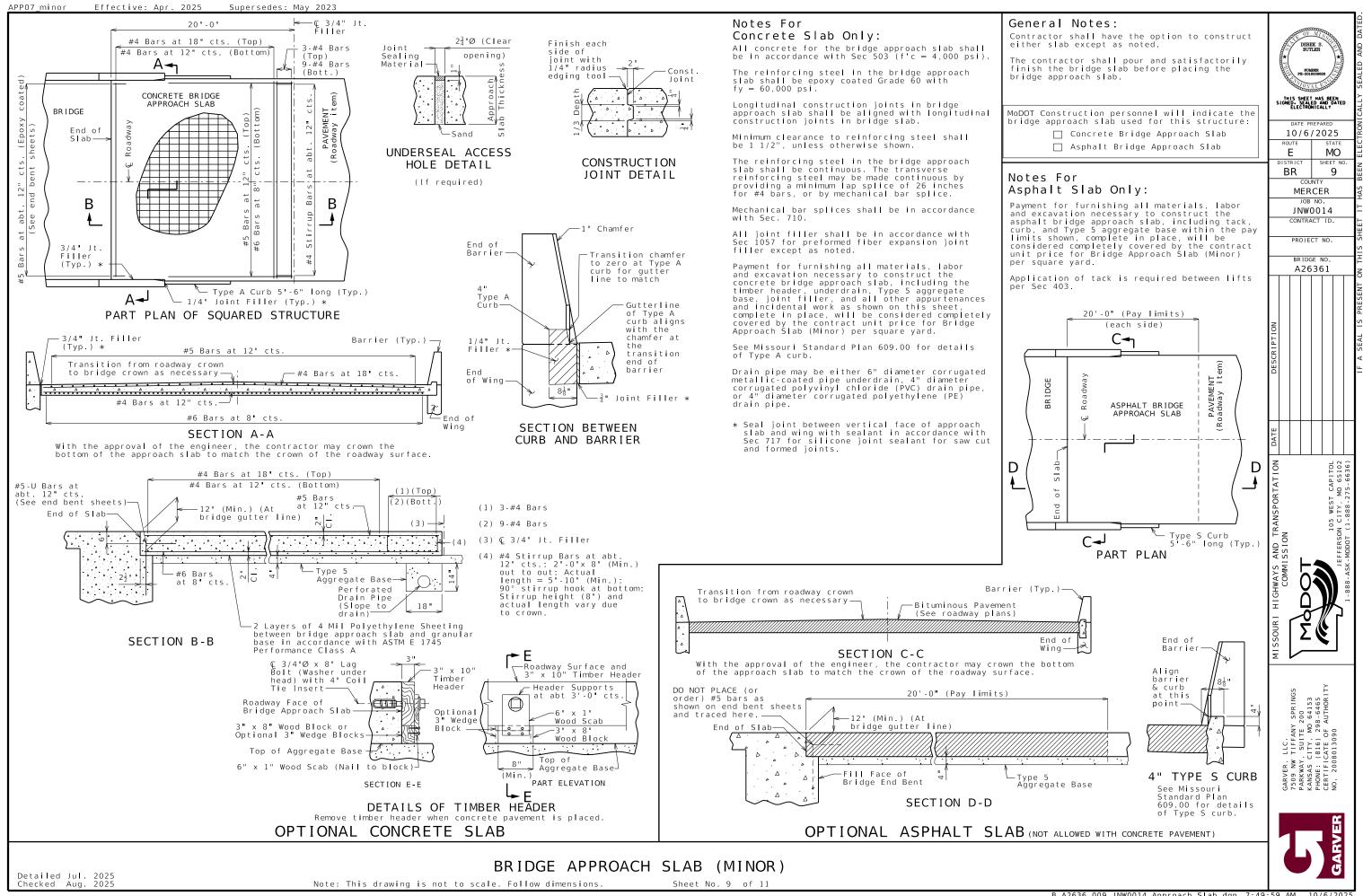
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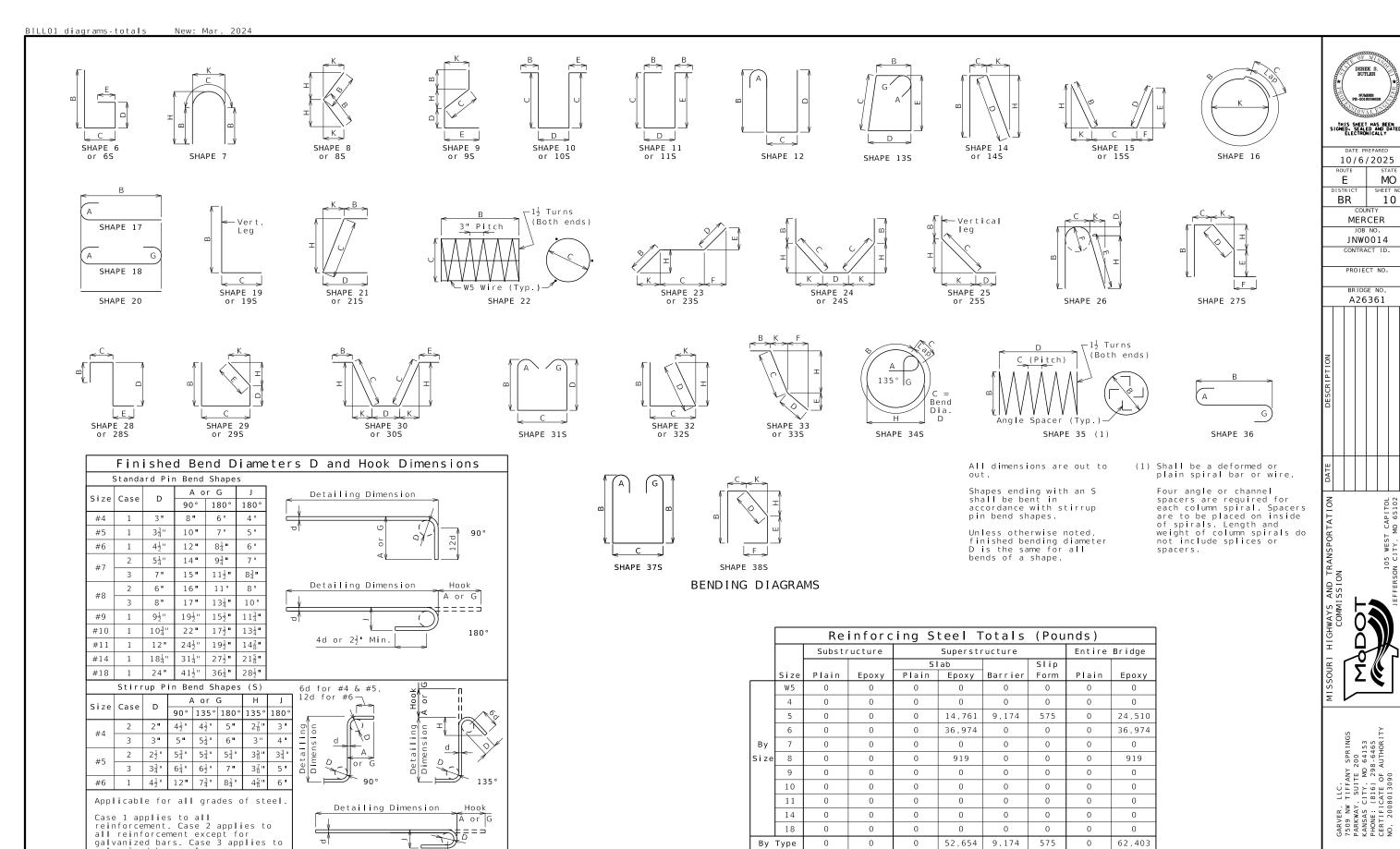












All superstructure reinforcing steel shall be epoxy coated unless otherwise specified.

BENDING DIAGRAMS AND REINFORCING STEEL TOTALS

180°

4d or $2\frac{1}{2}$ Min.

galvanized bars only.

Detailed Jul. 2025 Checked Aug. 2025

MO

10

BILLO3 data tables

New: Mar. 2024

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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.

Detailed Jul. 2025 Checked Aug. 2025

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.

10/6/2025 ROUTE Ε MO SHEET NO

DISTRICT BR 11 MERCER JOB NO.
JNW0014

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PROJECT NO.

BRIDGE NO. A26361

BILL OF REINFORCING STEEL Sheet No. 11 of 11

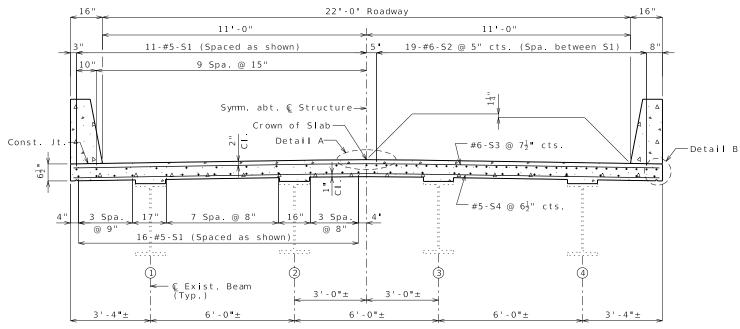
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Table Showing S2 Bar Lengths							
	SZ Bar	Lengths	5				
Int. Ber	nt No. 2	Int. Bei	nt No. 3				
Span 1	Span 2	Span 2	Span 3				
14'-8"	14 - 8 " 20 ' - 5 "		14'-8"				

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

** Unless otherwise shown

U.I.P., REDECK AND MAKE COMPOSITE EXISTING (37', 37', 37') SIMPLE WIDE FLANGE BEAM SPANS



HALF SECTION NEAR MIDSPAN

HALF SECTION NEAR INT. BENT

General Notes:

Design Specifications:

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

Design Loading:

H10-44 (1953) (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 psiClass 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,

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.

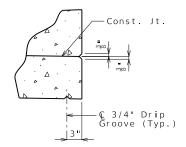
The area exposed by the removal of concrete and not covered with new concrete shall be coated with an approved qualified special mortar in accordance with Sec 704.

Rubblized concrete from the existing bridge deck that qualifies as clean fill may be placed on spill slopes at end bents above ordinary high water line (Roadway item).

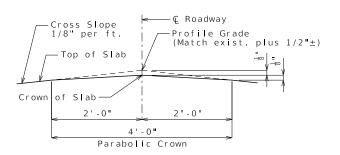
For adjusted beam deflection due to the weight of the new deck and barriers, see Bridge Electronic Deliverables.

Traffic Handling:

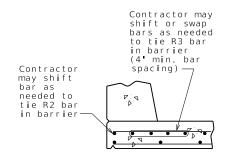
Structure to be closed during construction. Traffic to be maintained on other routes during construction. See roadway plans for traffic control.



DETAIL B



DETAIL A



OPTIONAL SHIFTING TOP BARS AT BARRIER

TYPICAL SECTION THRU SLAB

Total 2527 101 310 226
101 310
310
226
250
1
1056
18

Cost of any required excavation for bridge will be considered completely covered by the contract unit price for other items

Estimated Quantities for Slab on St	eel
I t em	Total
Class B-2 Concrete cu. yard	70
Reinforcing Steel (Epoxy Coated) pound	23,920

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 JJ OVER WEST HONEY CREEK

ROUTE JJ FROM ROUTE Y TO ROUTE C ABOUT 0.5 MILE EAST OF ROUTE Y BEGINNING STATION 240+61.00± (MATCH EXISTING)

DATE PREPARED						
10/6/2025						
ROUTE	STATE					
JJ	MO					
DISTRICT	SHEET NO.					
BR	1					
COU	NTY					
MERCER						
JOB	NO.					

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CONTRACT ID.	
PROJECT NO.	
DRIDGE NO	

		5E 1		
NOIL				
DESCRIPTION				





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DETAILS OF CONCRETE REMOVAL AT END BENTS

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 at End 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

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:

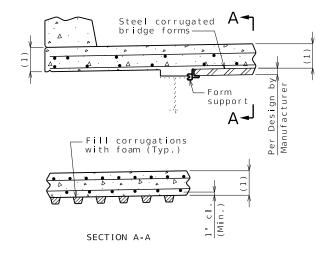
The contractor shall provide bracing necessary for lateral and torsional stability of the beams during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not weld on or drill holes in the beams. The cost for furnishing, installing,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

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

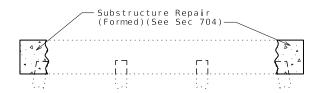
Alternate pour sequences may be submitted to the engineer for approval. Keyed construction joints shall be provided between pours.

Haunching:

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

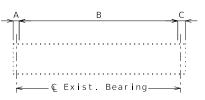


OPTIONAL STAY-IN-PLACE FORM DETAILS



DETAILS OF CONCRETE REPAIR AT INT. BENT NO. 2

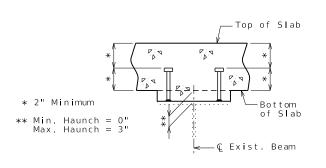
(Looking Upstation)



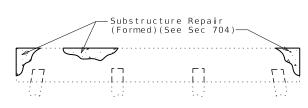
ELEVATION SHOWING SHEAR CONNECTOR SPACING

TABLE CHOWING CHEAR

	CONNECTOR UNIT SPACING							
Span	S.C. per unit	А	В	С				
1	2	6 "±	44 Units @ 10" cts.	6"±				
2	2	6 "±	44 Units @ 10" cts.	6"±				
3	2	6 "±	44 Units @ 10" cts.	6"±				
	Total sh	ear conr	nectors required	1056				

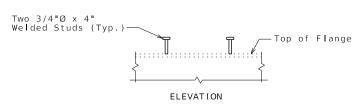


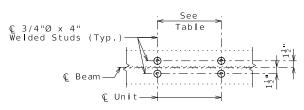
SECTION THRU EXIST. **BEAM SHOWING** SHEAR CONNECTORS



DETAILS OF CONCRETE REPAIR AT INT. BENT NO. 3

(Looking Backstation)



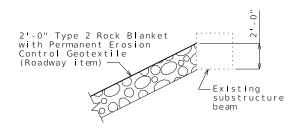


PLAN OF SHEAR CONN. (2 PER UNIT)

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.

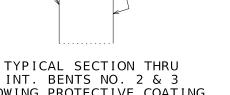
Shear connectors shall be in accordance with Sec 712, 1037 & 1080.



ROCK BLANKET ON SPILL SLOPES



INT. BENTS NO. 2 & 3 SHOWING PROTECTIVE COATING



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10/6/2025

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JNW0014

N02542

CONTRACT ID PROJECT NO

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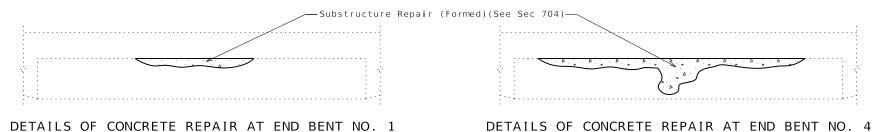
SHEET NO

2

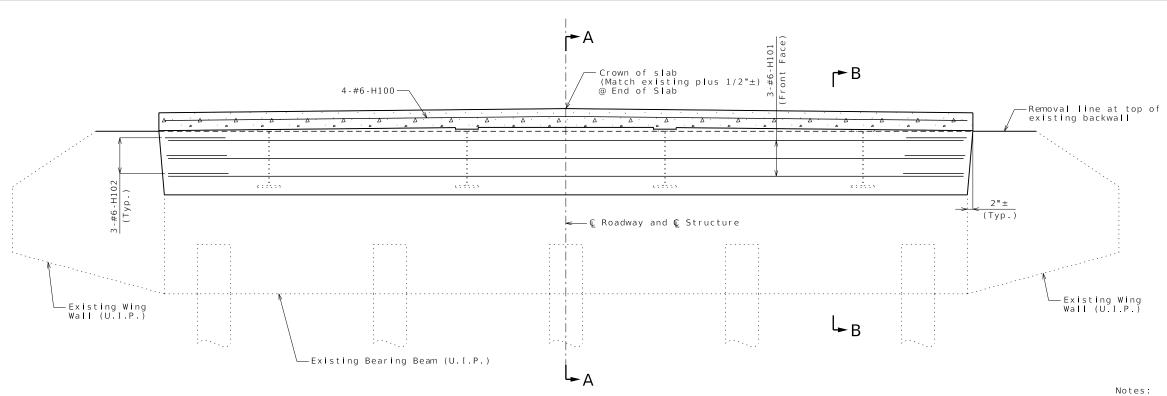
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BR





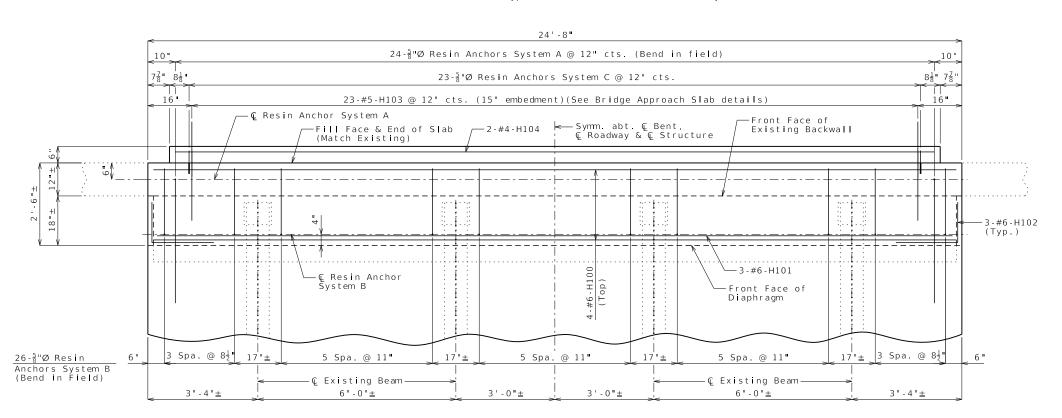
Note: All substructure repair work on all bents shall be completed prior to installing resin anchors, pouring diaphragms or sealing beam caps.



SECTION NEAR END BENT

Existing steel end diaphragms not shown for clarity (leave in place).

Resin anchors and Type H Barrier not shown for clarity.



PLAN

Existing steel diaphragms (U.I.P.) not shown for clarity.

END BENTS NO. 1 & 4

Detailed Jul. 2025 Checked Aug. 2025 Note: This drawing is not to scale. Follow dimensions.

Sheet No. 3 of 11

Work this sheet with Sheet No. 4.

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 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 beams shall extend a minimum of one foot outside the face of the beam 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 H101 bars are segmented for ease of placement through beam web holes. The total bar length for H101 bars shown in Bill of Reinforcing Steel allows for one lap splice with a length of 3'-8". Actual bar lengths with a length of 3'-8". Actual bar lengths to be determined by contractor for ease of installing bars. The contractor may use a mechanical splice in lieu of a lap splice. When a mechanical bar splice is used, the actual bar segment length determined by the contractor to accommodate manufacturer's recommendations for installation and ease of construction. The cost of furnishing and 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.

All concrete and reinforcement in the end bents is included in the Estimated Quantities for Slab on Steel.

For details of bridge approach slab, see

For details and reinforcement of barrier, see Sheet No. 8.



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10/6/2025 1.1 MO SHEET NO BR 3

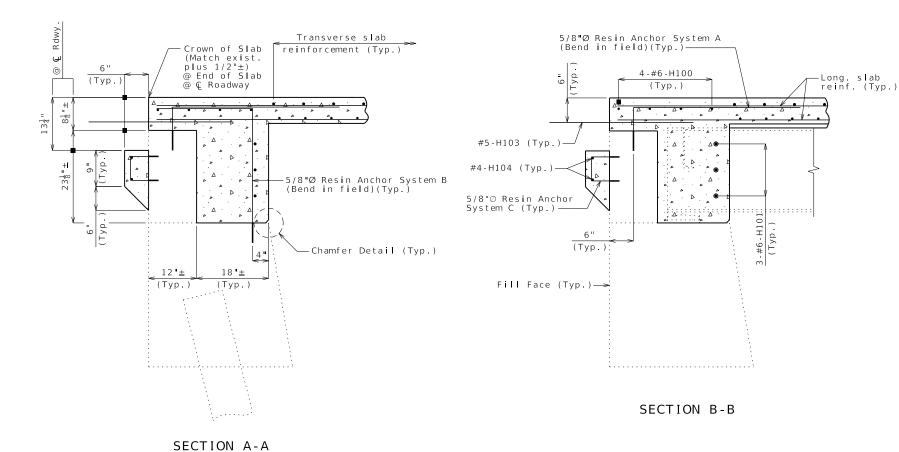
MERCER JNW0014 CONTRACT ID.

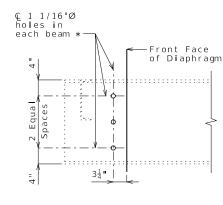
PROJECT NO

BRIDGE NO N02542

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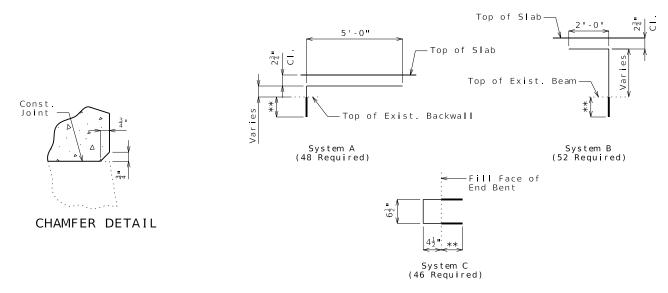






DETAIL OF WEB HOLES AT END BENTS

* Cost of field drilling holes in existing wide flange beam webs will be considered completely covered by the contract unit price for Slab on Steel.



DETAILS OF RESIN ANCHOR SYSTEMS

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

Notes:

Work this sheet with Sheet No. 3.

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 pullout strength in accordance with Sec 1039 but shall not be less than 5 inches.

An epoxy coated #5 Grade 60 reinforcing bar shall be substituted for the 5/8"Ø threaded rod for Resin Anchor Systems A, B & C.



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MERCER						
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CONTRACT ID.

PROJECT NO.



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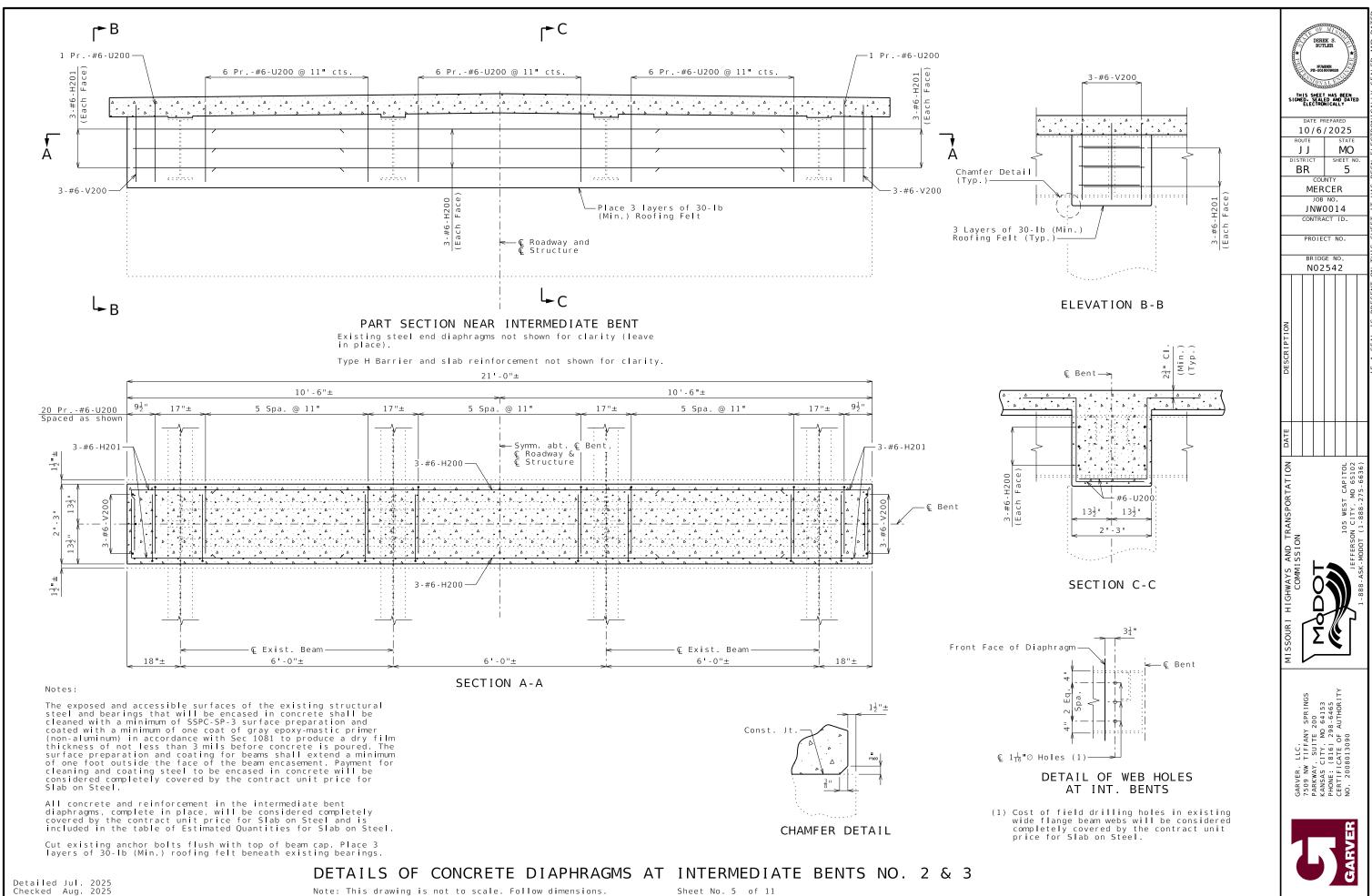
SSOURI HIGHWAYS AND TRANSPORTATI
COMMISSION
MODOT

105 WEST CAPIT
HEFFERSON CITY, MO 65:

09 NW TIFFANY SPRINGS
RKWAY, SUITE 200
NASAS CITY, MO 64153
ONE: (816) 298-6465
RTIFICATE OF AUTHORITY
2008013090



END BENTS NO. 1 & 4

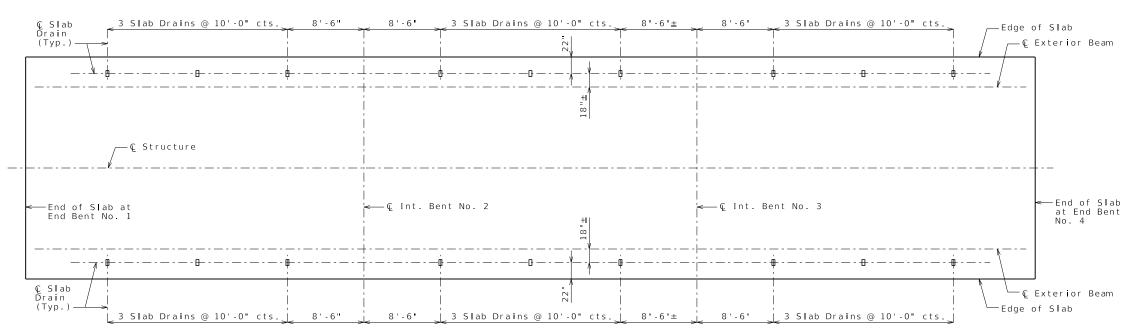


(Min.)

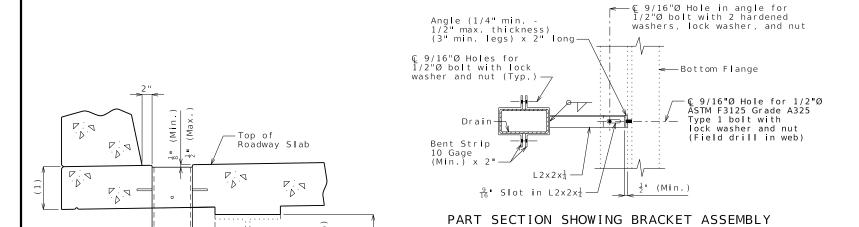
PART SECTION NEAR DRAIN

9/16/ 2"Ø/ ade/

1" (Min.)



PLAN OF SLAB SHOWING SLAB DRAIN LOCATIONS



Drain

Uite

Inside
Face of

PART PLAN OF SLAB AT DRAIN

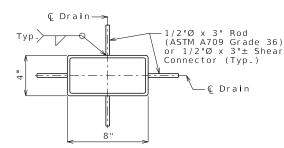
Note: This drawing is not to scale. Follow dimensions.



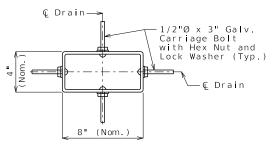
Sheet No. 6 of 11

© Drain

ELEVATION OF DRAIN



PLAN OF STEEL 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

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 $1/4\ \mathrm{inch}$.

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.



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DATE PREPARED						
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ROUTE	STATE					
JJ	MO					
DISTRICT	SHEET NO.					
BR	6					
COU	NTY					
MERCER						
JOB NO.						

JOB NO.
JNW0014
CONTRACT ID.

PROJECT NO

BRIDGE NO.
NO 2542

SOURI HIGHWAYS AND TRANSPORTATIC
COMMISSION

MODOT

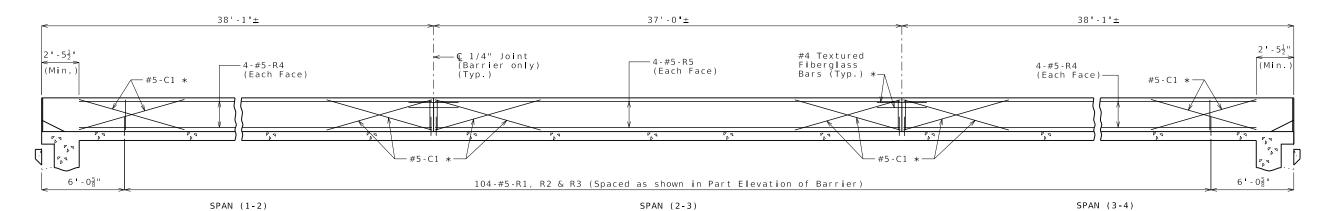
105 WEST CAPITO

JEFFERSON CITY, MO 651

AARVEK, LLC.
S109 NW TIFFANY SPRINGS
ARKWAY, SUITE 200
ANSAS CITY, MO 64153
HONE: (816) 298-6465
TERTIFICATE OF AUTHORITY
TO. 2008013090

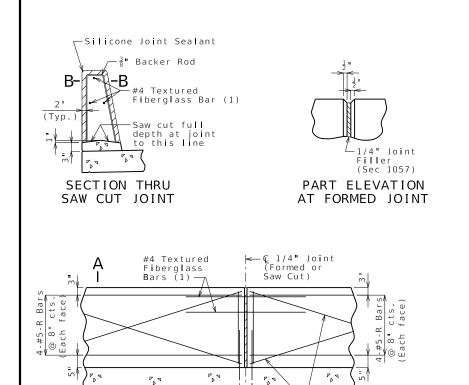


SLAB DRAINS



ELEVATION OF BARRIER

(Left barrier shown, right barrier similar) Longitudinal dimensions are horizontal.



PART ELEVATION OF BARRIER

#5-R1, R2 & R3

@ abt. 12" cts.

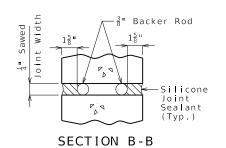
Detailed Jul. 2025 Checked Aug. 2025 21 "

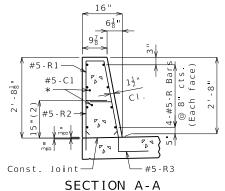
-#5-C1 (Typ.) *

#5-R1, R2 & R3

@ abt. 12" cts.

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

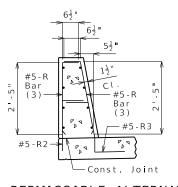




Use a minimum lap of 2'-6" for #5 horizontal barrier bars.

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 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 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 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.



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DATE PREPARED						
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BR	7					
COUNTY						
MERCER						

JOB NO.
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CONTRACT ID.



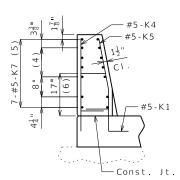
105 WEST CAPITOL 105 WEST CAPITOL 1 JEFFERSON CITY, MO 65102

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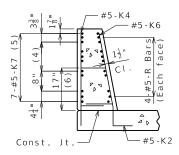
09 NW TIFFANY SPRINGS RKWAY, SUITE 200 RASAS CITY, MO 64153 ONE: (816) 298-6465 RTIFICATE OF AUTHORI



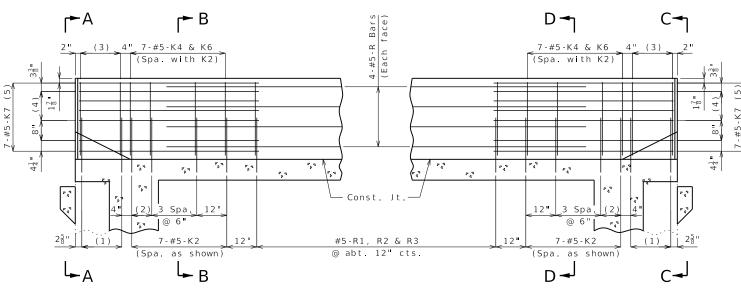
TYPE H BARRIER



ELEVATION A-A



SECTION B-B



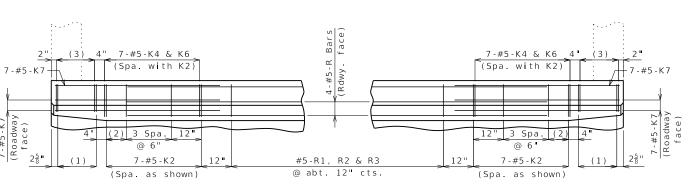
PART ELEVATION

- (1) 5-#5-K1 @ 4" cts.
- (2) 2 Spaces @ 4"

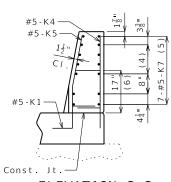
-Ç 1"Ø Holes

— Const. Joint

- (3) 5-#5-K4 and 5-#5-K5, spaced with K1
- (4) 3 Spaces @ 313"
- (5) Spaced as shown, each face
- (6) To top of bar



PART PLAN



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JNW0014

CONTRACT ID.

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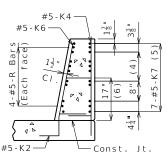
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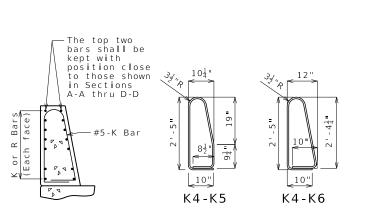
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BR

ELEVATION C-C



SECTION D-D

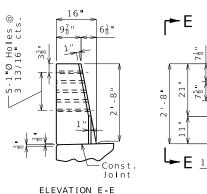


PERMISSIBLE ALTERNATE SHAPES

(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.



* Transition to zero at Type A curb for gutter lines to match.

1" Chamfer *

ELEVATION

20" 8"

C 1"Ø Holes

Roadway Face of Barrier

21"

22"

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:

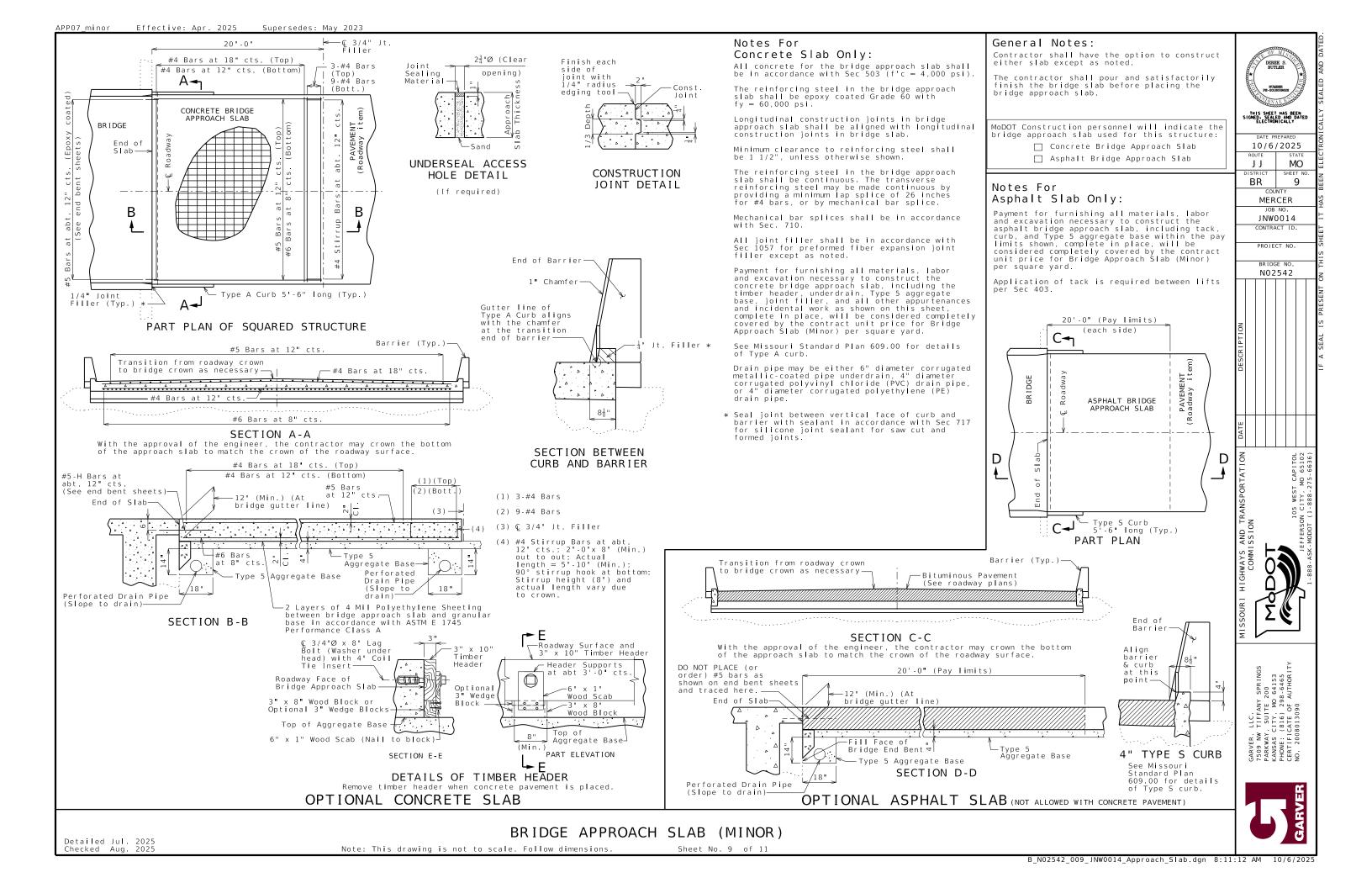
Minimum clearance to reinforcing steel shall be 1 1/2".

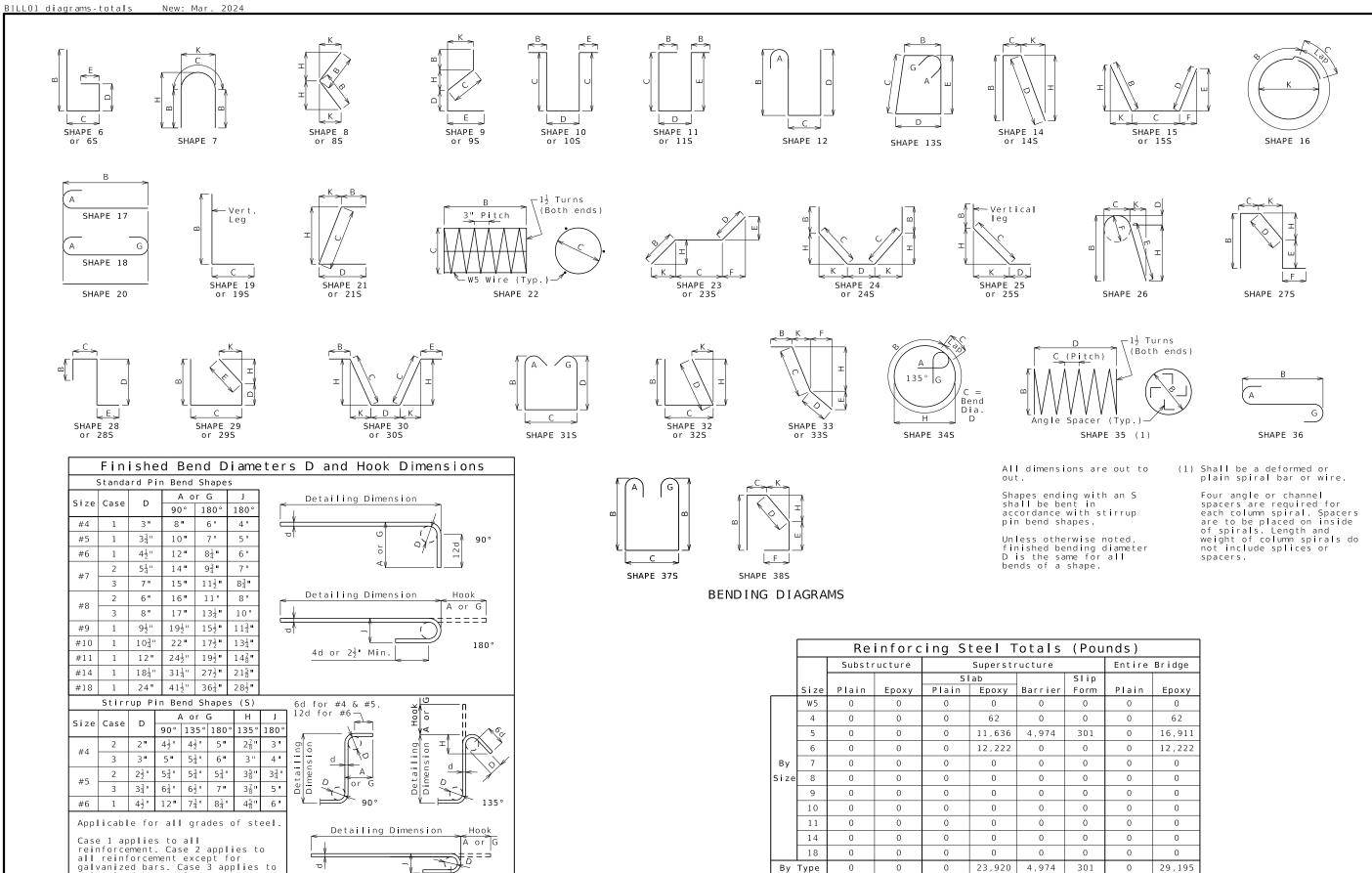
Use a minimum lap of 2'-6" between K7 bars and R bars.

TYPE H BARRIER AT END BENTS

(Left barrier shown, right barrier similar)

Detailed Jul. 2025 Checked Aug. 2025





		Substr	ucture		Superstr	ucture	Entire Bridge		
				SI	ab	Slip			
	Size	Plain	Epoxy	Plain	Epoxy	Barrier	Form	Plain	Epoxy
	W5	0	0	0	0	0	0	0	0
	4	0	0	0	62	0	0	0	62
	5	0	0	0	11,636	4,974	301	0	16,911
	6	0	0	0	12,222	0	0	0	12,222
Ву	7	0	0	0	0	0	0	0	0
Size	8	0	0	0	0	0	0	0	0
	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
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All superstructure reinforcing steel shall be epoxy coated unless otherwise specified.

BENDING DIAGRAMS AND REINFORCING STEEL TOTALS

180°

4d or $2\frac{1}{2}$ Min.

galvanized bars only.

Detailed Jul. 2025 Checked Aug. 2025

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JNW0014 CONTRACT ID. PROJECT NO

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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 All bars shall be Grade 60.	Nominal leng	gths are based o	n out to	out dime	ensions s	shown in	bending	diagrams	and are				to a second			С	Codes: C	= Required coa	ntings, wh	ere E = Epoxy Coated and	G = Gal	vanized.		

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.

All bars shall be Grade 60.

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.

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

Detailed Jul. 2025 Checked Aug. 2025

BILL OF REINFORCING STEEL Note: This drawing is not to scale. Follow dimensions. Sheet No. 11 of 11

B_N02542_011_JNW0014_Barbill_2.dgn 8:12:43 AM 10/6/2025

Supersedes: Jan. 2023

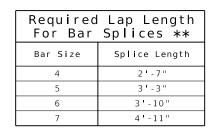
Table Showing S2 Bar Lengths Int. Bent No. 2 Int. Bent No. 3 Span 2 Span 2 Span 3

24'-6**"**

28'-5"

U.I.P., REDECK AND MAKE COMPOSITE EXISTING (60'- 80'- 60') CONTINUOUS WIDE FLANGE BEAM SPANS (SKEW: 15° L.A.)

SEC/SUR 17 TWP 63N RGE 20W



24'-6**"**

28 ' - 5 "

** Unless otherwise shown

General Notes:

Design Specifications:

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

Design Loading:

H15-44 (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 psiClass B-2 Concrete (End Bents & Superstructure, except Barrier) f'c = 4,000 psiReinforcing 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,

Reinforcing Steel:

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

Miscellaneous:

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

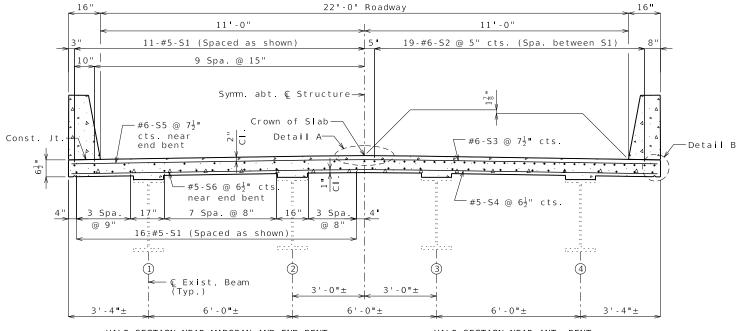
Roadway surfacing adjacent to bridge ends shall match new bridge slab súrface. (Roadwáy item)

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

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



HALF SECTION NEAR MIDSPAN AND END BENT

HALF SECTION NEAR INT. BENT

TYPICAL SECTION THRU SLAB

Estimated Quantities		
I t em		Total
Removal of Existing Bridge Deck	sq. foot	4528
Bridge Approach Slab (Minor)	sq. yard	101
Slab on Steel	sq. yard	558
Type H Barrier	linear foot	406
Shear Connectors	each	2808
Slab Drain	each	34
Surface Preparation for Applying Epoxy-Mastic Primer	lump sum	1
Gray Epoxy-Mastic Primer	lump sum	1
Non-Destructive Testing	linear foot	19
		•
		•

dered completely covered Cos

Non over plates of all beams.

Estimated Quantities for Slab on St	ee I
I t em	Total
Class B-2 Concrete cu. yard	118
Reinforcing Steel (Epoxy Coated) pound	40,280

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

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 OO OVER LOCUST CREEK

ROUTE OO FROM ROUTE BB TO ROUTE 5 ABOUT 2.5 MILES SOUTHEAST OF ROUTE BB BEGINNING STATION 285+96.10± (MATCH EXISTING)

	of any required exc ne contract unit pri				I be co	nsi
n - 0	destructive testing	to be	performed	on top	flange	C O
	Estimated	Quar	ntities	for	Slab	or
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THIS SHEET HAS BEEN SIGNED. SEALED AND DATE

10/7/2025

SULLIVAN

JNW0014

CONTRACT ID

PROJECT NO

BRIDGE NO

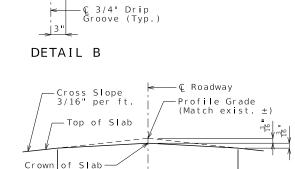
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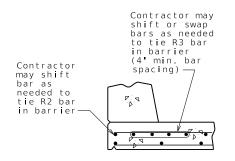
Parabolic Crown

2 - 0"

Const. Jt.

DETAIL A

2'-0"



OPTIONAL SHIFTING TOP BARS AT BARRIER

DETAILS OF CONCRETE REMOVAL AT END BENT NO. 1

DETAILS OF CONCRETE REMOVAL AT END BENT NO. 4

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

A smooth, level surface shall be provided at End 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

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:

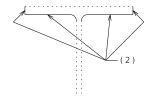
The contractor shall provide bracing necessary for lateral and torsional stability of the beams during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not weld on or drill holes in the beams. The cost for furnishing, installing,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

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.

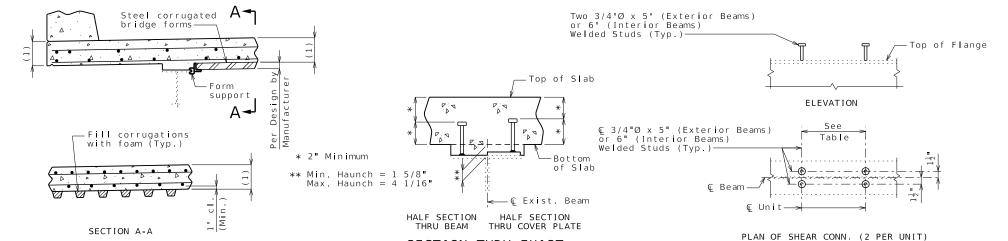
Haunching:

(1) Slab is to be considered a uniform thickness as shown on the plans. Haunching will vary. Add 1"± to haunch to match existing grade. See front sheet for slab thickness.



DETAIL OF TOP FLANGE TREATMENT

(2) Prior to forming the deck, clean sides and bottom of top flanges of all beams, plus additional areas up to 100 sq. ft. as identified by the engineer, with a minimum of SSPC-SP-3 surface preparation and coat 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. Payment for cleaning and coating sides and bottom of top flange, plus an additional 100 sq. ft., will be completely covered by the contract lump sum for Surface Preparation for Applying Epoxy-Mastic Primer and the contract lump sum for Gray Epoxy-Mastic Primer.

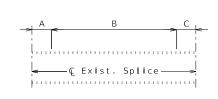


SECTION THRU EXIST.

BEAM SHOWING

SHEAR CONNECTORS

OPTIONAL STAY-IN-PLACE FORM DETAILS



ELEVATION SHOWING SHEAR CONNECTOR SPACING FOR END BEAMS

ip.....

← Ç Exist. Bearing

C Exist. Splice —

ELEVATION SHOWING SHEAR CONNECTOR SPACING FOR MID SPAN & BEARING BEAMS

TABLE SHOWING SHEAR CONNECTOR UNIT SPACING					
Beam Segment	S.C. per unit	Α	В	С	
End Beam (Spans 1-2 & 3-4)	2	(3)	88 Units @ 6" cts.	18"±	
Brg. Beam (Bents 2 & 3)	2	18"±	65 Units @ 6" cts.	18"±	
Mid Span (Span 2-3)	2	20"±	45 Units @ 10" cts.	20"±	
	Total sh	ear conr	nectors required	2808	

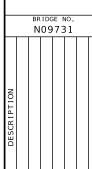
(3) 4 1/2"± Span (1-2) 5"± Span (3-4)



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COUNTY					

SULLIVAN JNW0014 CONTRACT ID

PROJECT NO



-ANY SPRING ITE 200 MO 64153) 298-6465 OF AUTHORI



-Existing substructure

DETAILS OF SHEAR CONNECTORS

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

ROCK BLANKET ON SPILL SLOPES

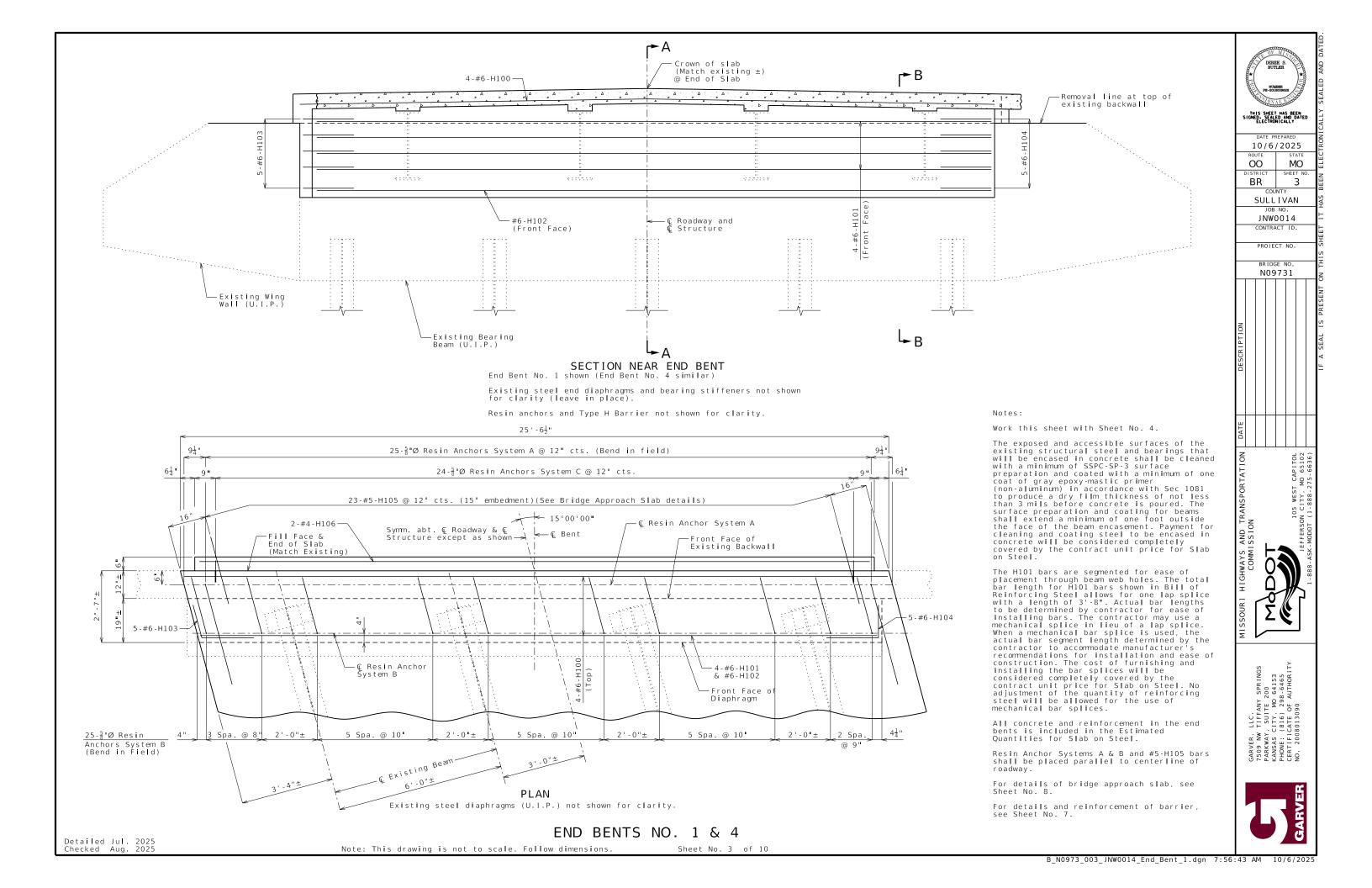
Shear Connectors

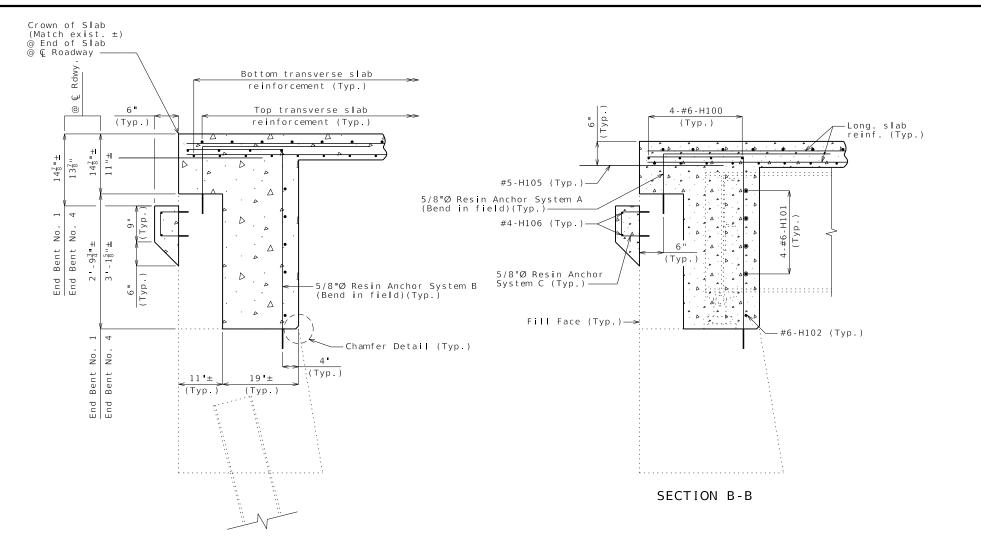
2'-0" Type 2 Rock Blanket with Permanent Erosion

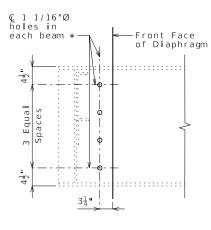
Control Geotextile

(Roadwav item)

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







DETAIL OF WEB HOLES AT END BENTS

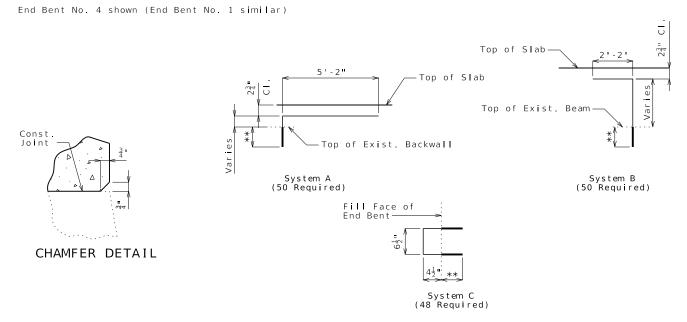
* Cost of field drilling holes in existing wide flange beam webs will be considered completely covered by the contract unit price for Slab on Steel.

The contractor shall use one of the qualified resin anchor systems in

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 pullout strength in accordance with Sec 1039 but shall not be less than 5 inches.

An epoxy coated #5 Grade 60 reinforcing bar shall be substituted for the 5/8"Ø threaded rod for Resin Anchor Systems A, B & C.



SECTION A-A

DETAILS OF RESIN ANCHOR SYSTEMS

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

END BENTS NO. 1 & 4

Detailed Jul. 2025 Checked Aug. 2025

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

Sheet No. 4 of 10

Notes:

Work this sheet with Sheet No. 3.

accordance with Sec 1039.



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PROJECT NO.



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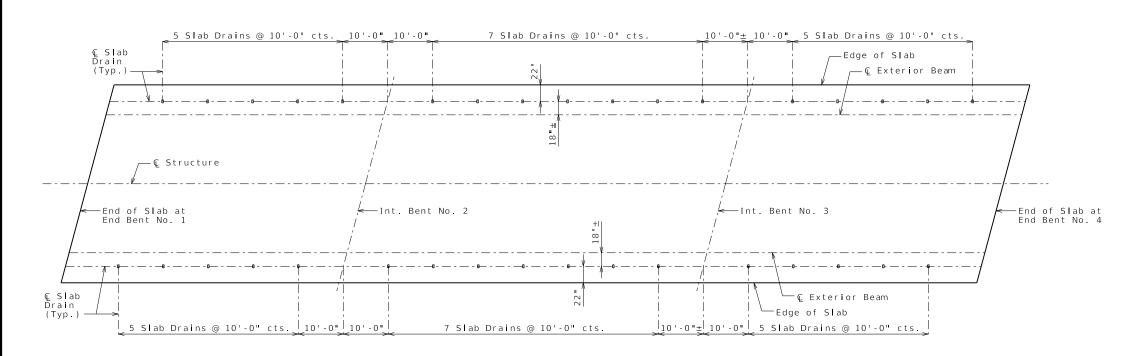
(Min.)

PART SECTION NEAR DRAIN

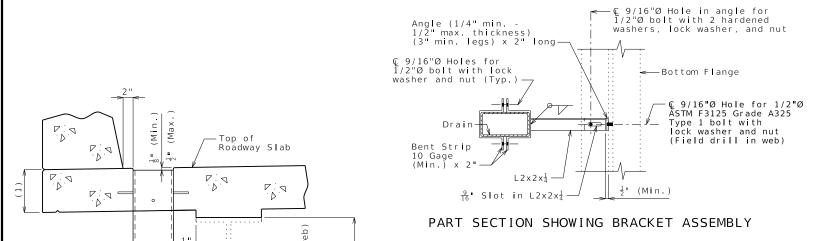
Detailed Jul. 2025

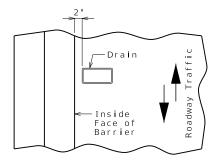
9/16/ 2"Ø/ ade/

1" (Min.)



PLAN OF SLAB SHOWING SLAB DRAIN LOCATIONS



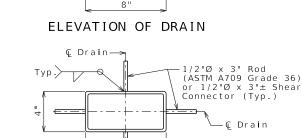


PART PLAN OF SLAB AT DRAIN

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



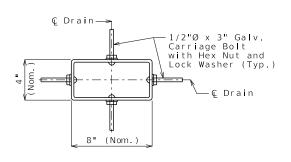
Sheet No. 5 of 10



Bottom of Roadway Slab

€ 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.

AII 1/2"Ø bolts shall be ASTM A307

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

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.



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DATE PREPARED

10/6/2025

ROUTE STATE

OO MO

DISTRICT SHEET NO.

BR 5

SULLIVAN
JOB NO.
JNW0014

PROJECT NO

CONTRACT ID.

BRIDGE NO.
NO9731

COMMISSION

COMMISSION

MODOT

105 WEST CAPITY

LOSO OCCUPANT (1, 100 ST CAPITY)

105 WEST CAPITY

106 OCCUPANT (1, 100 ST CAPITY)

107 OCCUPANT (1, 100 ST CAPITY)

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108 OCCUPANT (1, 100 ST CAPITY)

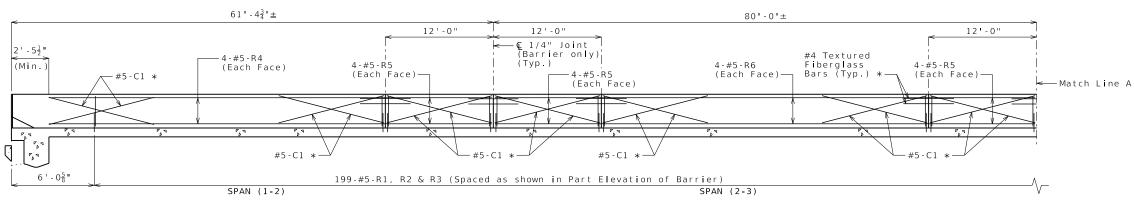
109 OCCUPANT (1, 100 ST CAPITY)

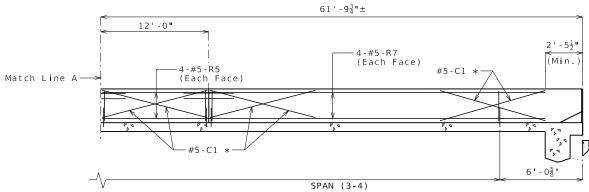
100 OCCUPANT (1, 100 ST CAPITY)

100 OCCUPANT (1, 100 ST CAPITY)

AARVEK, LLC.
S109 NW TIFFANY SPRINGS
ARKWAY, SUITE 200
ANSAS CITY, MO 64153
HONE: (816) 298-6465
TERTIFICATE OF AUTHORITY
TO. 2008013090

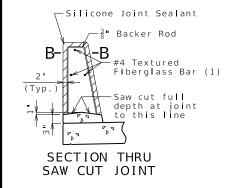






ELEVATION OF BARRIER

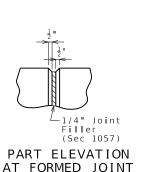
(Left barrier shown, right barrier similar by 180° rotation) Longitudinal dimensions are horizontal.

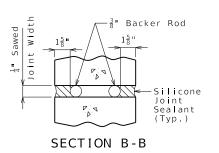


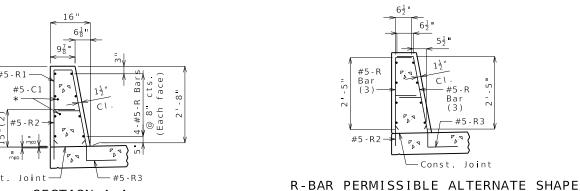
Detailed Jul. 2025 Checked Aug. 2025

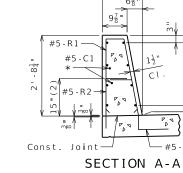
#4 Textured

Fiberglass Bars (1)









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

Ç 1/4" Jt. (Barrier only) |

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

grade and barrier joints normal to grade.

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 H Barrier.

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

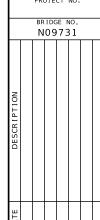
For slip-formed option, both sides of barrier shall have a vertically broomed finish and the top shall have a transversely broomed finish.



10/6/2025						
ROUTE	STATE					
00	MO					
DISTRICT	SHEET NO.					
BR	6					
COU	COUNTY					
SULLIVAN						
SULL	IVAN					

JNW0014 CONTRACT ID

PROJECT NO



-ANY SPRING: ITE 200 , MO 64153) 298-6465 OF AUTHORI



General Notes:

* Slip-formed option only.

Top of barrier shall be built parallel to

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.

0.0 -#5-C1 (Typ.) * 21" #5-R1, R2 & R3 @ abt. 12" cts. #5-R1, R2 & R3 @ abt. 12" cts. PART ELEVATION OF BARRIER

← © 1/4" Joint (Formed or

Saw Cut)

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

TYPE H BARRIER

(Typ.)

Roadway

of Barrier

Bar

PART PLAN SHOWING

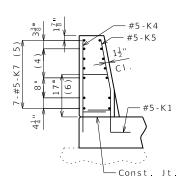
JOINT LOCATION

#5 - R Bar (3)

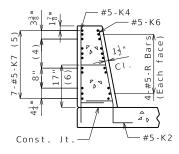
└─ Const. Joint

(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.)

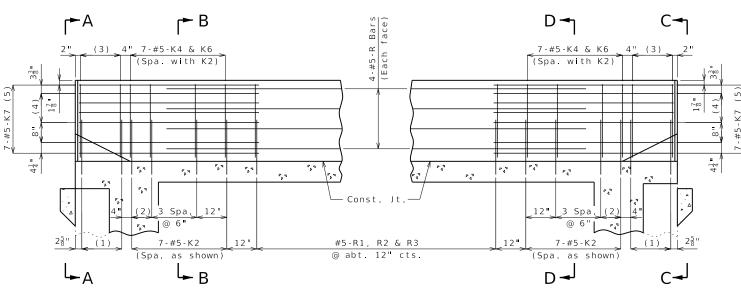
- #5 - R3



ELEVATION A-A



SECTION B-B



PART ELEVATION

- (1) 5-#5-K1 @ 4" cts.
- (2) 2 Spaces @ 4"

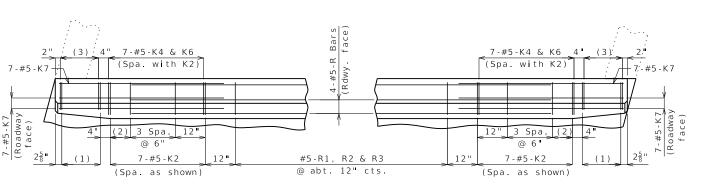
€ 1"Ø Holes

— Const. Joint

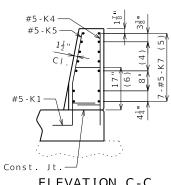
⊢Ç 1"Ø Holes

ELEVATION

- (3) 5-#5-K4 and 5-#5-K5, spaced with K1
- (4) 3 Spaces @ 3¹³"
- (5) Spaced as shown, each face
- (6) To top of bar



PART PLAN



THIS SHEET HAS BEEN SIGNED. SEALED AND DATE ELECTRONICALLY

10/6/2025

SULLIVAN

JNW0014

CONTRACT ID. PROJECT NO.

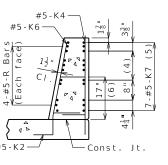
N09731

MO 7

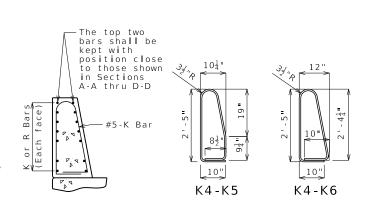
00

BR

ELEVATION C-C



SECTION D-D

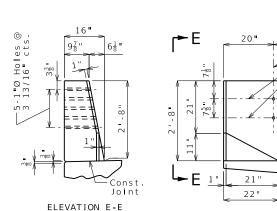


PERMISSIBLE ALTERNATE SHAPES

(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.



* Transition to zero at Type A curb for gutter lines to match Roadway Face of Barrier 1" Chamfer *

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:

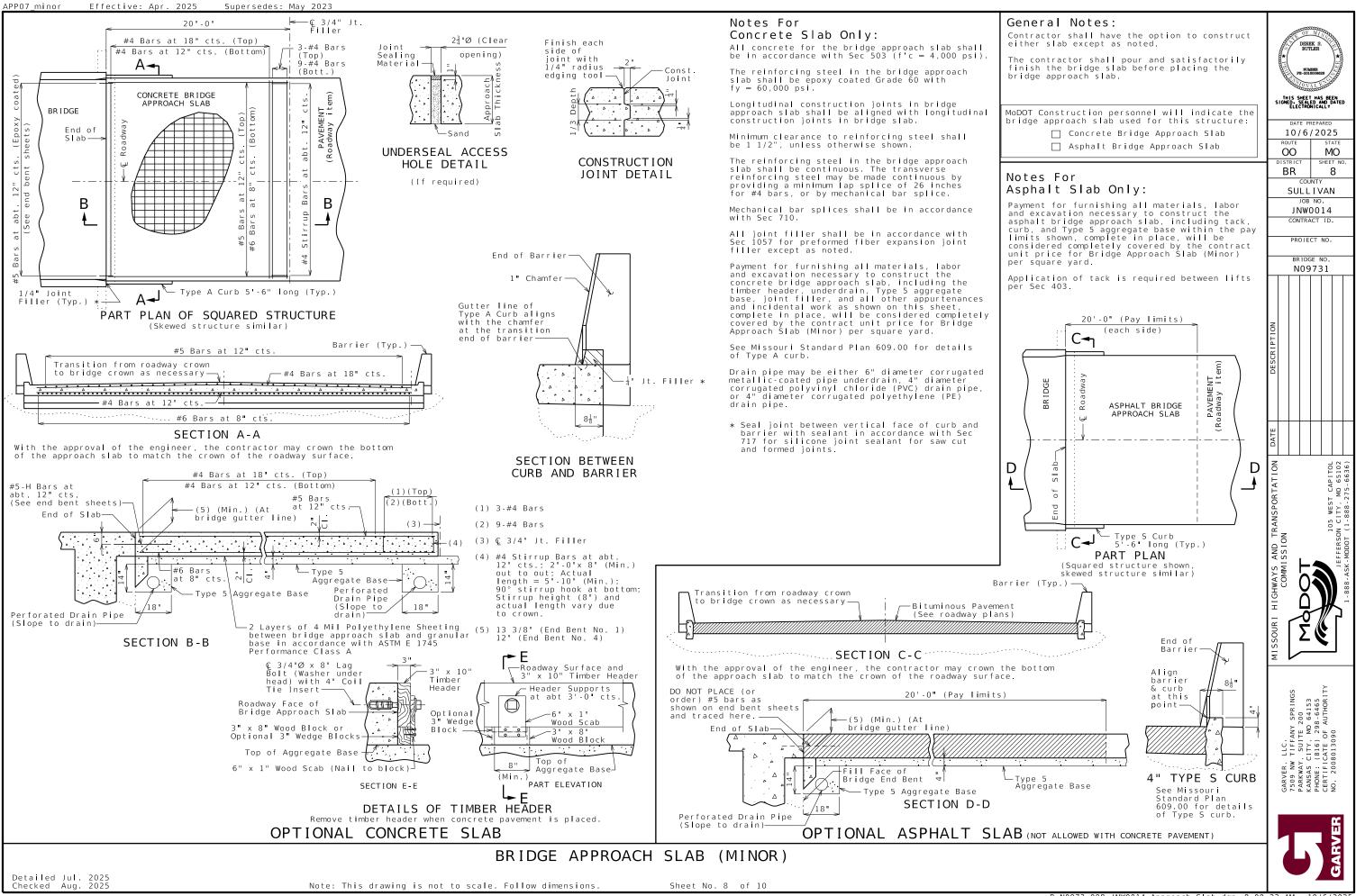
Minimum clearance to reinforcing steel shall be 1 1/2".

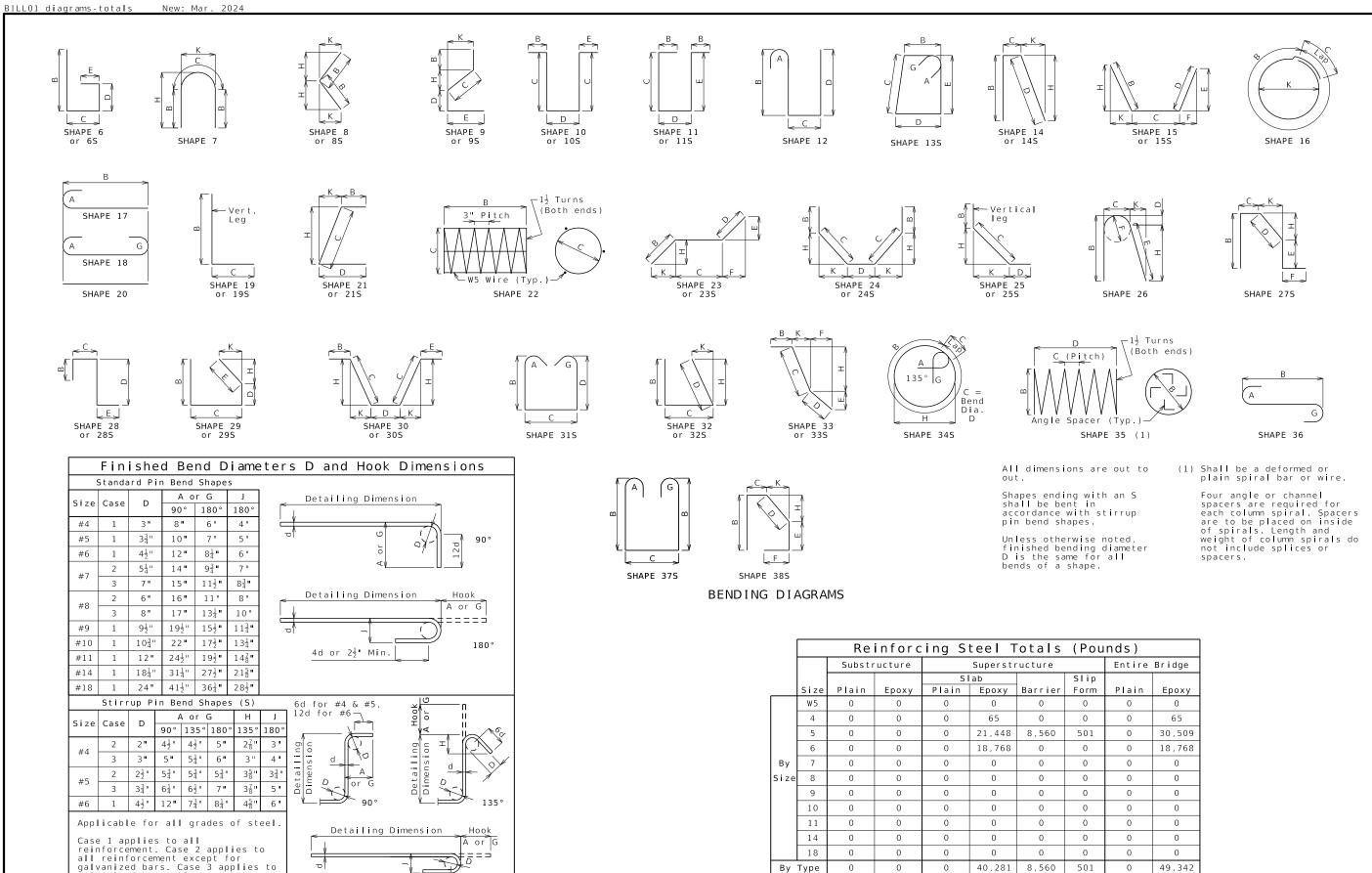
Use a minimum lap of 2'-6" between K7 bars and R bars.

TYPE H BARRIER AT END BENTS

(Left barrier shown, right barrier similar)

Detailed Jul. 2025 Checked Aug. 2025





		Substr	ucture		Superst	Entire Bridge			
				SI	ab		Slip		
	Size	Plain	Epoxy	Plain	Epoxy	Barrier	Form	Plain	Epoxy
	W5	0	0	0	0	0	0	0	0
	4	0	0	0	65	0	0	0	65
	5	0	0	0	21,448	8,560	501	0	30,509
	6	0	0	0	18,768	0	0	0	18,768
Ву	7	0	0	0	0	0	0	0	0
Size	8	0	0	0	0	0	0	0	0
	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
Ву	Туре	0	0	0	40,281	8,560	501	0	49,342

All superstructure reinforcing steel shall be epoxy coated unless otherwise specified.

BENDING DIAGRAMS AND REINFORCING STEEL TOTALS

180°

4d or $2\frac{1}{2}$ Min.

galvanized bars only.

Detailed Aug. 2025 Checked Aug. 2025

THIS SHEET HAS BEEN SIGNED. SEALED AND DATED ELECTRONICALLY

10/6/2025

SULLIVAN

JNW0014 CONTRACT ID. PROJECT NO

BRIDGE NO

N09731

MO SHEET NO

9

00

BR

BILLO3 data tables

New: Mar. 2024

			[Billo	f Rei	nforci	ng Ste	e I										Bill c	f Rei	nforci	ng St	eel			
						Dimension	15				Actual									Dimension				Nom. Actua	
No. Size/		Codes		С	D	E	F	Н				Weight		Size/		Codes		С	D	E	F				th Weigh
Req. Mark	Location	C SH	V ft in.	ft in.	ft in.	ft in.	ft in f	ft in.	ft in. f	ft in.	ft in	. Ib	Req.	. Mark	Location	C SH	V ft in.	ft in.	ft in.	ft in.	ft in.	ft in. ft	in. f	t in. ft i	n. Ib
	END BENTS NO. 1 & 4		_				+							 											
	NO. 1 & 4		+				+	-						+			+								
8 6 H100	DIAPHRAGM	E 20	25 3.00						2	25 3	25 3	304		\vdash			1								
8 6 H101	DIAPHRAGM	E 20	28 2.00								28 2	339													
2 6 H102	DIAPHRAGM	E 20	24 4.00						2	24 4	24 4	74													
10 6 H103	DIAPHRAGM	E 15S	15.00	22.00				14.50				46													
10 6 H104	DIAPHRAGM	E 6S	14.00	22.00						3 0															
46 5 H105	DIAPHRAGM	E 20	2 6.00								2 6	120		++											
4 4 H106	APPR. NOTCH	E 20	24 2.00				+			24 2	24 2	65		 											
	SLAB		+				+							 				+							
	JEAD	+												+-+											
212 5 S1	SLAB	E 20	53 3.00						Ē	53 3	53 3	11,775													
76 6 S2	SLAB	E 20	52 11.00						5	52 11	52 11	6,041		1 1											
315 6 S3	SLAB	E 20	24 5.00						2	24 5	24 5	11,553													
363 5 S4	SLAB	E 20	24 5.00								24 5	9,245													
18 6 S5	SLAB	E 20	2 4 3.00								4 3	368		+		\perp									
22 F CC	INCR = 28.00"		22 11.00								22 11	300	 	+		+									
22 5 S6	SLAB INCR = 24.25"		2 3 4.00				+				3 4 23 6	308		+											
	INCh = 24.25"	+	23 0.00				+			<u>0</u> C	23 0	1		+		+	+								
	TYPE H						+		-+			1		+			+								
	BARRIER		1									1												1	
																	1								
20 5 K1	BARRIER	E 27S							1.00																
28 5 K2	BARRIER	E 27S	20.50	9.25	17.25				3.25	5 2	4 10	142													
48 5 K4	BARRIER	E 19S	2 5.00	10.00						3 3		159													
20 5 K5	BARRIER	E 38S			19.25	9.50		18.75	4.25			63													
28 5 K6	BARRIER BARRIER	E 21S	5 6.00	2 4.88	10.00			2 4.25	6.00	3 3 5 6	3 1	91 322		 											
56 5 K7	BARRIER	E 20	5 6.00				+			5 6	5 6	322													
398 5 R1	BARRIER	E 14S	2 5.00	6.50	2 5.50		+	2 5.00	5.50	5 5	5 3	2,180		 											
398 5 R2	BARRIER	E 195	18.50		2 3.30			2 3.00		2 4		935													
398 5 R3	BARRIER	E 275	10.50	9.50		3.00	12.00	15.00				1,280		-											
16 5 R4	BARRIER	E 20	46 10.00								46 10	782													
64 5 R5	BARRIER	E 20	11 9.00								11 9	785													
16 5 R6	BARRIER	E 20	55 9.00								55 9	931		<u> </u>											
16 5 R7	BARRIER	E 20	47 3.00						4	47 3	47 3	789		<u> </u>											
	CL ID FORM													++											
	SLIP FORM						-						-	 											
40 5 C1	SLIP FORM	E 20	12 0.00						- 1	12 0	12 0	501	-	+				+						+	
40 3 61	JETT TOMM	1 20	12 0.00				+			12 0	12 0	701		++											
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						1	1		1				1			1 1 1	1	1	1					1	1

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.

All bars shall be Grade 60.

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.

10/6/2025

00 MO DISTRICT SHEET NO BR 10

> SULLIVAN JOB NO.
> JNW0014 CONTRACT ID.

PROJECT NO.

BRIDGE NO. N09731

For bending diagrams and steel reinforcing totals, see Sheet No. 9.

Detailed Aug. 2025 Checked Aug. 2025

BILL OF REINFORCING STEEL

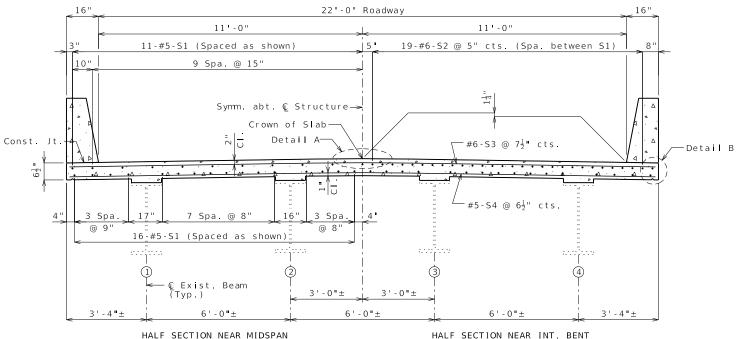
Effective: Feb. 2024 Supersedes

Table Showing S2 Bar Lengths						
Int. Be	nt No. 2	Int. Bei	nt No. 3			
Span 1 Span 2		Span 2	Span 3			
21'-4"	19'-10 "	19'-10"	21'-4"			

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

** Unless otherwise shown

U.I.P., REDECK AND MAKE COMPOSITE EXISTING (43', 57', 43') SIMPLE WIDE FLANGE BEAM SPANS



General Notes:

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

Design Loading: H10-44 (1953) (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)
Class B-2 Concrete (End Bents & Superstructure,
except Barrier)
Reinforcing Steel (ASTM A615 Grade 60)

f'c = 4,000 psi
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)

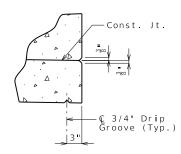
Outline of existing work is indicated by light dashed lines. Heavy lines indicate new work.

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.

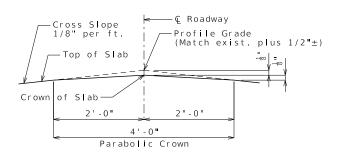
For adjusted beam deflection due to the weight of the new deck and barriers, see Bridge Electronic Deliverables.

Traffic Handling

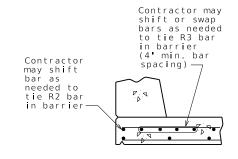
Structure to be closed during construction. Traffic to be maintained on other routes during construction. See roadway plans for traffic control.



DETAIL B



DETAIL A



OPTIONAL SHIFTING TOP BARS AT BARRIER

TYPICAL SECTION THRU SLAB

Estimated Quantities		
I t em		Total
Removal of Miscellaneous ACM (Non-Friable)	sq. foot	3
Removal of Existing Bridge Deck	sq. foot	3242
Bridge Approach Slab (Minor)	sq. yard	101
Slab on Steel	sq. yard	398
Type H Barrier		290
Substructure Repair (Formed)	linear foot	25
Protective Coating - Concrete Bents and Piers (Epoxy)	lump sum	1
Shear Connectors	each	1512
Slab Drain	each	26
Surface Preparation for Applying Epoxy-Mastic Primer	lump sum	1
Gray Epoxy-Mastic Primer	lump sum	1

SEC/SUR 32

TWP 66N

Cost of any required excavation for bridge will be considered completely covered by the contract unit price for other items.

Estimated Quantities for Slab on S	eel
I t em	Total
Class B-2 Concrete cu. yard	89
Reinforcing Steel (Epoxy Coated) pound	29,930

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 FF OVER SHOAL CREEK

ROUTE FF FROM ROUTE 136 TO ROUTE W
ABOUT 1.0 MILE SOUTH OF ROUTE 136
BEGINNING STATION 56+02.50± (MATCH EXISTING)

Detail B

Detail

SSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION
MODOT

105 WEST CAPITOL
LEFFERSON CITY, MO 65103

SARVER, LLC.
5599 NW TIFFANY SPRINGS
ARKWAY, SUITE 200
ANSAS CITY, MO 64153
HONE: (816) 298-6465
EERTIFICATE OF AUTHORITY
VO. 2008013090



DETAILS OF CONCRETE REMOVAL AT END BENTS

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 at End 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

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:

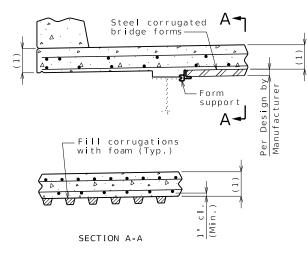
The contractor shall provide bracing necessary for lateral and torsional stability of the beams during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not weld on or drill holes in the beams. The cost for furnishing, installing,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

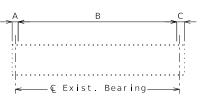
Alternate pour sequences may be submitted to the engineer for approval. Keyed construction joints shall be provided between pours.

Haunching:

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

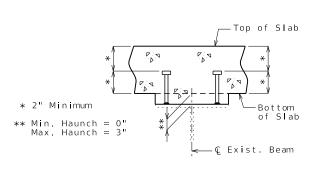


OPTIONAL STAY-IN-PLACE FORM DETAILS

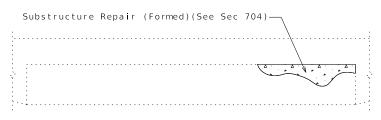


ELEVATION SHOWING SHEAR CONNECTOR SPACING

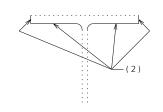
TABLE SHOWING SHEAR CONNECTOR UNIT SPACING						
Span	S.C. per unit	Α	В	С		
1	2	5"±	57 Units @ 9" cts.	5"±		
2	2	8"±	75 Units @ 9" cts.	8"±		
3	2	5"±	57 Units @ 9" cts.	5"±		
	Total shear connectors required 1512					



SECTION THRU EXIST. BEAM SHOWING SHEAR CONNECTORS

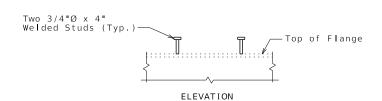


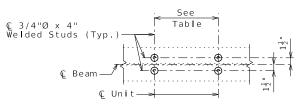
DETAILS OF CONCRETE REPAIR AT END BENT NO. 4



DETAIL OF TOP FLANGE TREATMENT

(2) Prior to forming the deck, clean sides and bottom of Prior to forming the deck, clean sides and bottom of top flanges of all beams, plus additional areas up to 100 sq. ft. as identified by the engineer, with a minimum of SSPC-SP-3 surface preparation and coat 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. Payment for cleaning and coating sides and bottom of top flange, plus an additional 100 sq. ft., will be completely covered by the contract lump sum for Surface Preparation for Applying Epoxy-Mastic Primer and the contract lump sum for Gray Epoxy-Mastic Primer.



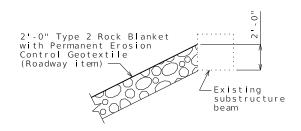


PLAN OF SHEAR CONN. (2 PER UNIT)

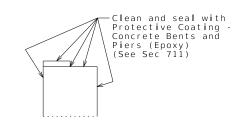
DETAILS OF SHEAR CONNECTORS

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.



ROCK BLANKET ON SPILL SLOPES

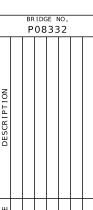


TYPICAL SECTION THRU INT. BENTS NO. 2 & 3 SHOWING PROTECTIVE COATING



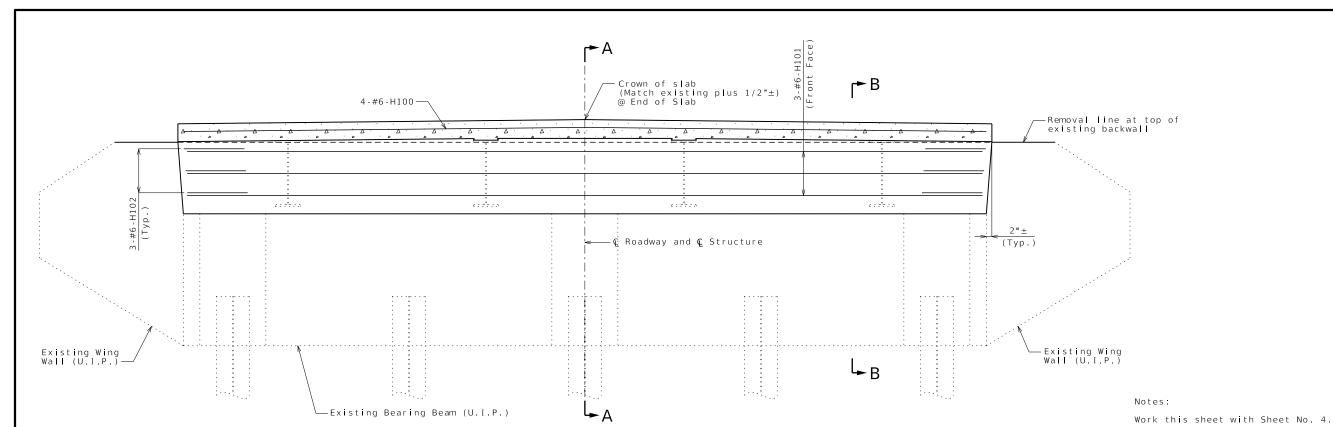
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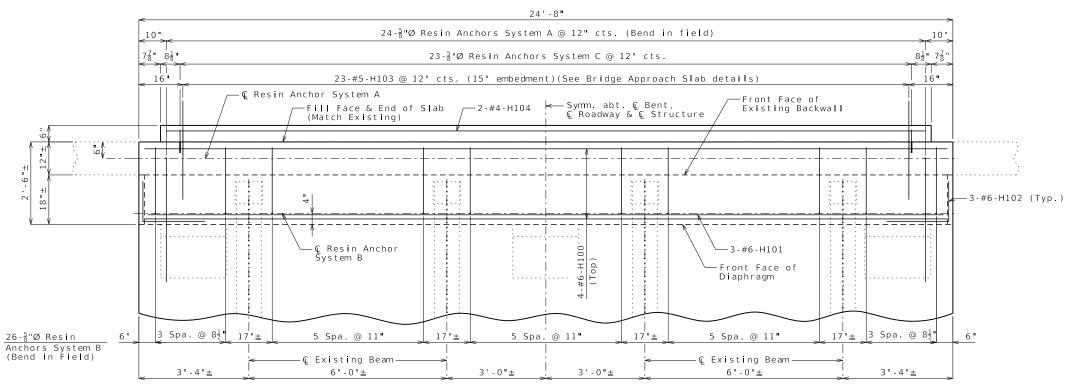




SECTION NEAR END BENT

Existing steel end diaphragms not shown for clarity (leave in place).

Resin anchors and Type H Barrier not shown for clarity.



PLAN

Existing steel diaphragms (U.I.P.) not shown for clarity.

END BENTS NO. 1 & 4

Detailed Jul. 2025 Checked Aug. 2025 Note: This drawing is not to scale. Follow dimensions.

Sheet No. 3 of 11



THIS SHEET HAS BEEN SIGNED. SEALED AND DATE

10/6/2025 FF MO SHEET NO BR 3 PUTNAM

JNW0014 CONTRACT ID.

PROJECT NO

BRIDGE NO P08332

bents is included in the Estimated Quantities for Slab on Steel. For details of bridge approach slab, see

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 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 beams shall extend a minimum of one foot outside the face of the beam 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.

placement through beam web holes. The total bar length for H101 bars shown in Bill of Reinforcing Steel allows for one lap splice with a length of 3'-8". Actual bar lengths

with a length of 3'-8". Actual bar lengths to be determined by contractor for ease of installing bars. The contractor may use a mechanical splice in lieu of a lap splice. When a mechanical bar splice is used, the actual bar segment length determined by the contractor to accommodate manufacturer's recommendations for installation and ease of construction. The cost of furnishing and

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

All concrete and reinforcement in the end

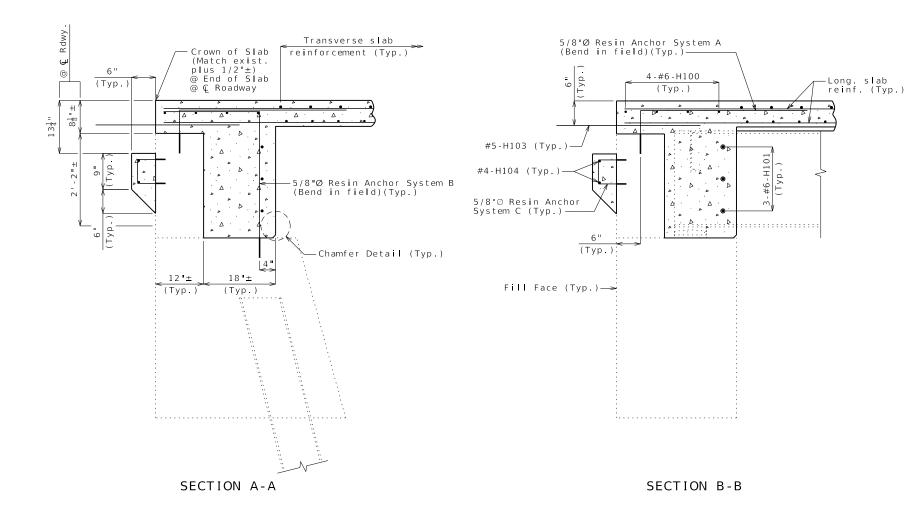
mechanical bar splices.

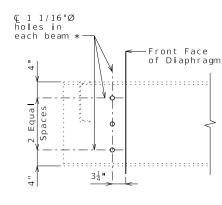
The H101 bars are segmented for ease of

For details and reinforcement of barrier, see Sheet No. 8.

FANY SPRING ITE 200 , MO 64153) 298-6465 OF AUTHORI

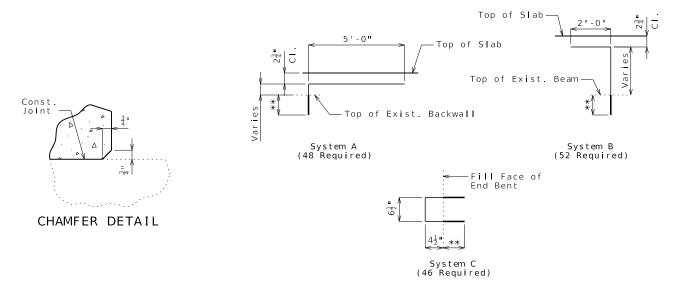






DETAIL OF WEB HOLES AT END BENTS

* Cost of field drilling holes in existing wide flange beam webs will be considered completely covered by the contract unit price for Slab on Steel.



DETAILS OF RESIN ANCHOR SYSTEMS

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

Notes:

Work this sheet with Sheet No. 3.

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 pullout strength in accordance with Sec 1039 but shall not be less than 5 inches.

An epoxy coated #5 Grade 60 reinforcing bar shall be substituted for the 5/8"Ø threaded rod for Resin Anchor Systems A, B & C.



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CONTRACT	ID.
PROJECT	NO.



I HIGHWAYS AND TRANSPORTATION
COMMISSION
DOT

105 WEST CAPITOL
JEFFERSON CITY, MO 65102

KVEK, LLC.

RKWAY, SUITE 200

NSAS (CITY, MO 64153

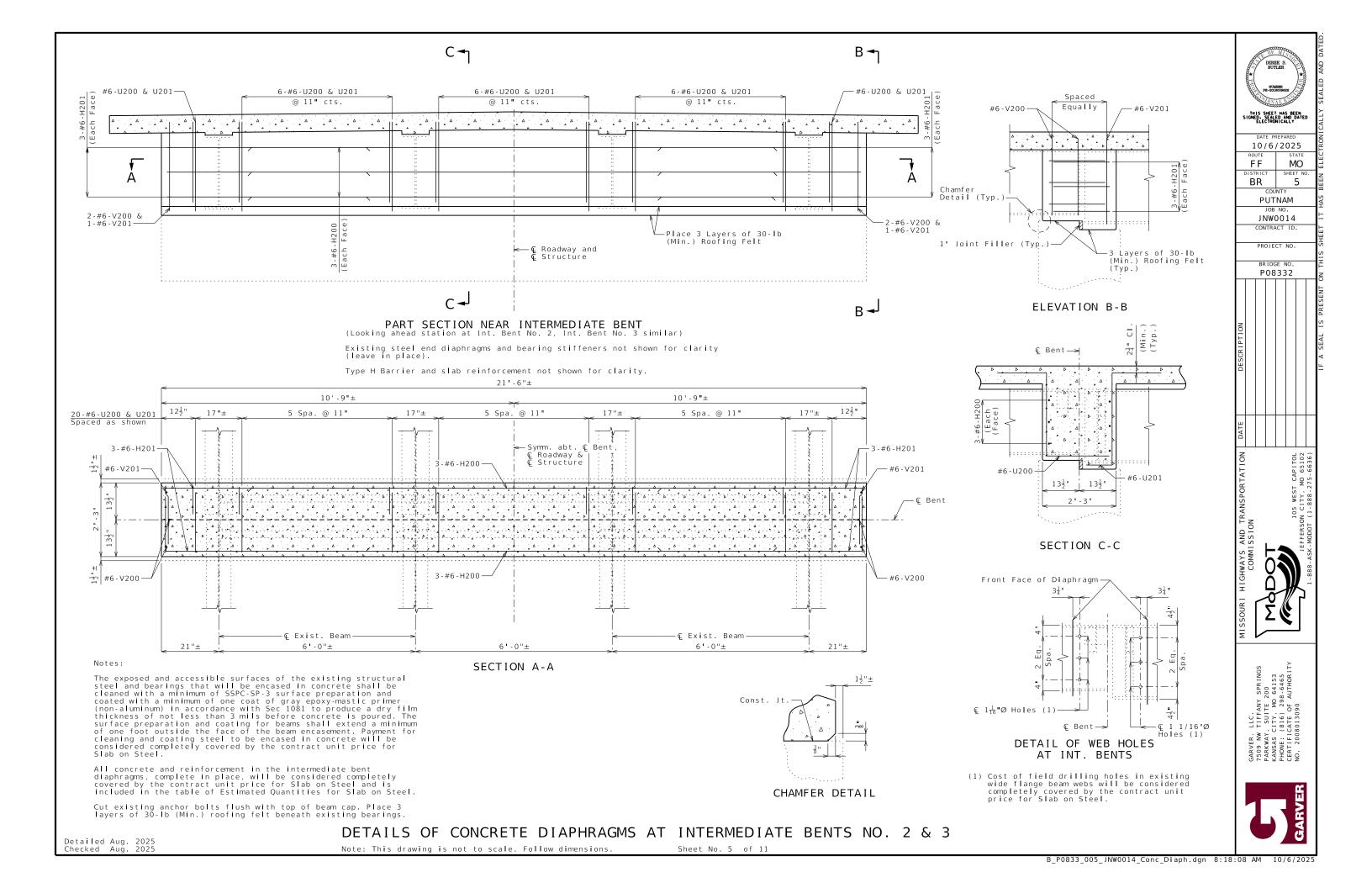
ONE: (816) 298-6465

TIFIFICATE OF AUTHORITY

Z008013090



END BENTS NO. 1 & 4



Roadway Slab

9/16"Ø 2"Ø AST ade A32 It with sher an

(Min.)

PART SECTION NEAR DRAIN

*4" Span (1-2) & (3-4) 4 1/2" Span (2-3)

* * 23 7/8"± Span (1-2) & (3-4) 2'-3 1/8"± Span (2-3)

1" (Min.)

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

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

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.

AII 1/2"Ø bolts shall be ASTM A307

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

(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

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 $8\,{}^{\rm w}$ x $4\,{}^{\rm w}$.

Minimum reinforced wall thickness shall be

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



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JNW0014						
CONTRACT ID.						

PROJECT NO.

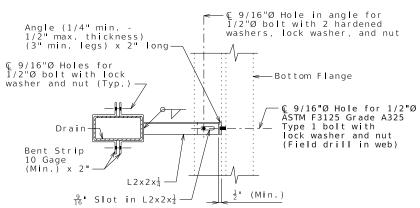


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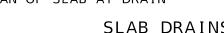


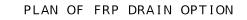
-Edge of Slab 4 Slab Drains 4 Slab Drains Ç Slab Drain (Typ.)——— @ 10'-0" cts. @ 10'-0" cts. - © Exterior Beam -⊊ Structure -End of Slab at — Çi Int. Bent No. 2 — Ç Int. Bent No. 3 -End of Slab at End Bent End Bent No. No. 4 € Slab Drain C Exterior Beam 5 Slab Drains @ 10'-0" cts. 8'-7"± 6'-5" 4 Slab Drains @ 10'-0" cts. @ 10'-0" cts. Edge of Slab

PLAN OF SLAB SHOWING SLAB DRAIN LOCATIONS



- Drain Inside Face of





8" (Nom.)

ELEVATION OF DRAIN

PLAN OF STEEL DRAIN OPTION

€ Drain-

€ Drain—

===

Bottom of

Roadway Slab

-1/2"Ø x 3" Rod (ASTM A709 Grade 36)

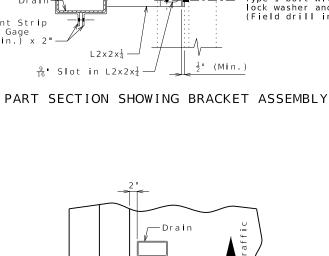
Connector (Typ.)

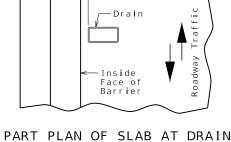
1/2"Ø x 3" Galv. Carriage Bolt with Hex Nut and Lock Washer (Typ.)

1/2"Ø x 3"± Shear

- © Drain

€ Drain





SLAB DRAINS

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 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 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 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.



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P08332

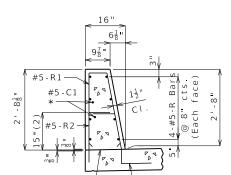
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SECTION A-A

horizontal barrier bars.

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

(2) To top of bar

@ abt. 12" cts. PART ELEVATION OF BARRIER (1) Four feet long, centered on joint,

slip-formed option only

21"

#4 Textured

Fiberglass Bars (1)

0.0

#5-R1, R2 & R3

@ abt. 12" cts.

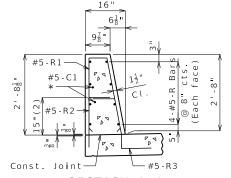
Detailed Jul. 2025 Checked Aug. 2025

← © 1/4" Joint (Formed or

-#5-C1 (Typ.) *

#5-R1, R2 & R3

Saw Cut)



Use a minimum lap of 2'-6" for #5

R-BAR PERMISSIBLE ALTERNATE SHAPE

Bar (3)

└─ Const. Joint

- #5 - R3

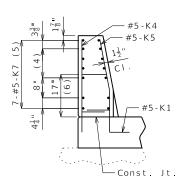
Bar

(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.)

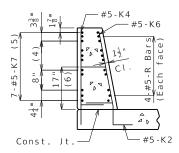
TYPE H BARRIER

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

Sheet No. 7 of 11

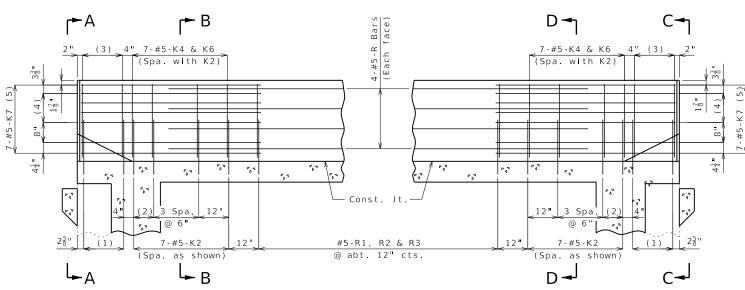


ELEVATION A-A



SECTION B-B

Joint



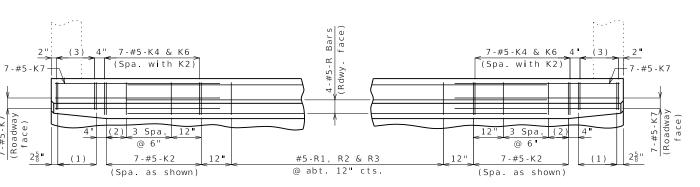
PART ELEVATION

- (1) 5-#5-K1 @ 4" cts.
- (2) 2 Spaces @ 4"

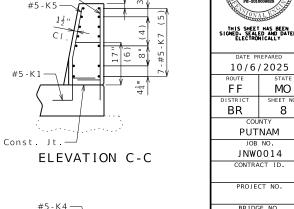
-Ç 1"Ø Holes

— Const. Joint

- (3) 5-#5-K4 and 5-#5-K5, spaced with K1
- (4) 3 Spaces @ 3¹³"
- (5) Spaced as shown, each face
- (6) To top of bar



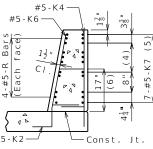
PART PLAN



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P08332



#5-K4

SECTION D-D

104"

_10"

K4-K5

PERMISSIBLE ALTERNATE SHAPES

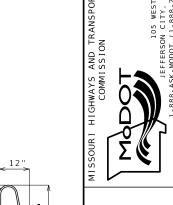
The K4-K5 and K4-K6 bar combination may be furnished as one bar as shown, at the contractor's option.

All dimensions are out to out.

(Other K bars not shown for clarity)

The top two kept with position close

to those shown in Sections A-A thru D-D





General Notes:

Reinforcing Steel:

Minimum clearance to reinforcing steel shall be 1 1/2".

Use a minimum lap of 2'-6" between K7 bars and R bars.

TYPE H BARRIER AT END BENTS

22" ELEVATION E-E ELEVATION ⊢Ç 1"Ø Holes * Transition to zero at Type A curb for gutter lines to match Roadway Face of Barrier 1" Chamfer * DETAILS OF GUARD RAIL ATTACHMENT

21"

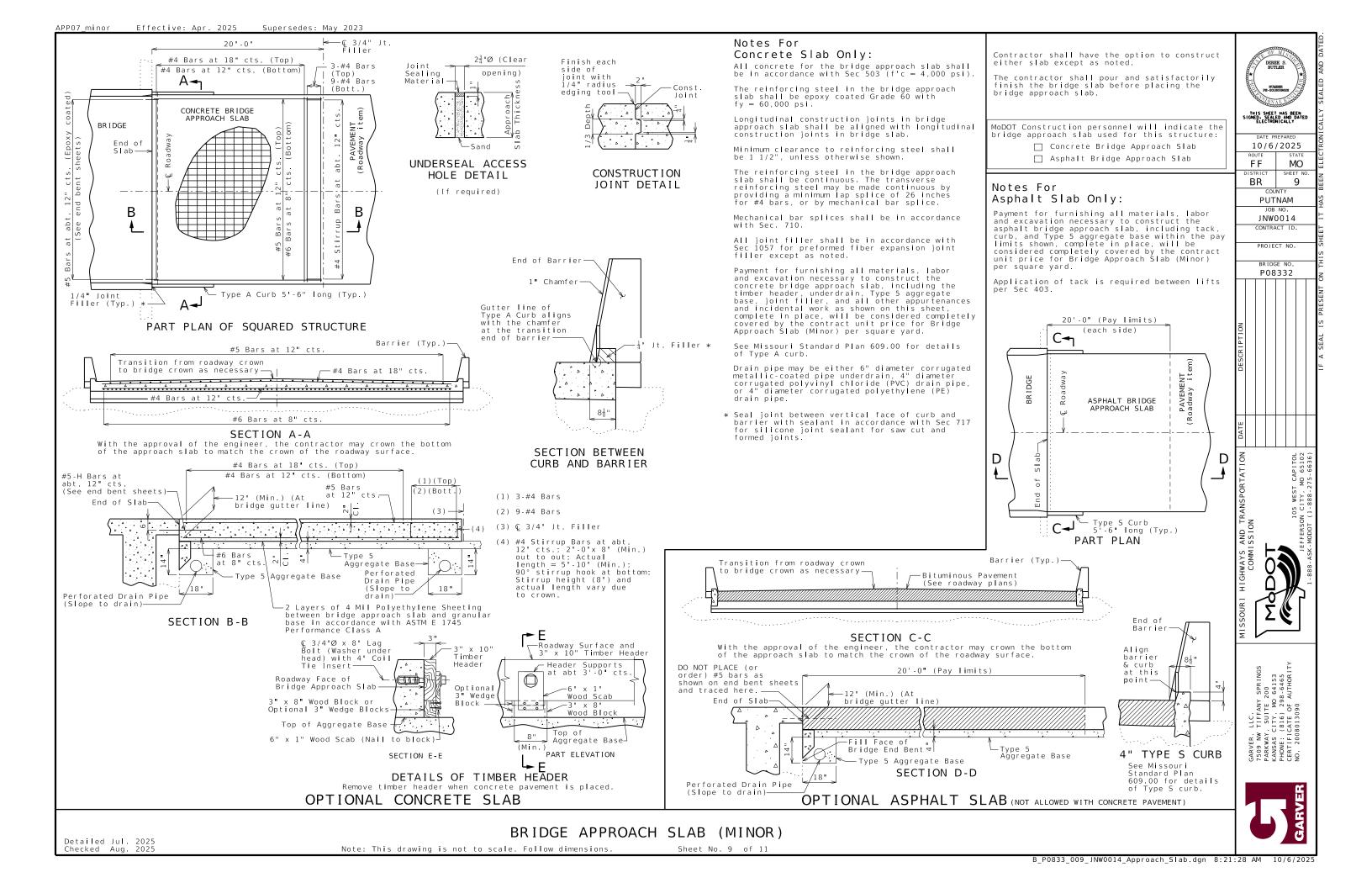
Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered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

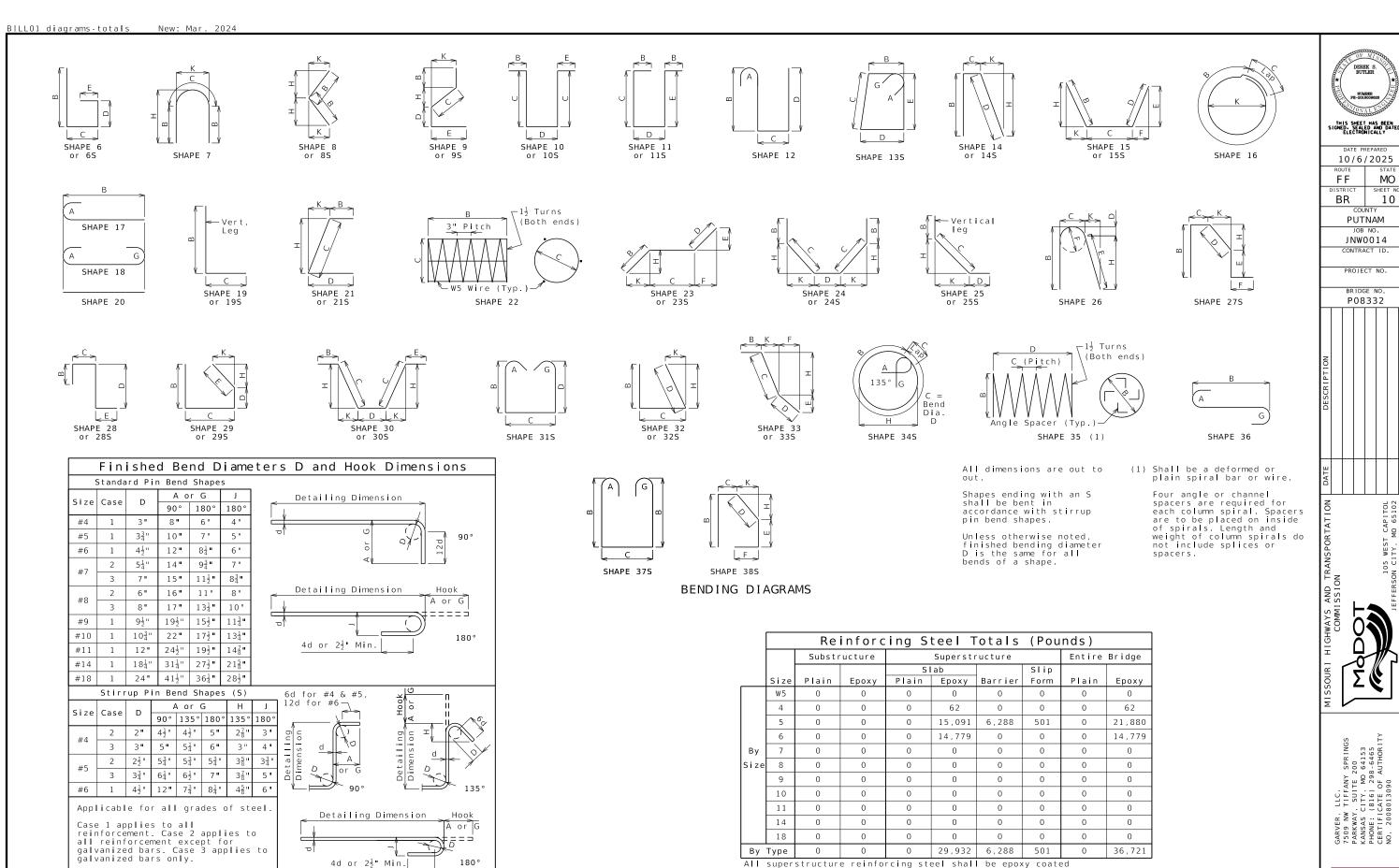
(Left barrier shown, right barrier similar)

Detailed Jul. 2025 Checked Aug. 2025

10"

K4-K6





All superstructure reinforcing steel shall be epoxy coated unless otherwise specified.

BENDING DIAGRAMS AND REINFORCING STEEL TOTALS

Detailed Jul. 2025 Checked Aug. 2025

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PUTNAM

JNW0014 CONTRACT ID. PROJECT NO

BRIDGE NO

P08332

BILLO3 data tables

New: Mar. 2024

				RIII 0		nforci		eeı		I	1	1		, ,			BIII		inforcing Steel		1	I a - / ·	
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Mark	Location			ft in		ft in.					ft in		No Req		Location				ft in. ft in. ft in			ft in	
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H100	DIAPHRAGM		24 5.00								24 5	294											
H101	DIAPHRAGM		28 1.00							28 1		254											
H102	DIAPHRAGM	E 6S	14.00							3 0													
H103	DIAPHRAGM		2 6.00							2 6													
4 H104	APPR. NOTCH	E 20	23 0.00	-						23 0	23 0	62											+
	INT DENTS																						+-
	INT. BENTS NO. 2 & 3		 											 									+
	NO. 2 Q 3													1									+
6 H200	DIAPHRAGM	E 20	16 7.00							16 7	16 7	299											+
6 H201	DIAPHRAGM	E 6S		6 0.00						7 9				1									+
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6 U200	DIAPHRAGM	E 28S		18.00	2 5.00	23.00				5 10	5 6	331											
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5 C1	SLAB	E 20	50 6.00							50 6	50 6	8,375	-			+				-	-	-	+
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6 S3	SLAB	E 20	24 5.00									8,252				+	++						+
5 S4	SLAB		24 5.00							24 5	24 5	6,596				+						†	+
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	TYPE H																						
	BARRIER																						1
5 K1	BARR I ER	E 27S	20.50				12.00			5 2													
5 K2	BARR I ER	E 27S	20.50			3.00	12.00	17.00	3.25	5 2													
5 K4	BARRIER	E 195	2 5.00	10.00						3 3													
5 K5	BARRIER	E 38S			19.25	9.50	8.25			3 1						\perp							
5 K6	BARRIER	E 21S	F 6 00	2 4.88	10.00			2 4.25	6.00	3 3		91											+
5 K7	BARRIER	E 20	5 6.00							5 6	5 6	322	-			+						-	+-
5 R1	BARRIER	E 14S	2 5.00	6 50	2 5.50			2 5.00	5 50	5 5	5 3	1,534		1									+
5 R2	BARRIER	E 195	18.50					2 3.00	3.30	2 4		658		1				_					+
) 5 R3	BARRIER	E 27S	10.50	9.50		3.00	12.00	15.00	3 00	3 4		901											+
5 R4	BARRIER		29 5.00		13.23	3.00	12.00	13.00	3.00		29 5	982											+
5 R5	BARRIER		11 9.00								11 9												1
5 R6	BARRIER		32 11.00								32 11												
	SLIP FORM																						
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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.

All bars shall be Grade 60.

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. DERREK S.

BUTLER

PN-DIRECTED

10/6/2025

ROUTE STATE
FF MO

DISTRICT SHEET NO.

11

PUTNAM

JOB NO.

JNW0014

CONTRACT ID.

BR

PROJECT NO.

BRIDGE NO.
P08332

THIGHWAYS AND TRANSPORTATION
COMMISSION

1 105 WEST CAPITOL

SOB NW TIFFANY SPRINGS
RAKWAY, SUITE 200
NNSAS CITY, MO 64153
HONE: (816) 298-6465

5

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

Detailed Jul. 2025 Checked Aug. 2025 BILL OF REINFORCING STEEL