DESIGN DESIGNATION

A.A.D.T. - 2022 = 789A.A.D.T. - 2042 = 871D.H.V. = 9%T = 12%V = 55 M.P.H. D = 51%

FUNCTIONAL CLASSIFICATION - MAJOR COLLECTOR

NO RIGHT OF WAY ACQUISITION

CONVENTIONAL SYMBOLS

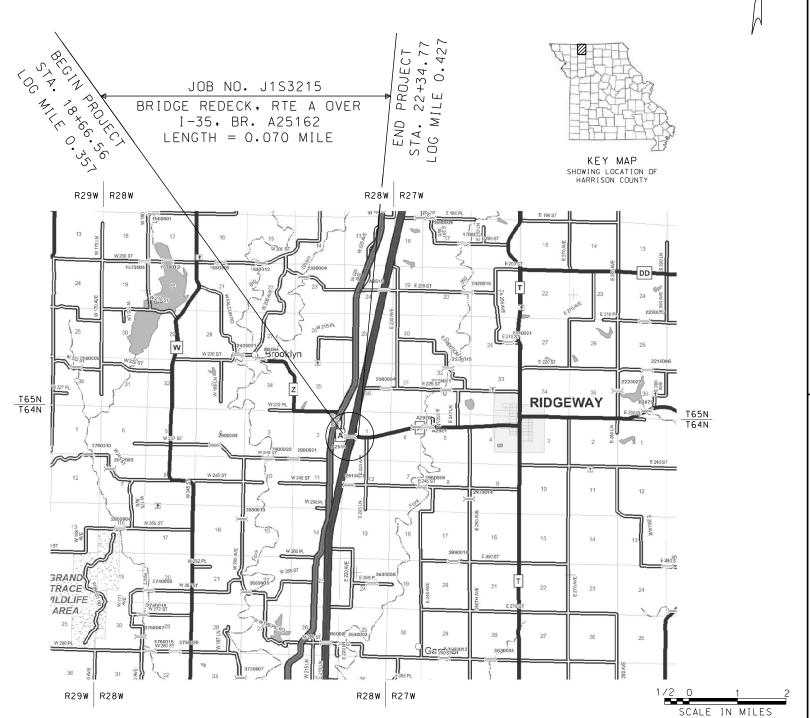
	EXISTING	NEW
BUILDINGS AND STRUCTURES CUARD RAIL CUARD CABLE CONCRETE RIGHT-OF-WAY MARKER STEEL RIGHT-OF-WAY MARKER LOCATION SURVEY MARKER	0000 0000 0000	
UTILITIES FIBER OPTICS OVERHEAD CABLE TV UNDERGROUND CABLE TV OVERHEAD TELEPHONE UNDERGROUND TELEPHONE OVERHEAD POWER UNDERGROUND POWER SANITARY SEWER STORM SEWER GAS WATER	-F0- -0TV- -UTV- -0T- -UT- -0E- -UE- -S- -SS- -G-	-F0 -0TV -UTV -0T -0E -0E -VE -S -SS -6 -W
MANHOLE	HYD	€
FIRE HYDRANT	wv]
WATER VALVE	ww _	€
WATER METER)
DROP INLET		
DITCH BLOCK	SIGN	-
GROUND MOUNTED SIGN LIGHT POLE		_
H-FRAME POWER POLE		
TELEPHONE PEDESTAL FENCE CHAIN LINK	PED \	<u></u>
WOVEN WIRE GATE POST	—— x	: —— 3
BENCHMARK	Вм	-)

NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION PLANS FOR PROPOSED

STATE HIGHWAY

HARRISON COUNTY



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

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PE-200	MISSOLD OLAS MAS MBER 7035784	Y SFALFD AND DATED
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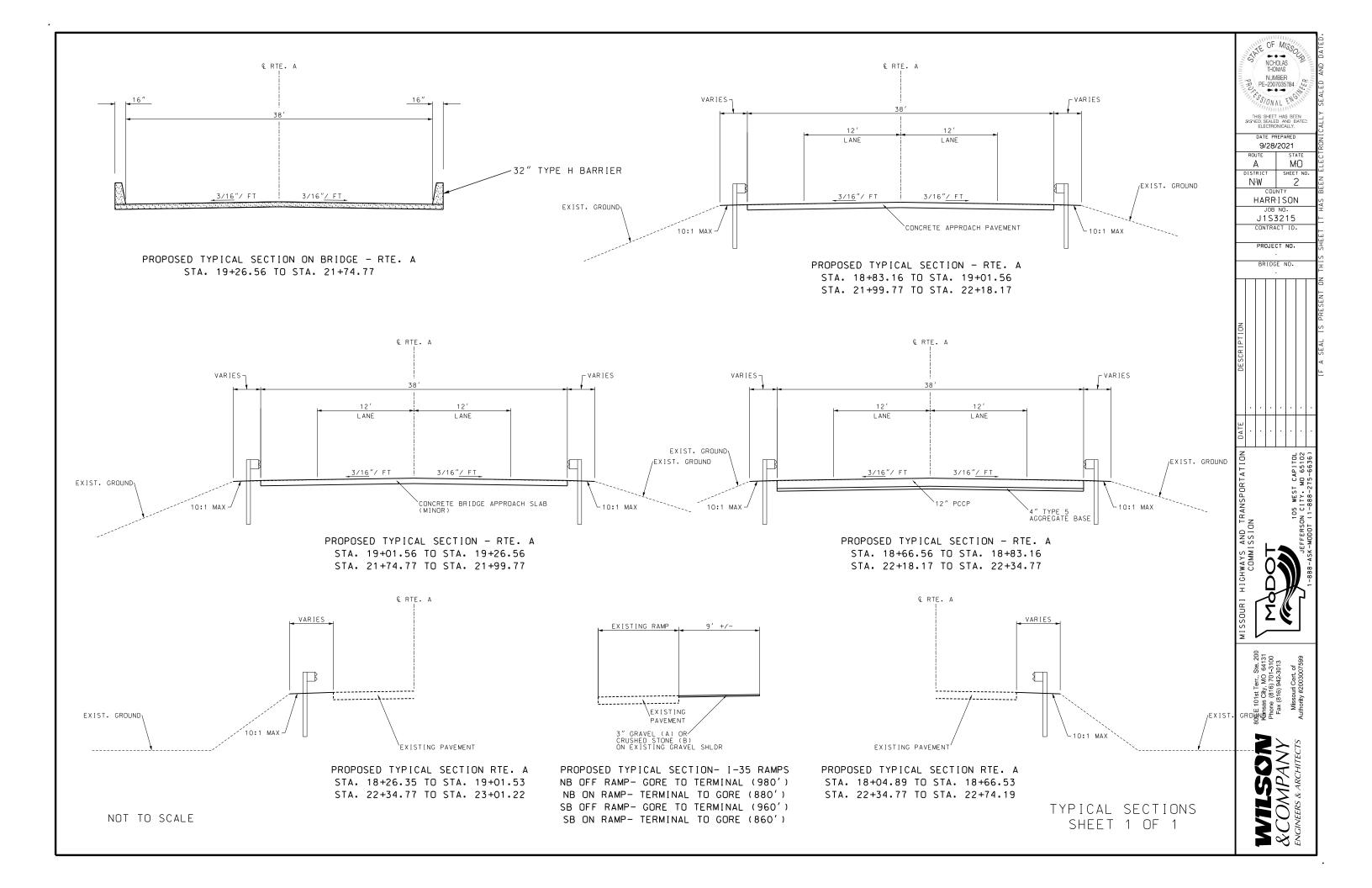
LENGTH OF PROJECT

BEGINNING OF PROJECT STA. 18+66.56 STA. 22+34.77 END OF PROJECT 368.21 FEET APPARENT LENGTH

EQUATIONS AND EXCEPTIONS:

0.20 ACRES

TOTAL CORRECTIONS 0.00 FEET NET LENGTH OF PROJECT 368.21 FEET STATE LENGTH 0.070 MILE FOR INFORMATION ONLY ESTIMATED DISTURBED ACRES



	REMOVAL OF IMPROVEMENTS										
SHEET	STA.	STA.	LOCATION	ITEM	UNIT	QUANTITY					
4	18+13.10	19+13.78	RTE. A	GUARDRAIL	LF	101					
4	18+45.17	19+20.19	RTE. A	GUARDRAIL	LF	76					
4	18+66.53	19+26.56	RTE. A	EXISTING PAVEMENT	SY	249					
4	18+66.53		RTE. A	SAWCUT	LF	36					
4	21+74.69	22+34.77	RTE. A	EXISTING PAVEMENT	SY	249					
4	21+80.21	22+55.91	RTE. A	GUARDRAIL	LF	76					
4	21+86.87	22+89.75	RTE. A	GUARDRAIL	LF	103					
4	22+34.77		RTE. A	SAWCUT	LF	36					
				TOT	AL = 1	LUMP SUM					

CONTRACTOR FURNISHED SURVEYING AND STAKING

TOTAL = 1 LUMP SUM

MOBILIZATION

TOTAL = 1 LUMP SUM

LINEAR GRADING, CLASS 2								
				QUANTITY				
SHEET	STA.	STA.	LOCATION	(STA)				
4	18+04.89	19+26.56	RTE. A. RT	1.22				
4	18+26.35	19+26.56	RTE. A. LT	1.00				
4	21+74.77	22+74.19	RTE. A. RT	0.99				
4	21+74.77	23+01.22	RTE. A. LT	1.26				
			TOTAL	4.47				
			PAY TOTAL	4.50				

	DRAINAGE BASIN REPAIR									
			QUANTITY							
SHEET	STA.	LOCATION	(EA)							
13	18+95	RTE. A, RT	1							
13	19+02	RTE. A, LT	1							
13	22+00	RTE. A, RT	1							
13	22+05	RTE. A, LT	1							
		TOTAL	4							
		PAY TOTAL	4							

	CONCRETE APPROACH PAVEMENT										
SHEET	STA.	STA.	WIDTH (L.F.)	CONCRETE APPROACH PAVEMENT (S.Y.)	REMARKS						
4	18+83.16	19+01.56	LOCATION RTE. A	(L.F.) 18.4	38	78					
4	21+99.77	22+18.17	RTE. A	18.4	38	78					
				TOT	ALS	156					
				PAY T	OTALS	156					

	CONCRETE PAVEMENT											
SHEET	STA.	STA.	LOCATION	LENGTH (L.F.)	WIDTH (L.F.)	12" PCCP (S.Y.)	4" TYPE 5 AGG. BASE (S.Y.)	REMARKS				
4	18+66.56	18+83.16	RTE. A	16.6	38	70	70					
4	22+18.17	22+34.77	RTE. A	16.6	38	70	70					
					ALS	140	140					
				PAY T	OTALS	140	140					

	PERMANENT EROSION CONTROL									
				TYPE 1 ROCK DITCH LINER (1' DEPTH)						
			FURNISHING PLACI							
SHEET	STA.	STA.	LOCATION	(CY)	(CY)					
13	19+08.24	19+55.49	RTE. A. RT	10	10					
13	19+18.77	19+65.52	RTE. A, LT	10	10					
13	21+36.46	21+82.50	RTE. A, RT	10	10					
13	21+43.00	21+89.96	RTE. A. LT	9	9					
			TOTALS	39	39					
			PAY TOTALS	39	39					

	TEMPORARY EROSION CONTROL										
						SEDIMENT					
					SILT FENCE	REMOVAL					
SHEET	STA.	STA.	LOCATION	SIDE	(LF)	(CY)					
12	19+09.2	19+54.6	RTE. A	RT	50	1					
12	19+19.5	19+64.1	RTE. A	LT	50	1					
12	21+36.8	21+81.9	RTE. A	LT	50	1					
12	21+43.5	21+81.7	RTE. A	RT	50	1					
		TOTALS		200	4						
			PAY TOTALS		200	4					

	PAVEMENT MARKING										
SHEET	STATION	STATION	LOCATION	4 IN. YELLOW STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS (LF)	4 IN. WHITE STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS (LF)	REMARKS					
14	18+65.00	22+35.00	RTE. A	93		INTERMITTENT YELLOW CENTERLINE					
14	18+65.00	22+35.00	RTE. A		370	WHITE EDGELINE					
14	18+65.00	22+35.00	RTE. A		370	WHITE EDGELINE					
	TOTALS 93 740										
			PAY TOTALS	93	740						

	GUARDRAIL										
SHEET	LOCATION	STATION	STATION	SIDE	MGS GUARDRAIL (LF)	TYPE A CRASHWORTHY END TERMINALS (MASH) (EA)	MGS BRIDGE APPROACH TRANSITION SECTION (REGULAR/NO CURB) (EA)	BRIDGE ANCHOR SECTION (EA)			
4	RTE. A	18+14.56	19+15.67	RT	12.5	1	1				
4	RTE. A	18+40.09	19+22.48	LT	12.5	1		1			
4	RTE. A	21+78.88	22+61.26	RT	12.5	1	1				
4	RTE. A	21+86.94	22+86.83	LT	12.5	1		1			
			TOTAL	.S	50	4	2	2			
			PAY TOT	ALS	50	4	2	2			

	SHOULDER AGGREGATE	
		GRAVEL (A) OR CRUSHED STONE (B)
SHEET	LOCATION	(TONS)
2	NB OFF RAMP OUTSIDE SHOULDER	160
2	NB ON RAMP OUTSIDE SHOULDER	144
2	SB OFF RAMP OUTSIDE SHOULDER	157
2	SB ON RAMP OUTSIDE SHOULDER	140
	TOTALS	601
	PAY TOTALS	601

SUMMARY OF QUANTITIES SHEET 1 OF 2



																EFFECTIVE:
			TOTAL	1	TOTAL							QTY TOTAL SIGN				
	SI	ze are	A QTY AREA	RELOC	RELOC	NUM.			SIZEARE	A QTY	TOTAL	RELOCRELOC NUM.				
SIGN	IN	I. SQ.F	EACH SQ.FT.	EACH	SQ.FT.			SIGN	IN. SQ.F	T. EACH	SQ.FT	. EACH SQ.FT.		ITEM	TOTAL	
			WARNING S	IGNS			DESCRIPTION			GUII	DE SI	GNS	DESCRIPTION	NUMBER	QTY	DESCRIPTION
WO1-1L	_	48 16.0					TURN (SYMBOL LEFT ARROW)	E05-1	36X48 12.0	00			GORE EXIT	6122008		IMPACT ATTENUATOR 40 MPH (SAND
WO1-1R	_	48 16.0					TURN (SYMBOL RIGHT ARROW)	E05-2	48X36 12.0	_			EXIT OPEN	6122009		IMPACT ATTENUATOR 45 MPH (SAND
WO1-2L	_	48 16.0					CURVE (SYMBOL LEFT ARROW)	E05-2a	48X36 12.0	_			EXIT CLOSED	6122010		IMPACT ATTENUATOR 50 MPH (SAND
WO1-2R	_	48 16.0					CURVE (SYMBOL RIGHT ARROW)	GD20-1	60X24 10.0	_	40.00		ROAD WORK NEXT XX MILES	6122012		IMPACT ATTENUATOR 55 MPH (SAND
WO1-3L WO1-3R	_	48 16.0 48 16.0					REVERSE TURN (SYMBOL LEFT ARROW) REVERSE TURN (SYMBOL RIGHT ARROW)	GD20-2 GD20-4	48X24 8.0 36X18 4.5	_	32.00	26	END ROAD WORK PILOT CAR FOLLOW ME	6122014		IMPACT ATTENUATOR 60 MPH (SAND IMPACT ATTENUATOR 65 MPH (SAND
W01-3K	_	48 16.0					REVERSE CURVE (SYMBOL LEFT ARROW)		42X30 8.7	_			PILOT CAR IN USE WAIT & FOLLOW	6122017		IMPACT ATTENUATOR 70 MPH (SAND
W01-4R	_	48 16.0					REVERSE CURVE (SYMBOL RIGHT ARROW)		18X12 1.5				PILOT CAR IN USE WAIT & FOLLOW	6122020		REPLACEMENT SAND BARREL
W01-4bl	_	48 16.0					DOUBLE ARROW REVERSE CURVE (SYMBOL LT ARROWS)		36X24 6.0	_	96.00		WORK ZONE (PLAQUE)	6122030		IMPACT ATTENUATOR (RELOCATION)
WO1-4bF	_	48 16.0					DOUBLE ARROW REVERSE CURVE (SYMBOL RT ARROWS)	MO4-8a	24X18 3.0	_	6.00	52	END DETOUR	6123000A		TRUCK OR TRAILER MOUNTED ATTENU
W01-4cl	_ 48X	48 16.0	0				TRIPLE ARROW REVERSE CURVE (SYMBOL LT ARROWS)	MO4-9L	48X36 12.0	00			DETOUR (LEFT ARROW)	6161008	4	ADVANCED WARNING RAIL SYSTEM
WO1-4cF	₹ 48X	48 16.0	0				TRIPLE ARROW REVERSE CURVE (SYMBOL RT ARROWS)	MO4-9R	48X36 12.0	00			DETOUR (RIGHT ARROW)	6161012		BUOYS (BOATS KEEP OUT)
WO1-6	_	30 12.5					HORIZONTAL ARROW (SYMBOL)		48X12 4.0	_			STREET NAME (PLAQUE)	6161013		BUOYS (NO WAKE)
WO1-6a	_	36 18.0				16	HORIZ. ARROW (SYMBOL ON PERMANENT BARRICADE)		48X18 6.0	_			DETOUR (ARROW LEFT)	6161014		SPECIAL SIGN ASSEMBLY (BOATS KE
WO1-7	_	30 12.5					DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)	M04-10R	48X18 6.0	0	DEOLU		DETOUR (ARROW RIGHT)	6161020	40	CHANNELIZER (DRUM-LIKE)
WO1-7a	_	36 18.0					DOUBLE HEAD HORIZ, ARROW (SYMBOL ON PERM. BARR.)	D1 1	140740147 0	\E 0		_ATORY SIGNS	CIOD	6161025	62	CHANNELIZER (TRIM LINE)
WO1-8 WO1-8a		36 7.5					CHEVRON (SYMBOL) CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)	R1-1 R1-2	48X48 13.2 48TRI. 6.9	_	26.50	41	YIELD	6161030 6161033	12 60	TYPE III MOVEABLE BARRICADE DIRECTION INDICATOR BARRICADE
W01-80		48 16.0				39	STOP AHEAD (SYMBOL)	R1-2a	36X36 9.0	_			TO ONCOMING TRAFFIC (PLAQUE)	6161040	4	FLASHING ARROW PANEL
W03-2	_	48 16.0				33	YIELD AHEAD (SYMBOL)	R1-3P	30X12 2.5	_			ALL WAY (PLAQUE)	6161047		TYPE III OBJECT MARKER
WO3-3		48 16.0					SIGNAL AHEAD (SYMBOL)	R2-1	36X48 12.0		168.00) 4	SPEED LIMIT XX	6161051		WARNING LIGHT, TYPE A
WO3-4	_	48 16.0					BE PREPARED TO STOP	R3-1	48X48 16.0	_	1.00.00		NO RIGHT TURN (SYMBOL)	6161052	24	WARNING LIGHT, TYPE B
WO3-5			0 8 128.00			3	SPEED LIMIT AHEAD	R3-2	48X48 16.0		64.00	59	NO LEFT TURN (SYMBOL)	6161053		WARNING LIGHT, TYPE C
WO4-1L	_	48 16.0					MERGE (SYMBOL FROM LEFT)	R3-3	36X36 9.0				NO TURNS	6161055	60	SEQUENTIAL FLASHING WARNING LIG
WO4-1R	48X	48 16.0	0				MERGE (SYMBOL FROM RIGHT)	R3-4	48X48 16.0				NO U-TURN (SYMBOL)	6161070		TUBULAR MARKER
W04-1al	_ 48X	48 16.0	0				MERGE (ARROW SYMBOL)	R3-7L	30X30 6.2				LEFT LANE MUST TURN LEFT	6161095		RADAR SPEED ADVISORY SYSTEM
W04-1af		48 16.0				6 A	MERGE (ARROW SYMBOL)	R3-7R	30X30 6.2				RIGHT LANE MUST TURN RIGHT]		CHANGEABLE MESSAGE SIGN.
WO5-1		48 16.0					ROAD/BRIDGE/RAMP NARROWS	R4-1	36X48 12.0				DO NOT PASS	6161096		COMMISSION FURNISHED/RETAINED
WO5-3		48 16.0					ONE LANE BRIDGE	R4-2	36X48 12.0		48.00	46A	PASS WITH CARE			CHANGEABLE MESSAGE SIGN W/O COM
W05-5		48 16.0					NARROW LANES	R4-8a	36X48 12.0				KEEP LEFT (HORIZONTAL ARROW)	6161098A	2	INTERFACE, CONTRACTOR FURNISHED
W06-1		48 16.0					DIVIDED HIGHWAY (SYMBOL)	R4-7a	36X48 12.0				KEEP RIGHT (HORIZONTAL ARROW)			CHANGEABLE MESSAGE SIGN WITH CO
WO6-2 WO6-3		48 16.0 48 16.0					DIVIDED HIGHWAY END (SYMBOL) TWO WAY TRAFFIC (SYMBOL)	R5-1 R5-1a	30X30 6.2 36X24 6.0	_			DO NOT ENTER WRONG WAY	6161099 6162000A		INTERFACE, CONTRACTOR FURNISHED WORK ZONE TRAFFIC SIGNAL SYSTEM
W07-3a		24 5.0					NEXT XX MILES (PLAQUE)	R6-1L	54X18 6.7	_			ONE WAY ARROW (LEFT)	6162000		TEMPORARY LONG-TERM RUMBLE STRI
WO8-1		48 16.0					BUMP	R6-1R	54X18 6.7	_			ONE WAY ARROW (RIGHT)	6162004	2	TEMPORARY SHORT-TERM RUMBLE STR
WO8-2		48 16.0					DIP	R6-2L	24X30 5.0	_			ONE WAY (LEFT)			TEMPORARY TRAFFIC BARRIER
WO8-3	48X	48 16.0	0				PAVEMENT ENDS	R6-2R	24X30 5.0	0			ONE WAY (RIGHT)	6173600D		CONTRACTOR FURNISHED/RETAINED
WO8-4	48X	48 16.0	0				SOFT SHOULDER	R9-9	24X12 2.0	0			SIDEWALK CLOSED			TEMPORARY TRAFFIC BARRIER
WO8-5	48X	48 16.0	0				SLIPPERY WHEN WET (SYMBOL)						SIDEWALK CLOSED AHEAD,	6173602B		CONTRACTOR FURNISHED/COMMISSION
WO8-6		48 16.0					TRUCK CROSSING (WITH FLAGS)	R9-11L	24X18 3.0	0			(ARROW LEFT) CROSS HERE	6174000A		TEMP. TRAFFIC BARRIER HEIGHT TR
W08-6c		48 16.0					TRUCK ENTRANCE						SIDEWALK CLOSED AHEAD.	6175010A		RELOCATING TEMPORARY TRAFFIC BA
WO8-7		36 9.0					LOOSE GRAVEL	R9-11R	24X18 3.0				(ARROW RIGHT) CROSS HERE			TEMPORARY TRAFFIC BARRIER
W08-70	_	36 9.00 48 16.0					FRESH OIL/LOOSE GRAVEL LOW SHOULDER	R10-6 R11-2	24X36 6.0 48X30 10.0		40.00		STOP HERE ON RED (45° ARROW) ROAD CLOSED	6176000B		COMMISSION FURNISHED/RETAINED TEMP. TRAFFIC BARRIER HEIGHT TR
		48 16.0					UNEVEN LANES	KTT-Z	46830 10.0	70 4	40.00		ROAD CLOSED XX MILES AHEAD	6177000B		COMMISSION FURNISHED/RETAINED
		48 16.0					NO CENTER LINE	R11-3a	60X30 12.5	10			LOCAL TRAFFIC ONLY	6208064A		TEMPORARY RAISED PAVEMENT MARKE
		48 16.0					GROOVED PAVEMENT		60X30 12.5				ROAD CLOSED TO THRU TRAFFIC	9029400		TEMPORARY TRAFFIC SIGNALS
WO8-15F	30X	24 5.0)				MOTORCYCLE (PLAQUE)	1 — — —	60X48 20.0	_			FINE SIGN	9029401		TEMPORARY TRAFFIC SIGNALS AND L
WO8-17	48X	48 16.0	0				SHOULDER DROP-OFF (SYMBOL)	CONST-3	x 56X12 4.6	7			SPEEDING/PASSING (PLATE)			
WO8-17F	30X	24 5.0)				SHOULDER DROP-OFF (PLAQUE)				MISC	ELLANEOUS SIGNS				
	_	ND. 9.6					RAILROAD CROSSING	1 	48X36 12.0				POINT OF PRESENCE			
		24 4.0					DOUBLE DOWN ARROW (SYMBOL)		96X48 32.0				POINT OF PRESENCE			
		48 16.0		-	-		LOW CLEARANCE (SYMBOL)		48X24 8.0		32.00		RATE OUR WORK ZONE			-
		18 3.0					LOW CLEARANCE (PLAQUE)		72X36 18.0		40.00		RATE OUR WORK ZONE			
	_	24 14.C X60 50.C					OVERHEAD LOW CLEARANCE (FEET AND INCHES) LOW CLEARANCE XX FT XX IN XX MILES AHEAD		48X36 12.0 60X8 3.3		48.00	62	WORK ZONE NO PHONE ZONE			
	_	x60 50.0					WIDTH RESTRICTION XX FT XX IN XX MILES AHEAD		36X60 15.0		60	504	POINT OF PRESENCE DETOUR ASSEMBLY	ł		
	_	30 6.2					ADVISORY SPEED (PLAQUE)	1 	36X60 15.0		60		DETOUR ASSEMBLY	1		
		24 5.0					XXX FEET (PLAQUE)		36X60 15.0		60		DETOUR ASSEMBLY			
	_	24 5.0					X MILE (PLAQUE)		36X60 15.0		60		DETOUR ASSEMBLY	1		
	_		0 4 64.00			2	ROAD/BRIDGE/RAMP WORK AHEAD		36X60 15.0		60		DETOUR ASSEMBLY	1		
W020-2	48X	48 16.0	0 2 32.00			18	DETOUR AHEAD		36X60 15.0		60		DETOUR ASSEMBLY			
	_	48 16.0				20	ROAD CLOSED AHEAD		48X48 16.0	_	32.00		ROAD CLOSED 500 FT			
	_	48 16.0					ONE LANE ROAD AHEAD	M1 -1	24X24 4.0	_	_		INTERSTATE ROUTE SIGN			
	_		0 4 64.00			5	RIGHT/CENTER/LEFT LANE CLOSED AHEAD		21X15 2.2	5 2			DIRECTIONAL ARROW	J		
	_	48 16.0		-			2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD	616-10		LONG	TOTAL	_				
	_		0 2 32.00	-			RIGHT/CENTER/LEFT LANE CLOSED		UCTION S	I GNS	1561					
		36 9.0	0 2 32.00	-		8	FLAGGER (SYMBOL, WITH FLAGS) FRESH OIL	616-10	TED SIGN:	ς		TOTAL				
		48 16.0					SHOULDER WORK AHEAD	INCLUCA	LILU SIGN	<i></i>						
		48 16.0					BLASTING ZONE AHEAD	1							\sim 1	IIMMARY OF QUANTIT
	1						1								<u> </u>	

TURN OFF 2-WAY RADIO AND PHONE

WET PAINT (ARROW PIVOTS)

END BLASTING ZONE

W022-2 42X36 10.50

W022-3 42X36 10.50

GO22-1 21X15 2.19

EFFECTIVE: 04-01-2021 NICHOLAS THOMAS NUMBER 758/0NAL ENGINEERS IMPACT ATTENUATOR 40 MPH (SAND BARRELS) IMPACT ATTENUATOR 45 MPH (SAND BARRELS) IMPACT ATTENUATOR 50 MPH (SAND BARRELS) IMPACT ATTENUATOR 55 MPH (SAND BARRELS) IMPACT ATTENUATOR 60 MPH (SAND BARRELS) 9/28/2021 IMPACT ATTENUATOR 65 MPH (SAND BARRELS) IMPACT ATTENUATOR 70 MPH (SAND BARRELS) M∙∩ Α DISTRICT SHEET NO 3 N-WTRUCK OR TRAILER MOUNTED ATTENUATOR (TMA **HARRISON** J1S3215 CONTRACT ID. PROJECT NO. BRIDGE NO. INTERFACE, CONTRACTOR FURNISHED/RETAINED INTERFACE, CONTRACTOR FURNISHED/RETAINED CONTRACTOR FURNISHED/COMMISSION RETAINED TEMP. TRAFFIC BARRIER HEIGHT TRANSITION TEMP. TRAFFIC BARRIER HEIGHT TRANSITION

800 E 101st Terr., Ste. 200 Kansas City, MO 64131 Phone (816) 701-3100 Fax (816) 942-3013

SUMMARY OF QUANTITIES SHEET 2 OF 2

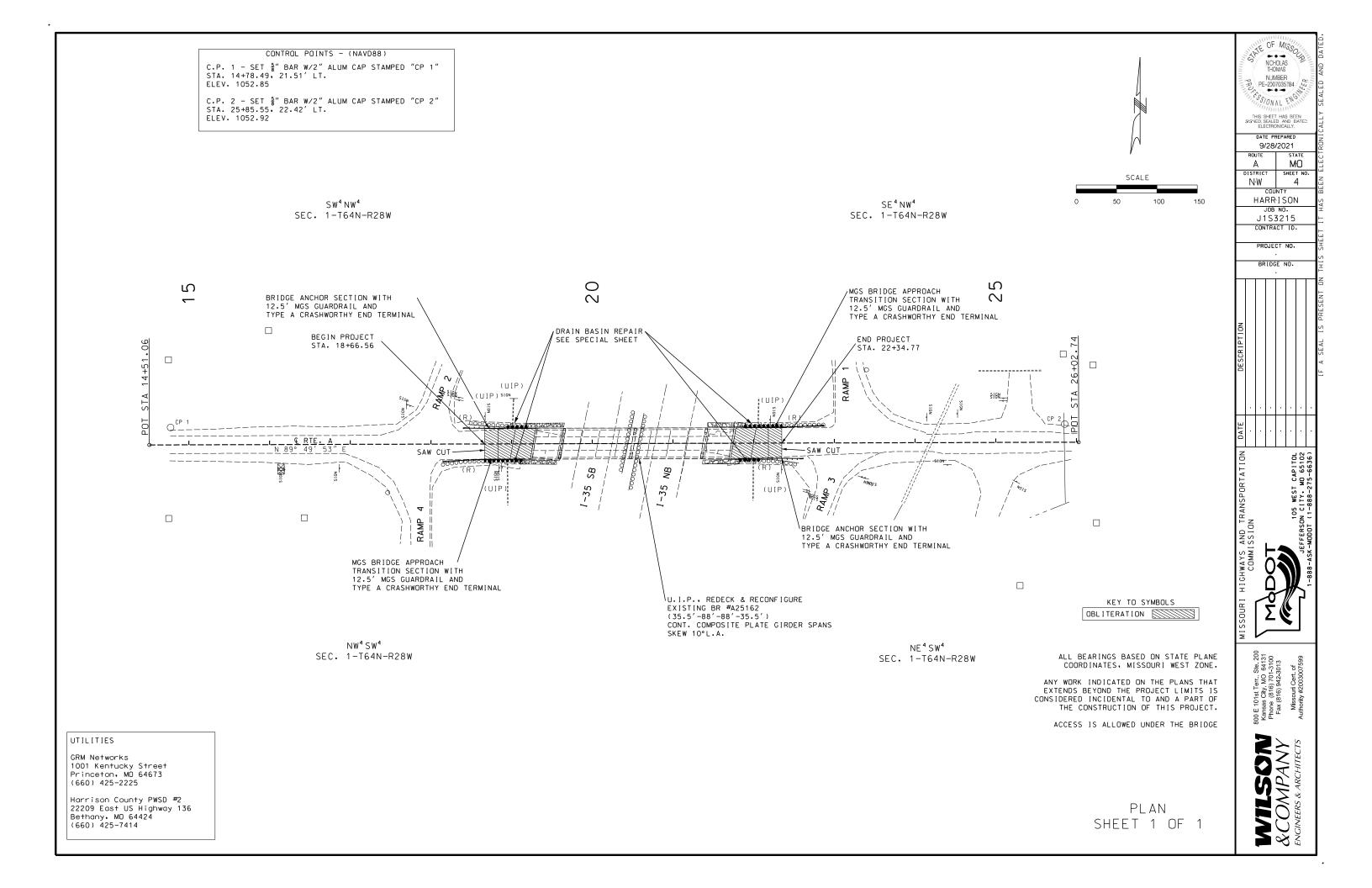
SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)

CHANGEABLE MESSAGE SIGN WITH COMM.

TEMPORARY SHORT-TERM RUMBLE STRIPS TEMPORARY TRAFFIC BARRIER

RELOCATING TEMPORARY TRAFFIC BARRIER

TEMPORARY TRAFFIC SIGNALS AND LIGHTING



ALL PROJECT COOF STATE PLANE COOF	RD I	NATES ARE OF THE MISSOURI NATE (SPC) SYSTEM OF 1983.					
PROJECT COORDINATE INFORMATION							
COORDINATE SYSTE	М	MISSOURI STATE PLANE					
HORIZONTAL DATUM	1	NAD 83					
VERTICAL DATUM		NAVD 88					
GEOID MODEL		GEOID 12B (CONUS)					
ELEVATIONS DETERMINED BY		STATIC GPS OBSERVATION MO VRS					
PROJECT PROJECTI	ON	FACTOR 1.0000000					
REFERENCE CON	TR	OL INFORMATION					
COORDINATE SYSTE	M	MISSOURI WEST ZONE 2403					
CONTROL STATION		MOAL					
DESIGNATION	М	ODOT ALBANY CORS ARP					
CORS_ID	М	OAL					
PID	_	M4112					
LATITUDE		0°15′20.75416″ (N)					
LONGITUDE	94°17′58.90396″ (W)						
NORTHING (M)	453884.890						

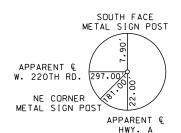
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MO WEST

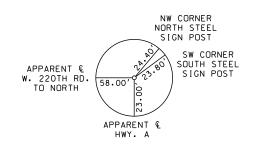
EASTING (M)

ZONE

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				OFFSET	NORTHING	STATE PLANE (GF EASTING	ELEVATION		GPK	SYGNE	IS SHEET HA D, SEALED A ELECTRONIC	S BEEN ND DATED ALLY.
	SHEET NO	STATION	LOCATION	(USFT)	(US SURVEY FT)	(US SURVEY FT)	(US SURVEY FT)	DESCRIPTION	POINT ID		9/28/20	
	PROJECT CO	ONTROL POINTS								ROU		STATE
	4	14+78.49	ROUTE A	21.51′ LT	1532652.269	2926612.860	1052.85	C.P. 1 - SET BAR W/2" ALUM. CAP		A		MO
	4	25+85.55	ROUTE A	22.42′ LT	1532656.433	2927720.941	1052.92	C.P. 2 - SET BAR W/2" ALUM. CAP		DISTR		HEET NO.
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	AL I GNMENTS	5										
	4	14+51.06	ROUTE A	0.00'	1532630.677	2926586.488	0.00	BEGIN CENTERLINE CHAIN	RTE_A			
	4	26+02.74	ROUTE A	0.00'	1532634.066	2927738.169	0.00	END CENTERLINE CHAIN	RTE_A			
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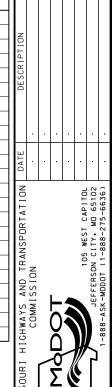


CONTROL POINT 1 ½" IRON BAR WEST OF BRIDGE COORDINATES NORTHING = 1.532.652.269EASTING = 2.926.612.86ELEVATION = 1052.85(APPROXIMATE STATION 14+78.49 APPROXIMATE OFFSET 21.51' LEFT)



CONTROL POINT 2
\$\frac{5}{8}\text{" IRON BAR}
EAST OF BRIDGE COORDINATES NORTHING = 1.532.656.433EASTING = 2.927.720.941ELEVATION = 1052.93 (APPROXIMATE STATION 25+85.55 APPROXIMATE OFFSET 22.42' LEFT)

REFERENCE POINTS AND COORDINATE POINTS SHEET 1 OF 1



800 E 101st Terr., Ste. 200 Kansas City, MO 64131 Phone (816) 701-3100 Fax (816) 942-3013

NICHOLAS THOMAS NUMBER

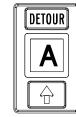
LEGEND NOTES: REFER TO STD. PLANS FOR GUARDRAIL POST SPACING - CONCRETE REFER TO SPECIAL PROVISIONS FOR ADDITIONAL CONSTRUCTION DETAILS. - TYPE 1 AGGREGATE -EXISTING DRAIN BASIN SAWCUT LINE WINGWALL -DRAIN BASIN REPAIR EDGE OF SHOULDER SAWCUT LINE -END OF BRIDGE A25162 EDGE OF PAVEMENT NOT TO SCALE DRAIN BASIN REPAIR

9/28/2021 N·W HARRISON JOB NO.
J1S3215
CONTRACT ID. PROJECT NO. BRIDGE NO.

DRAIN BASIN REPAIR SPECIAL SHEET 1 OF 1





















(50E)

(50F)













AWRS

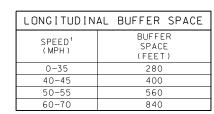
TYPE III MOVABLE BARRICADE WITH TYPE B WARNING LIGHTS

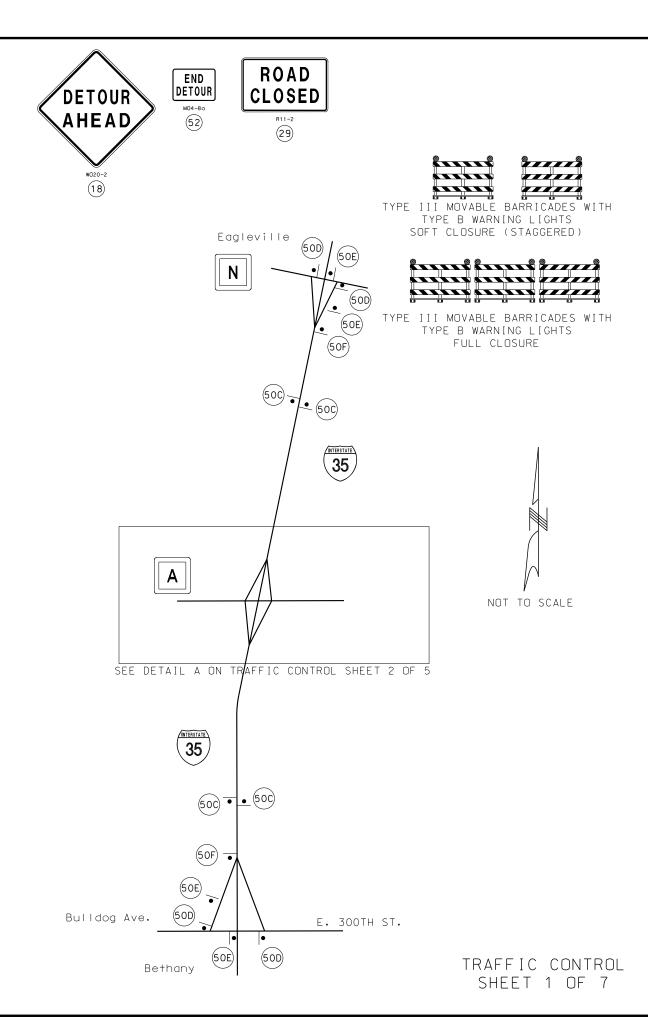
SIGN	SF	PACING	FOR	ADVAN	CED	SIGNS					
SPEED¹			SIGN SPACING ² (S) (FT)								
(MPH)		UNDIVI	DED H	IGHWAY	DIVIDED HIGHWAY						
UP TO 35			200		200						
40 TO 45			350			500					
50 TO 55	500					1000					
						SA-1000					
60 TO 70			1000			SB-1500					
					SC-2640						

^{&#}x27;SPEED LIMIT IS BASED ON POSTED SPEED LIMIT. ²SIGN SPACING MAY BE ADJUSTED, NORMALLY BY INCREASING IT, TO ACCOMMODATE FIELD CONDITIONS AND VISIBILITY.

st THE SA DIMENSION IS THE DISTANCE FROM THE TRANSITION OR POINT OF RESTRICTION TO THE FIRST SIGN.

THE SB DIMENSION IS THE DISTANCE BETWEEN THE FIRST AND SECOND SIGNS.





NICHOLAS THOMAS

NUMBER

9/28/2021

HARRISON J1S3215

CONTRACT ID.

PROJECT NO. BRIDGE NO.

800 E 101st Terr., Ste. 200 Kansas City, MO 64131 Phone (816) 701-3100 Fax (816) 942-3013

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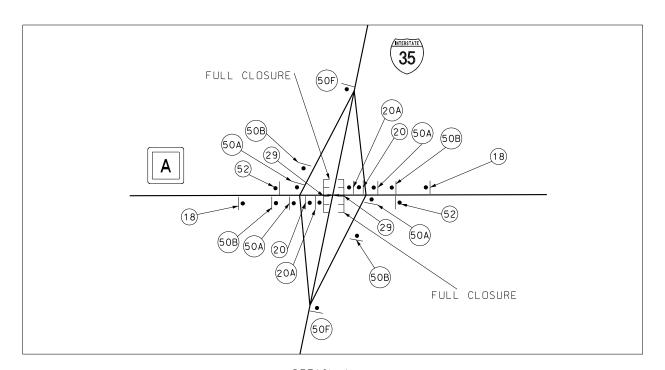
SHEET NO 7

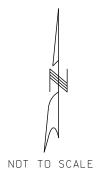
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DISTRICT

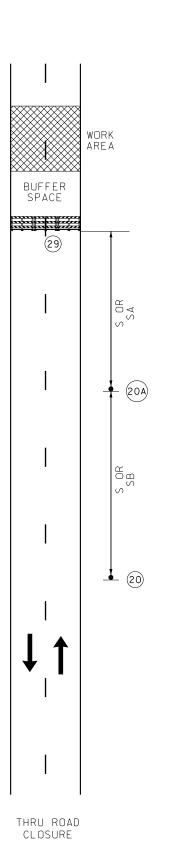
N·W

NUMBER PE-2007035784 PS-2007035784



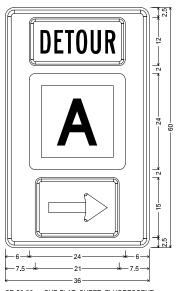


DETAIL A

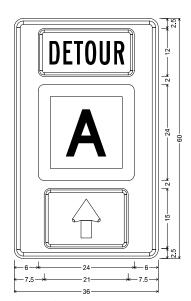


TRAFFIC CONTROL SHEET 2 OF 7

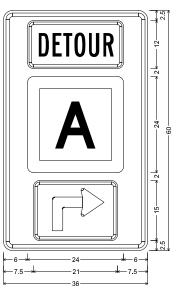
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	A MO DISTRICT SHEET NO. N.W 8 COUNTY HARRISON JOB NO. J1S3215 CONTRACT ID PROJECT NO. BRIDGE NO.							
DESCRIPTION							•	. NO IN SEAL IS PRESENT ON
DATE								
MISSOURI HIGHWAYS AND TRANSPORTATION					105 WEST CAPITOL	JEFFERSON CITY. MO 65102	1-888-ASK-MODOT (1-888-275-6636)	
	H + 1 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2	Kansas City, MO 64131	Phone (816) 701-3100	Fax (816) 942-3013	Missouri Cert. of	Authority #2003007599		
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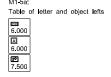
SP-50-36 SHF-FLAT SHEET FLUORESCENT; 2,250" Radius, 0.875" Border, 0.625" Indent, Black on, Orange; M1-5a;



SP-50-36 SHF-FLAT SHEET FLUORESCENT;



SP-50-36 SHF-FLAT SHEET FLUORESCENT; 2.250" Radius, 0.875" Border, 0.625" Indent, Black on, Orange, M1-5a;





SP-50-36 SHF-FLAT SHEET FLUORESCENT; SP-50-36 SHF-FLAT SHEET FLUORESCENT;
2.250" Radius, 0.875" Border, 0.625" Indent, Black on, Orange;
M1-5a;
Table of letter and object lefts

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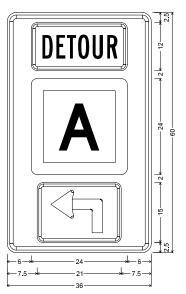
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DETOUR

TRAFFIC CONTROL SHEET 3 OF 7



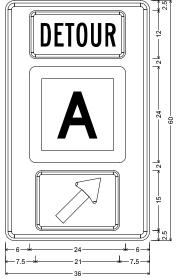
800 E 101st Terr., Ste. 200 Kansas City, MO 64131 Phone (816) 701-3100 Fax (816) 942-3013



SP-50-36 SHF-FLAT SHEET FLUORESCENT; 2,250" Radius, 0.875" Border, 0.625" Indent, Black on, Orange; M1-5a;

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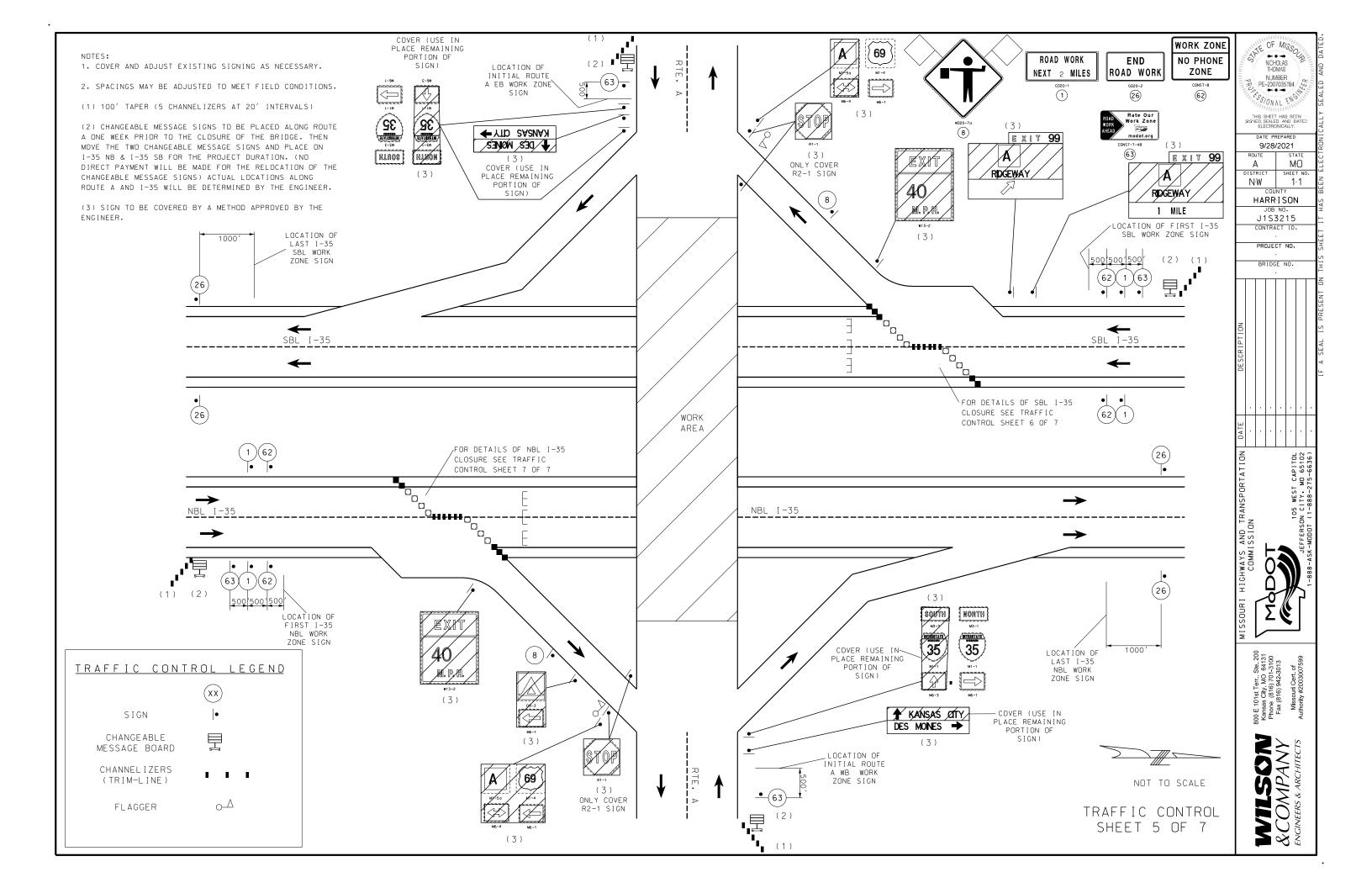
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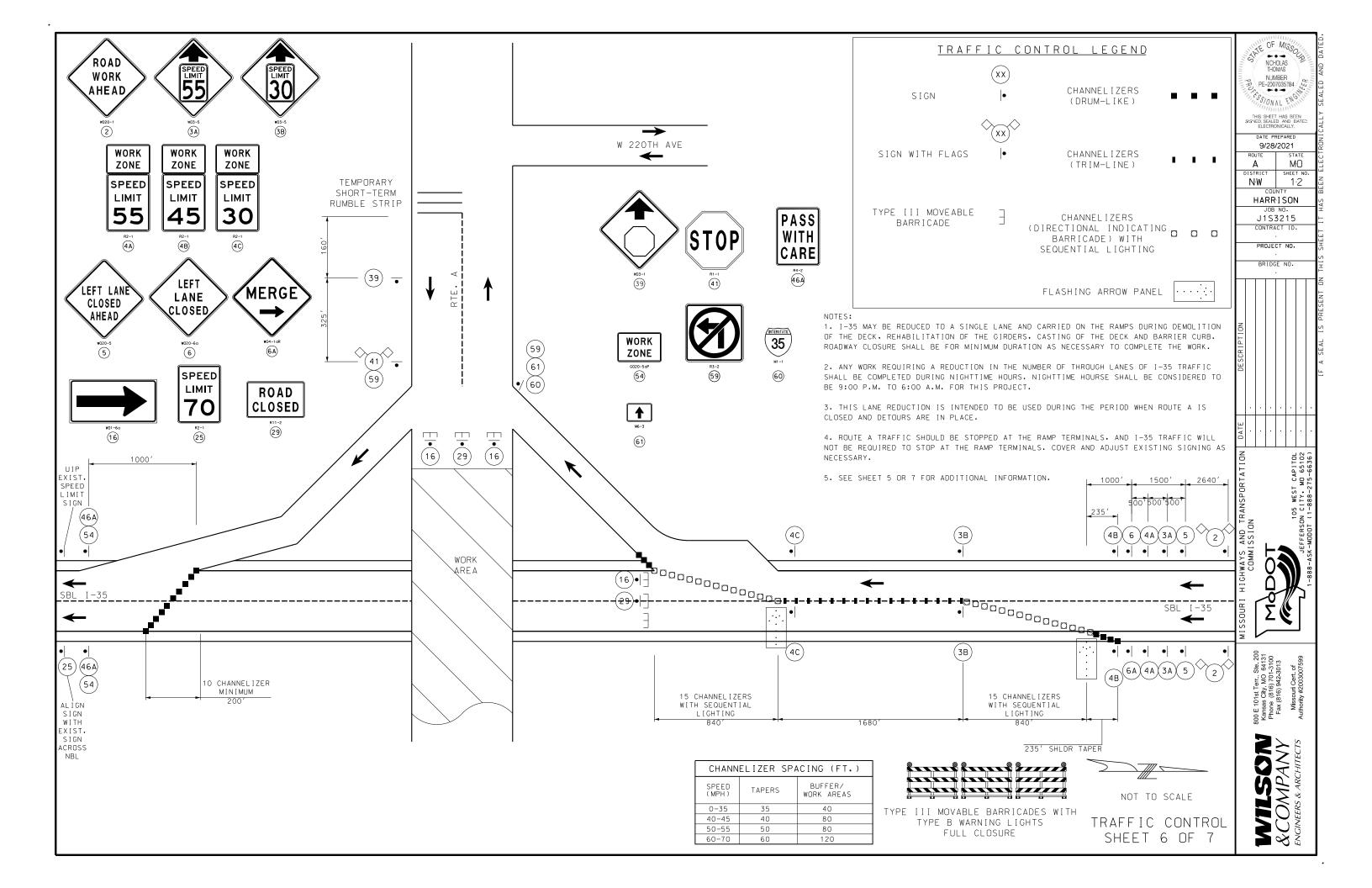


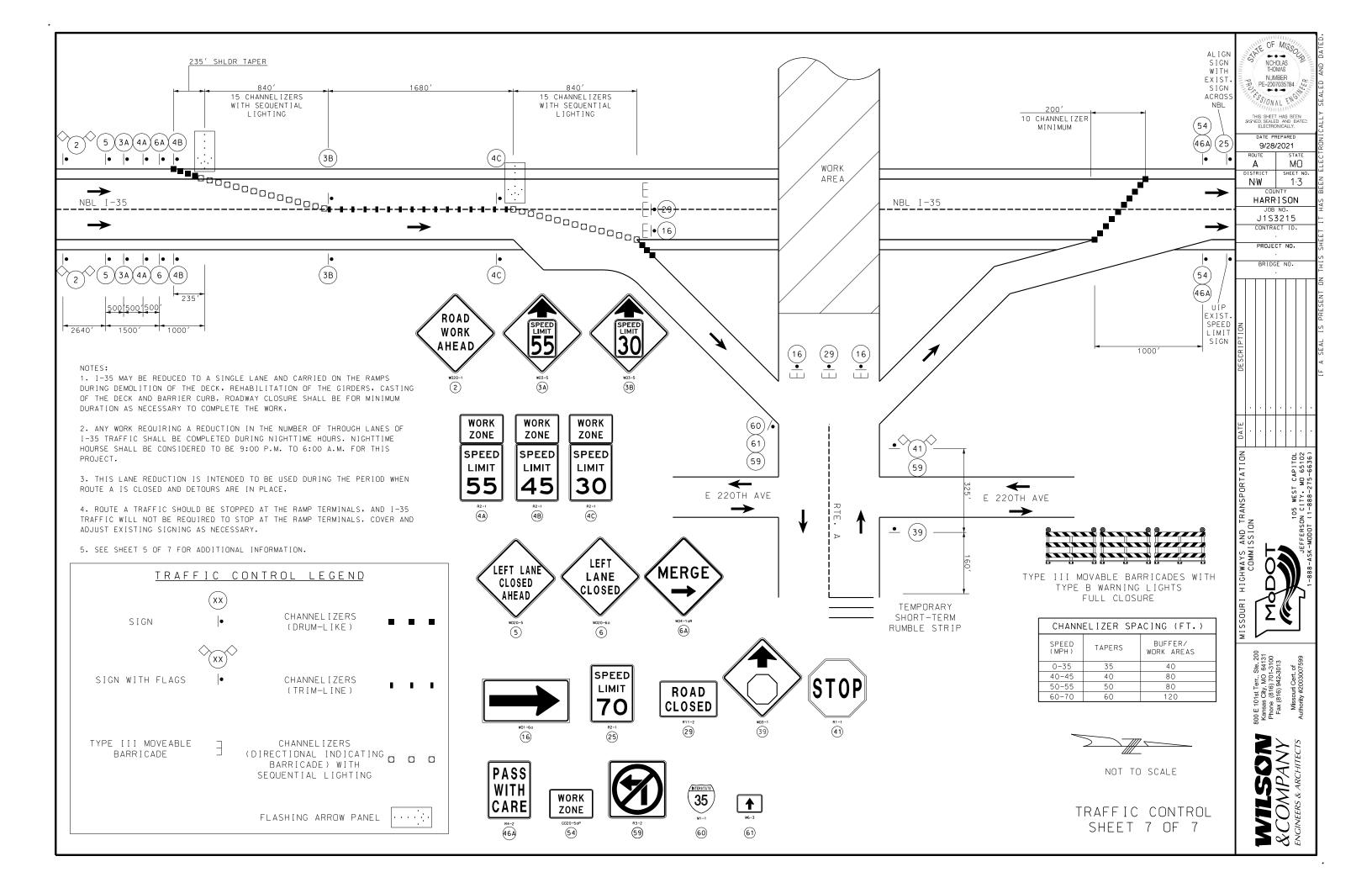


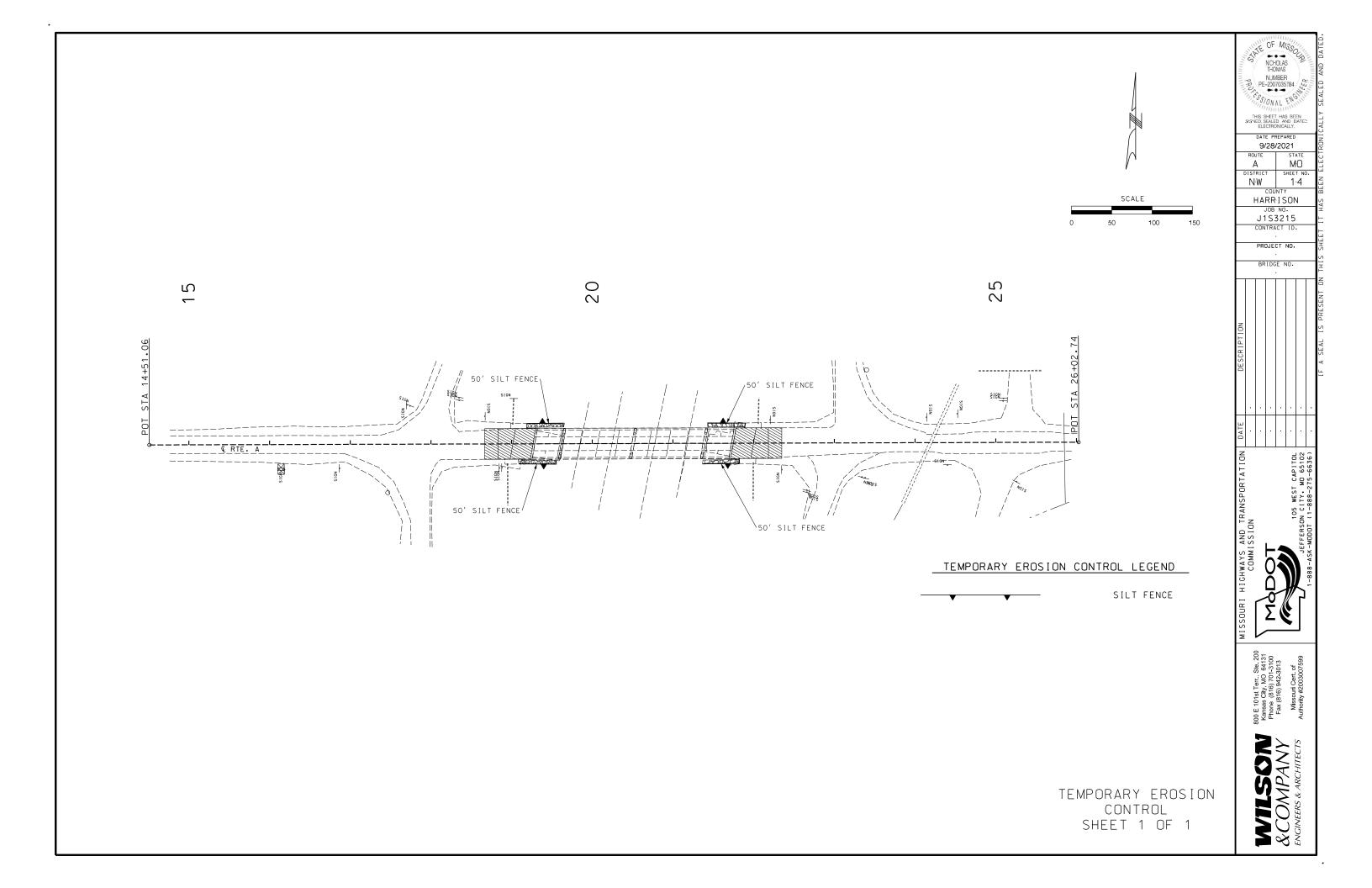
NCHOLAS THOMAS NUMBER PE-2007035784 9/28/2021 ROUTE STATE M:O SHEET NO. DISTRICT N·W COUNTY HARRISON JOB NO.
J1S3215
CONTRACT ID. PROJECT NO. BRIDGE NO. 800 E 101st Terr., Ste. 200 Kansas City, MO 64131 Phone (816) 701-3100 Fax (816) 942-3013

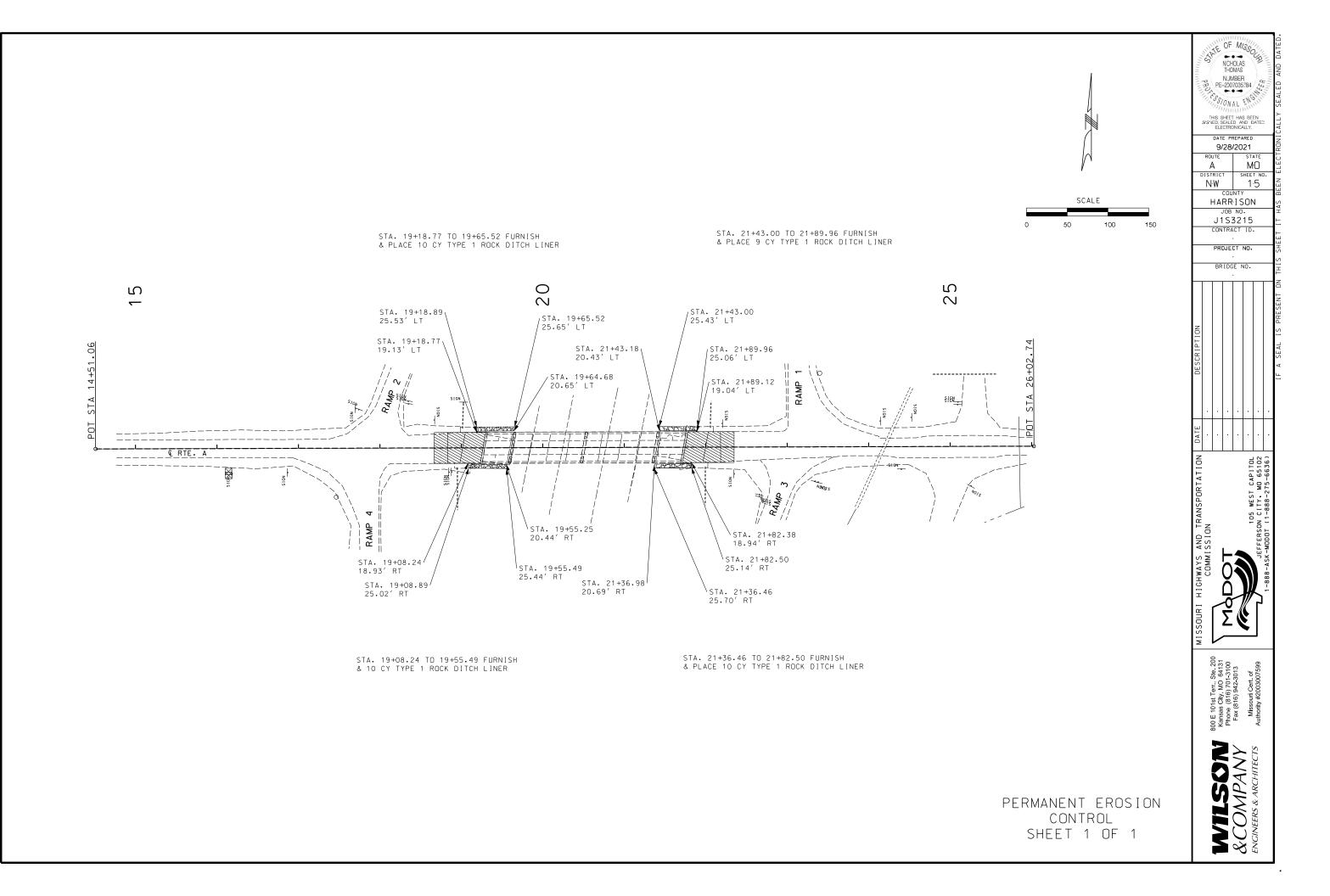
TRAFFIC CONTROL SHEET 4 OF 7

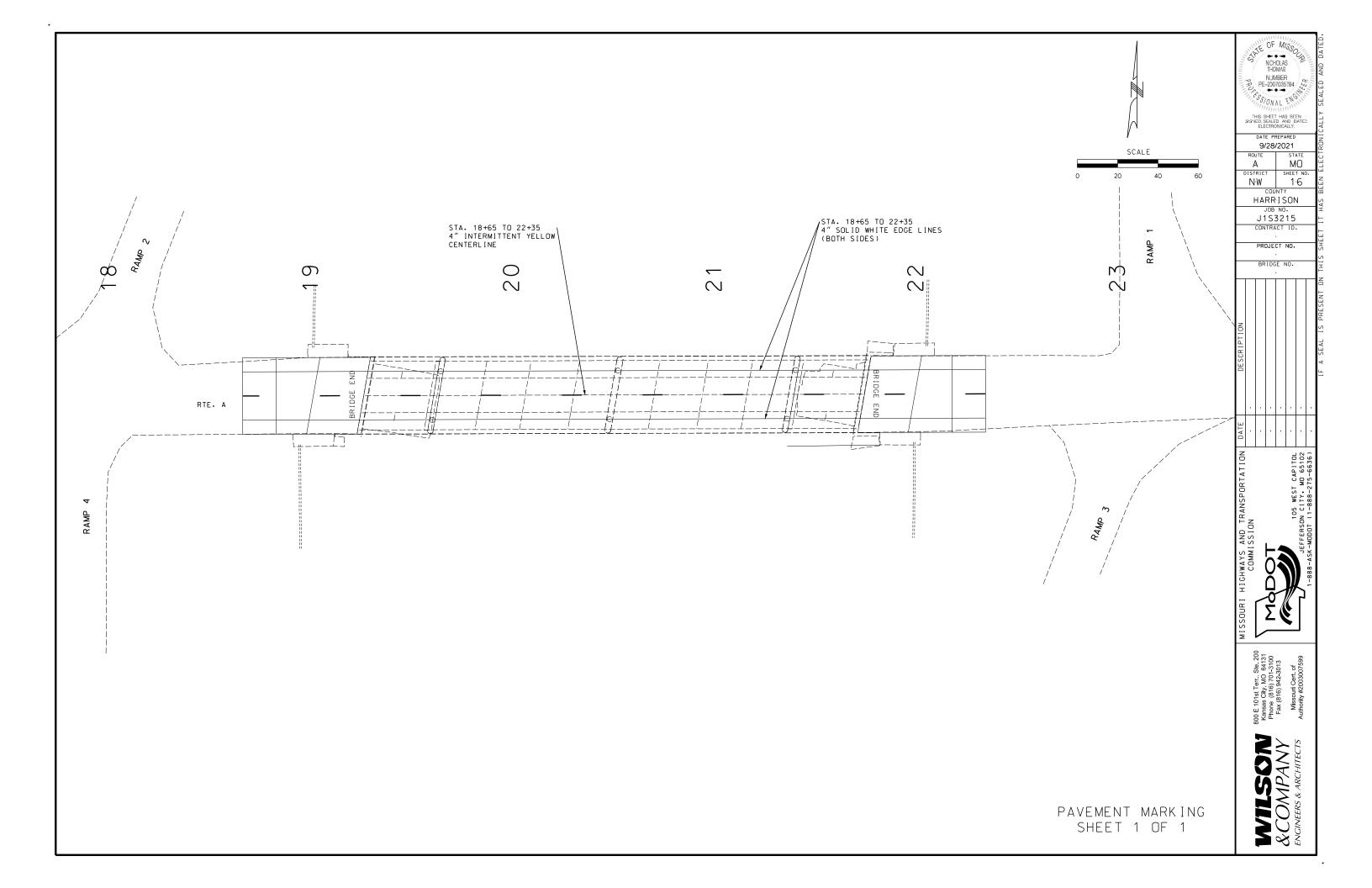










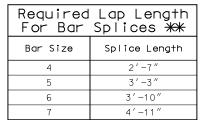


f'c = 4,000 psi

f'c = 4.000 psi= 60,000 psify = 60,000 psify = 50,000 psi

U.I.P., REDECK AND RECONFIGURE EXISTING SUPERSTRUCTURE TO (35.5'-88'-88'-35.5') CONTINUOUS COMPOSITE PLATE GIRDER SPANS (SKEW:10°L.A.)





** Unless otherwise shown.

General Notes:

Design Specifications:

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

Desian Loadina:

H20-44 (1969) (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 (Grade 60) Structural Steel (ASTM 709 Grade 50)

Fabricated Steel Connections:

Field connections shall be made with 3/4" diameter ASTM F3125 Grade A325 Type 1 bolts and 13/16" diameter holes, except as noted.

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 least 40 diameters for smooth bars and 30 diameters for deformed bars, unless otherwise noted.

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

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

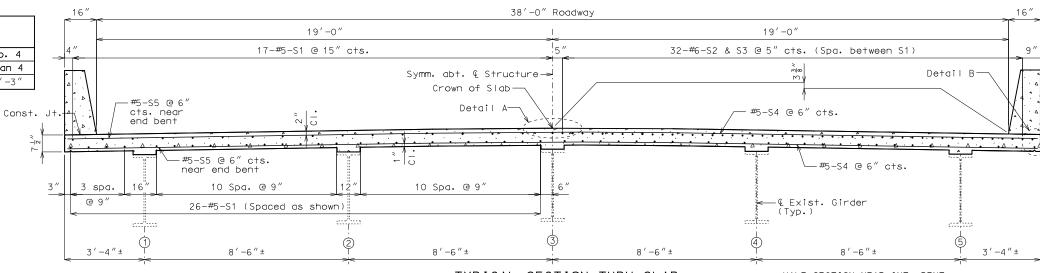
Contractor shall verify all dimensions in field before ordering new material.

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.

Traffic Handling:

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

Vertical clearance for Interstate 35 traffic during construction shall be 15'-0'' minimum over a 26 foot wide horizontal opening of the roadway in each direction.



HALF SECTION NEAR MIDSPAN AND END BENT

Cross Slope

Top of Slab

4'-0'

Parabolic Crown

DETAIL A

Estimated Quantities for Slab on Steel

3/16" per

Crown of Slab

TYPICAL SECTION THRU SLAB

HALF SECTION NEAR INT. BENT

Estimated Quantitie	s	
I tem		Total
Removal of Miscellaneous ACM (Non-Friable)	sq. foot	24
Removal of Existing Bridge Deck	sq. foot	10,203
Partial Removal of Substructure Concrete	lump sum	1
Removal of Existing Bearings	each	10
Bridge Approach Slab (Minor)	sq. yard	211
Slab on Steel	sq. yard	1127
Type H Barrier	linear foot	545
Substructure Repair (Formed)	sq. foot	100
Fiber Reinforced Polymer Wrap	sq. foot	395
Protective Coating - Concrete Bents and Piers (Epoxy)	lump sum	1
Fabricated Structural Low Alloy Steel (Plate Girder) A7	09, Grade 50 pound	46,84
Shear Connectors	each	1440
Cleaning and Coating Existing Bearings	each	5
Slab Drain	each	12
Surface Preparation for Recoating Structural Steel	sq. foot	10,20
Field Application of Inorganic Zinc Primer	sq. foot	10,20
Intermediate Field Coat (System G)	sq. foot	13,10
Finish Field Coat (System G)	sq. foot	2800
Reconfigure Existing Structural Steel	lump sum	1
Vertical Drain at End Bents	each	2
Laminated Neoprene Bearing Pad Assembly	each	10

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

> * Type H Barrier Curb Shall be cast-in-place option or slip-form option. *** See Special Provisions

einforcing Steel (Epoxy Coated) pound 86,480 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.

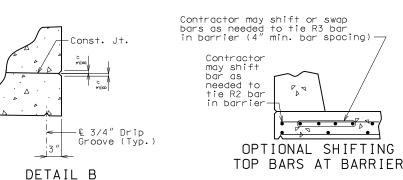
-€ Roadway -Profile Grade

(Match exist.±)

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 A OVER INTERSTATE 35

ROUTE A FROM ROUTE 69 TO ROUTE T ABOUT 0.4 MILE FAST OF ROUTE 69 BEGINNING STATION 19+25.34 ± (MATCH EXISTING)

Detailed June 202

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

lass B-2 Concrete

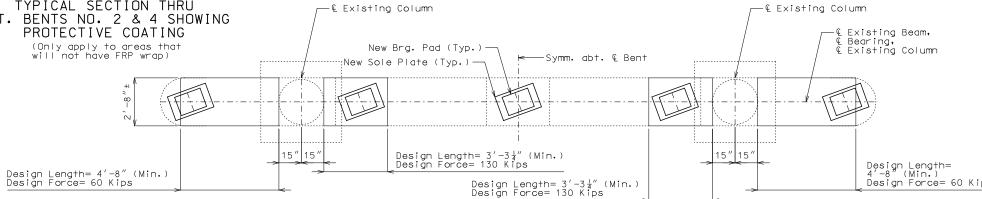
Sheet No. 1 of 15

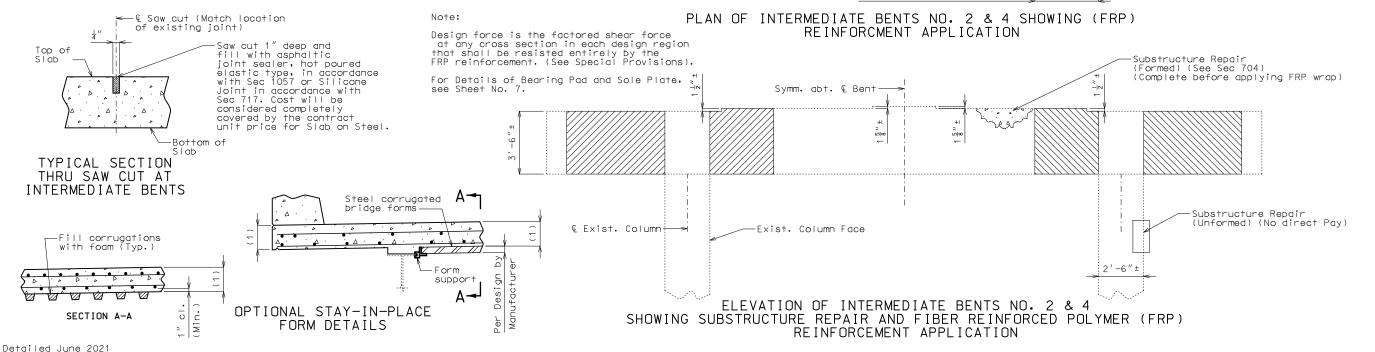
Total

cu, yard

293

TIMOTHY D. LEAF NUMBER PE-2012000778 SONAL THIS SHEET HAS BEEN SIGNED, SEALED AND DATE 8/10/2021 MΩ Δ DISTRICT SHEET NO BR 1 HARRISON J1S3215 CONTRACT ID PROJECT NO. A25162





Sheet No. 2 of 15

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

General Notes:

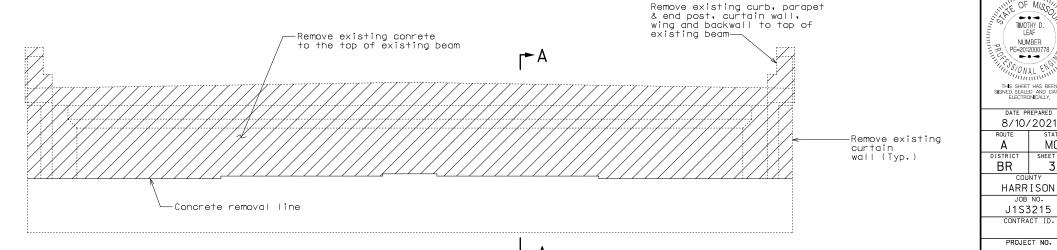
Structural Steel Protective Coating: Protective Coating: System G in accordance with Sec 1081. All existing bearings at Bent No. 3 shall be recoated with System G.

Surface Preparation: Surface preparation of the existing steel shall be in accordance with Sec 1081 for Recoating of Structural Steel (System G, H or I). The cost of surface preparation will be considered completely covered by the contract unit price for Surface Preparation for Recoating Structural Steel.

Prime Coat: The cost of the prime coat will be considered completely covered by the contract unit price for Field Application of Inorganic Zinc Primer. Tint of the prime coat for System G shall be similar to the color of the field coat to be used. The cost of the prime coat for new structural steel shall be considered completely covered by the unit price for Fabricated Structural Low Alloy Steel (Plate Girder) A709 Grade 50 (Plate Girder) A709, Grade 50.

Field Coat: The color of the finish field coat shall be Gray (Federal Standard #26373). The cost of the intermediate field coat will be considered completely covered by the contract unit price for Intermediate Field Coat (System G). The cost of the finish field coat will be considered completely covered by the contract unit price for Finish Field Coat (System G).

At the option of the contractor, the intermediate field coat and finish field coat may be applied in the shop. The contractor shall exercise extreme care during all phases of loading, hauling, handling, erection and pouring of the slab to minimize damage and shall be fully responsible for all repairs and cleaning of the coating systems as required by the engineer.



ELEVATION OF END BENT NO. 1 SHOWING CONCRETE REMOVAL

Remove existing end post, curb, parapet, wing and rails to const. joint Bottom of Wing ELEVATION OF WING SHOWING

CONCRETE REMOVAL LIMITS

Remove exist. backwall concrete to const. joint Const. Joint —

SECTION A-A

-Remove exist. curb, parapet, wings & end post concrete (Typ.)

Remove existing backwall concrete as shown in Section A-A

PLAN OF END BENT NO. 1 SHOWING CONCRETE REMOVAL End Bent No. 1 shown, End Bent No. 5 similar

Existing bearings and girders not shown for clarity.

Existing vertical backwall and wingwall reinforcement shall be cleaned and reused.

The cost of concrete removal will be considered completely covered by the contract price for Partial Removal of Substructure Concrete.

DETAILS OF CONCRETE REMOVAL

Detailed June 2021

Notes:



105 ON CI

-Remove existing curtain wall (Typ.)

TIMOTHY D. LEAF

NUMBER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

8/10/2021

HARRISON

J1S3215

CONTRACT ID

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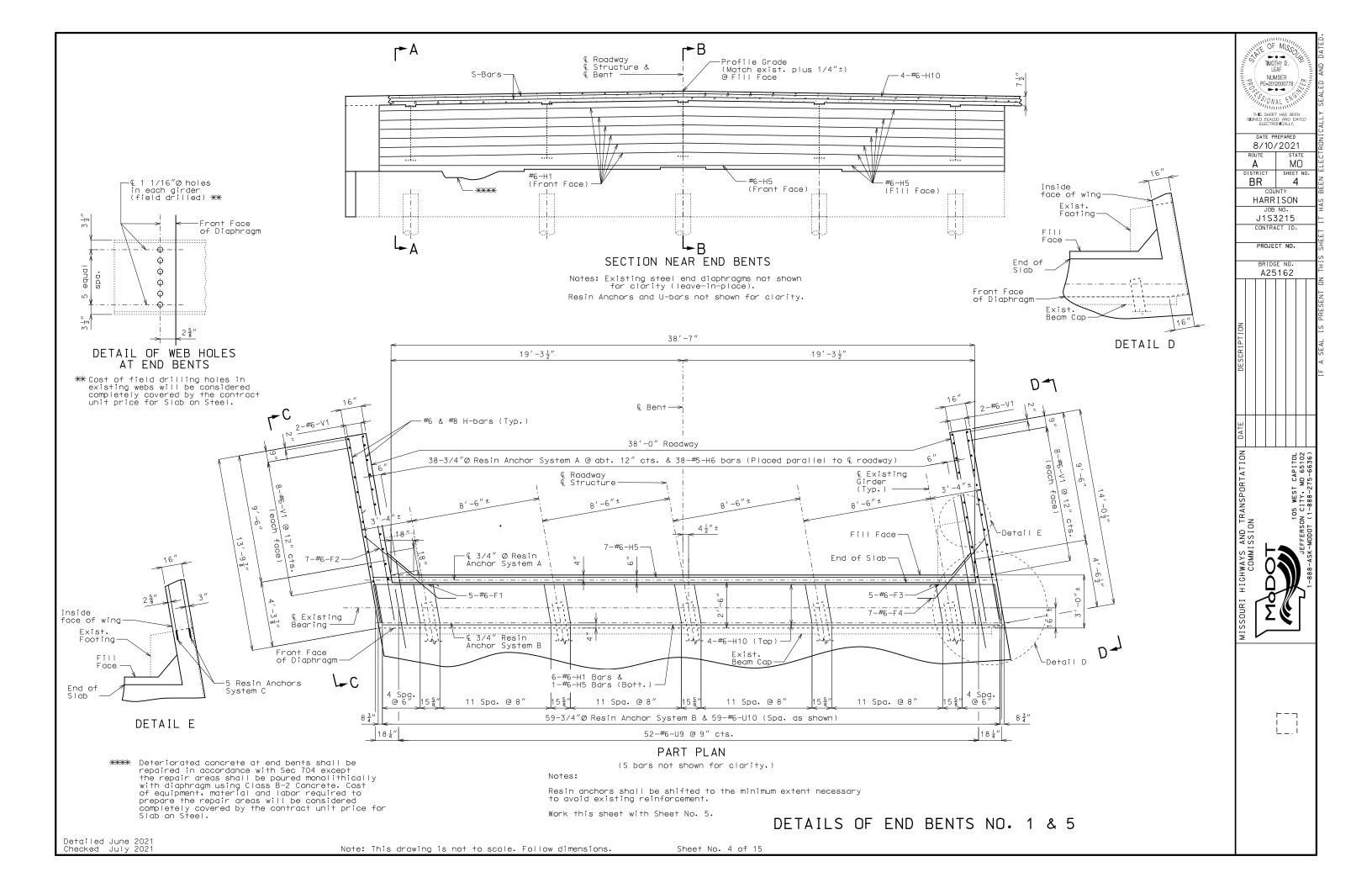
DISTRICT

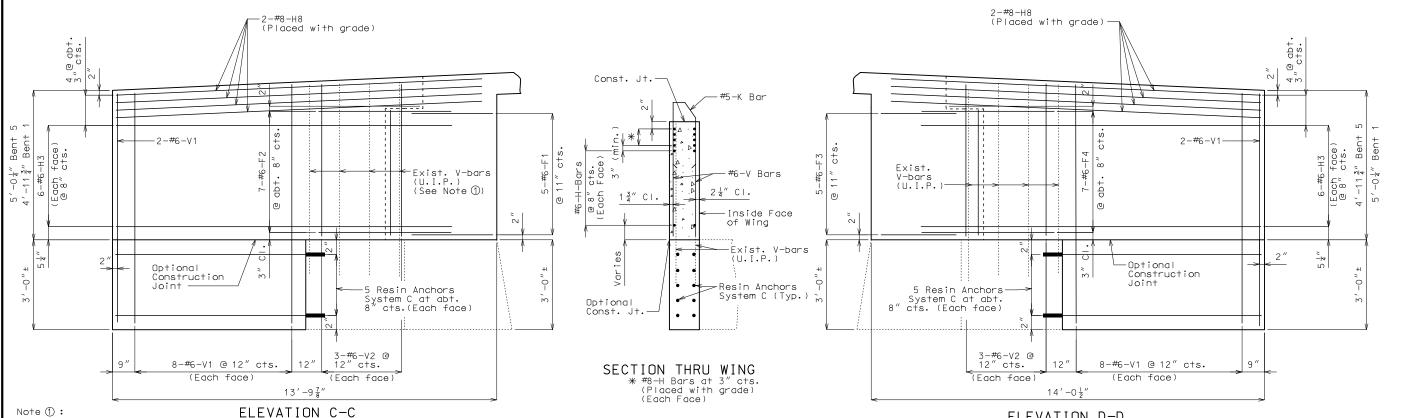
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SHEET NO

3



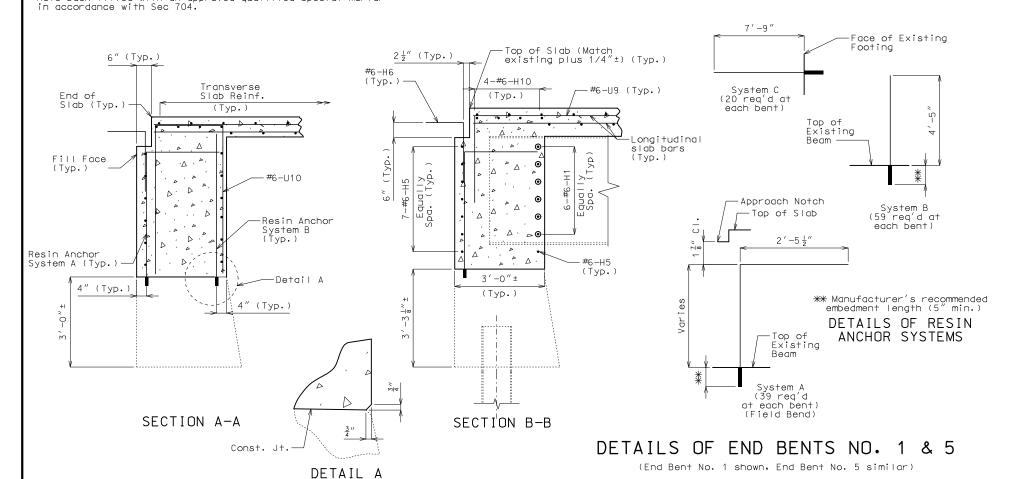


(Existing piles not shown for clarity.)

Sheet No. 5 of 15

Existing V-bars at the inside face shall be field bent so as to be encased in new wing concrete or shall be cut off 1" below top of bearing beam and the resulting hole back filled with an approved qualified special mortar

Detailed June 202



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

ELEVATION D-D

Notes:

Work this sheet with Sheet No. 4.

For details and reinforcement of Type H Barrier, see Sheets No. 12 thru 14.

All concrete and reinforcement is included in the Table of Estimated Quantities for Slab on Steel and will be considered completely covered by the contract unit price for Slab on Steel.

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".

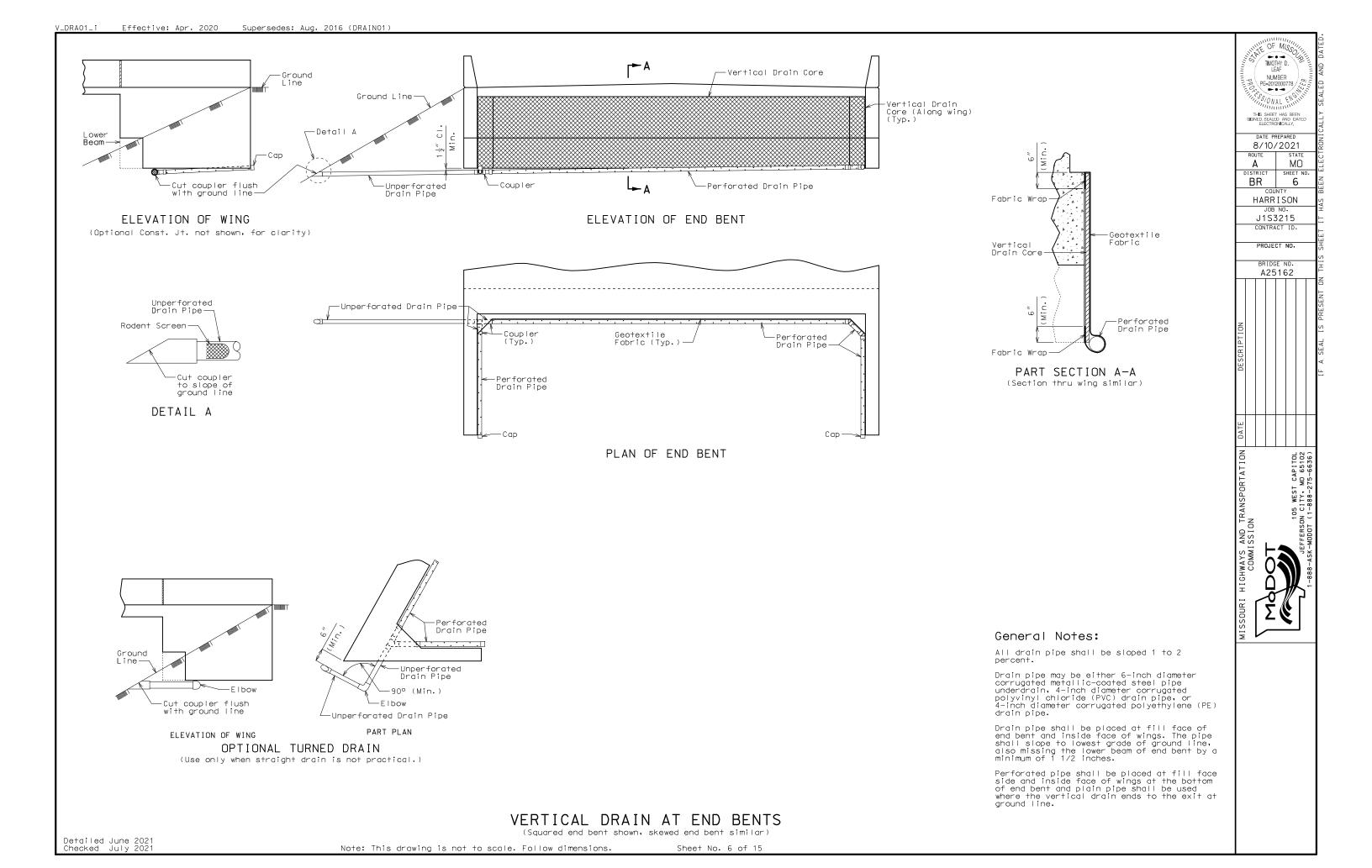
An epoxy coated #6 Grade 60 reinforcing bar shall be substituted for the $3/4\,{}''$ Ø threaded rod.

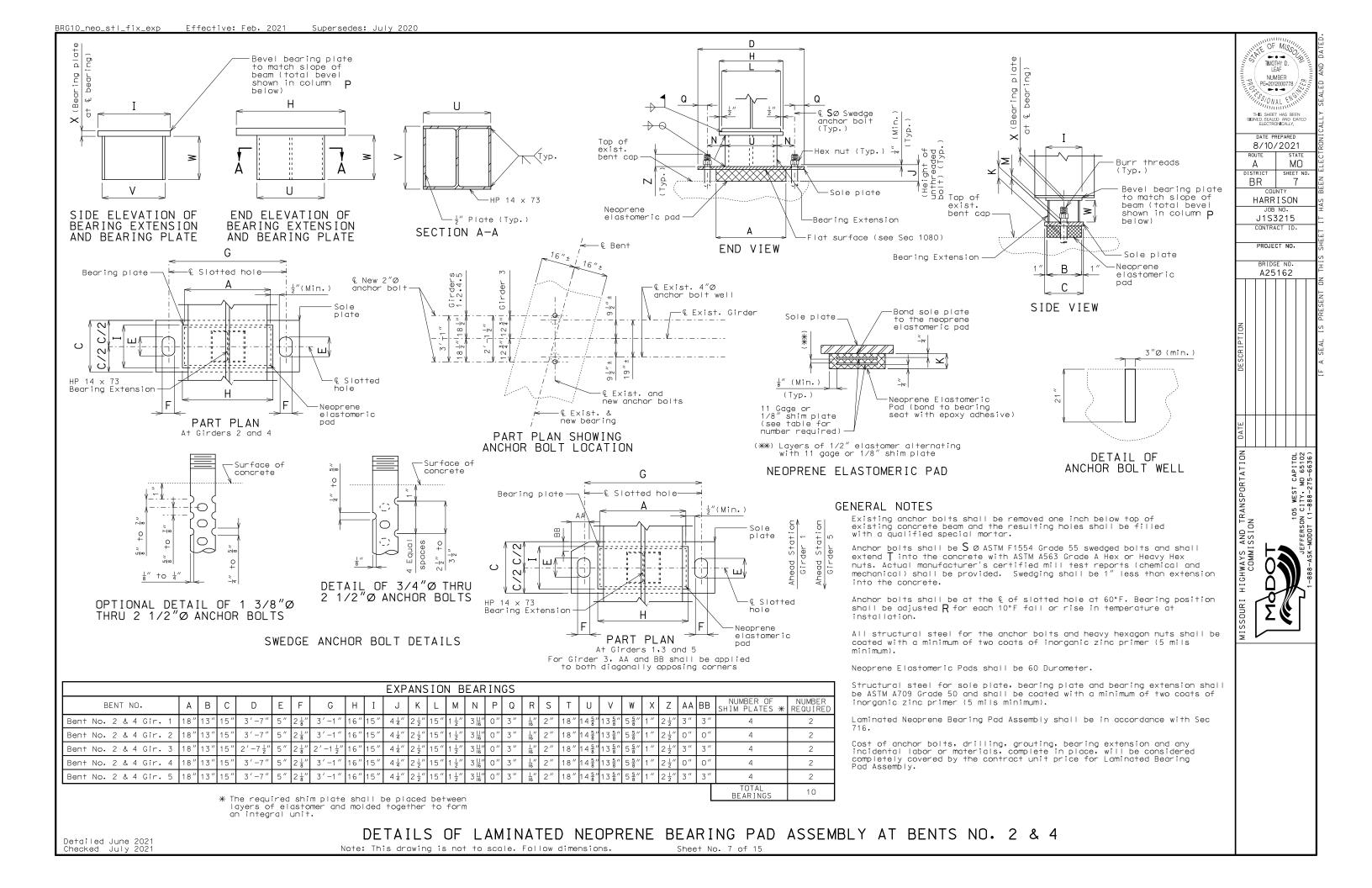
The exposed and accessible surfaces of the existing structural steel and bearings that will be encased in concrete shall be cleaned with a minimum of SSPC-SP-3 surface preparation and coated with a minimum of one coat of gray epoxy-mastic primer (non-aluminum) in accordance with Sec 1081 to produce a dry film thickness of not less than 3 mils before concrete is poured. The surface preparation and coating for 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.

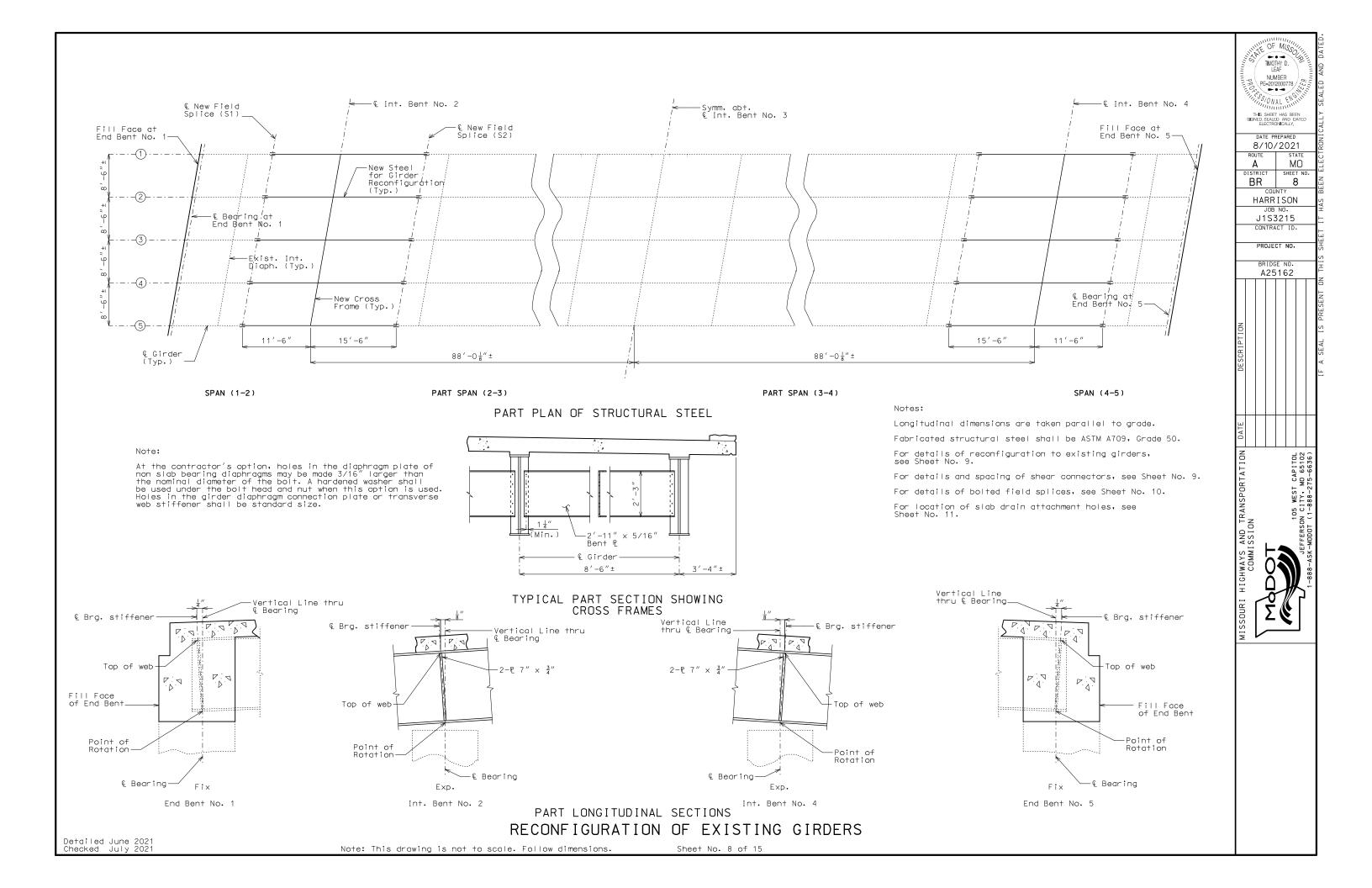
The H1 bars are segmented for ease of placement through girder web holes. The total bar length for H1 bars shown in Bill of Reinforcing Steel allows for one lap splice with a length of 3'-10". Actual bar segment lengths to be determined by contractor for ease of installing bars. The contractor may use a mechanical bar splice in lieu of a lap splice. When a mechanical bar splice is used, the actual bar segment length will be determined by the actual bar segment length meendanical bar spince is used, the actual bar segment length will be determined by the contractor to accommodate manufacturer's recommendations for installation and ease of construction. The cost of furnishing and installing the bar splices will be considered completely covered by the contract unit price for Slab on Steel. No adjustment of the quantity of reinforcing steel will be allowed for the use of mechanical bar

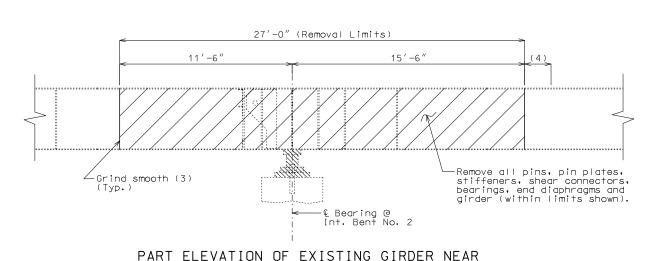
TIMOTHY D. LEAF NUMBER PE-20 THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY. 8/10/2021 MΩ Δ DISTRICT SHEET NO BR 5 HARRISON J1S3215 CONTRACT ID PROJECT NO. BRIDGE NO A25162 - CAPITOL MO 65102 WEST TY. 105 CERSON CI WAYS AND T COMMISSION

Cost of field drilling holes in existing plate girder webs will be considered completely covered by the contract unit price for Slab on Steel.









Existing web £ 42" x 3/8"--Existing web P 42" x 3/8" Existing flange -Existing flange £8" x 5/8" 27'-0" *** 11'-6" 15′-6″ _ _1 New Unit -Flange P. 8" x 7/8" ** }<---Web ₽ 42" x 7/16" Brg. Stiffener 2-R's -New Brg. Assembly Flange F € Field Splice (S2) -Existing flange £ 15" x 1" — € Field Splice (S1 Existing flange £8" x 5/8" -& Bearing @ Int. Bent No. 2

PART ELEVATION OF PROPOSED GIRDER NEAR INT. BENT NO. 2 SHOWING RECONFIGURATION

INT. BENT NO. 2 SHOWING STRUCTURAL STEEL REMOVAL

Payment for removal of pins, pin plates, end diaphragms, bearings and any other incidental material included in the girder region being removed, and any coating repair will be considered completely covered by the contract lump sum price for Reconfigure Existing Structural Steel

Any weld material remaining after removal shall be ground flush.

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 &

Required temporary support load of 22 kips per girder left of Int. Bent No. 2 (Span 1-2) and right of Int. Bent No. 4 (Span 4-5) and 31 kips per girder right of Int. Bent No. 2 (Span 2-3) and left of Int. Bent No. 4 (Span 3-4) is a service dead load without a factor of safety. It includes existing girder weight (existing or new deck weight not included) and a construction load of 50 psf. See Special Provisions.

Girder reconfiguration work shall be completed at one bent before starting removals at the other bent for each girder line.

- (3) The cut end of existing girders and any damaged areas of existing paint shall be coated with Gray Epoxy-Mastic
- (4) Any shear connectors interfering with splice plate installation shall be removed.

-Top of Slab of Slab È Girder

SECTION THRU NEW GIRDER SHOWING SHEAR CONNECTORS

(New girder shown, existing girder similar)

**** Min. Haunch = 1/2'Max. Haunch = 2'

Notes:

Longitudinal dimensions are taken parallel to grade.

All web plates shall be subject to notch toughness requirements.

All fabricated structural steel shall be ASTM A709, Grade 50.

For Details of Laminated Neoprene Bearing Pad Assembly, see Sheet No. 7.

For details of cross frames, see Sheet No. 8.

For Part Plan of Structual Steel, see Sheet No. 8.

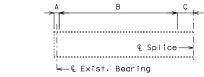
For Part Longitudinal Section at Bents No. 2 & 4, see Sheet No. 8.

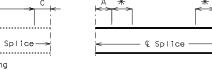
For details of bolted field splices, see Sheet No. 10.

For location for slab drain attachment holes, see Sheet No. 11.

** Indicates all flange plates subject to notch toughness requirements.

*** Add one new unit of shear connectors between existing units on each airder in Spans 2 and 3.



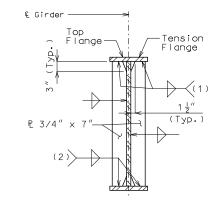


CONNECTOR SPACING FOR END BEAMS & MAIN BEAMS

ELEVATION SHOWING SHEAR ELEVATION SHOWING SHEAR CONNECTOR SPACING FOR BEARING BEAMS

TABLE SHOWING SHEAR CONNECTOR UNIT SPACING										
Beam	S.C. per unit	Α	В	С						
End Beam (Spans 1-2 & 4-5)	2	20¼"±	26 Units @ 10" cts.	21 5 " ±						
Brg. Beam (Bents 2 & 4)	3	21 5″±	*	21 5 " ±						
Main Beam (Spans 2-3 & 3-4)	2	21 5″±	31 Units @ 17" cts.	21 5/2 ±						
Total shear connectors required										

* Anchorage Shear Connectors: 5 Units @ 6" cts.



TIMOTHY D. LEAF

NUMBER PE-2012000778

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THIS SHEET HAS BEEN SIGNED, SEALED AND DATE! ELECTRONICALLY.

8/10/2021

HARRISON J1S3215

CONTRACT ID

PROJECT NO.

A25162

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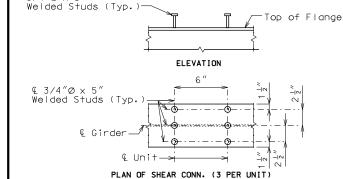
SHEET NO

9

INTERMEDIATE

WELDING DETAILS

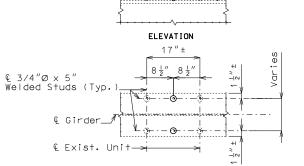
- (1) Tight fit
- (2) Grind or mill to bear.



& Stiff. PL

Cross Frames Skews Thru 209

DETAILS OF ANCHORAGE SHEAR CONNECTORS



PLAN OF SHEAR CONN. (2 PER UNIT) DETAILS OF SHEAR CONNECTORS

DETAILS OF RECONFIGURATION OF EXISTING GIRDERS

(Near Intermediate Bent No. 2 shown, near Intermediate Bent No. 4 similar by 180° rotation)

Detailed June 202

Outside Face of Exterior Girder

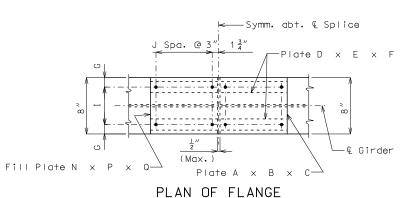
See Conn.

 $3/4''0 \times 5'$

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

op of Flange

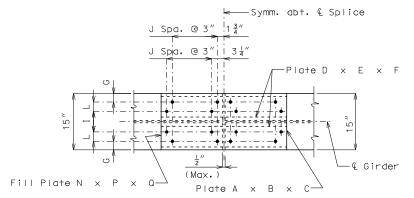
Sheet No. 9 of 15



S1 & S2 (TOP)

► Symm. abt. & Splice J Spa. @ 3" 1 3 " (Max.) Fill Plate N \times P \times Q-Plate A \times B \times

PLAN OF FLANGE S1 (BOTTOM)



TIMOTHY D. LEAF

NUMBER

8/10/2021

HARRISON

J1S3215 CONTRACT ID.

PROJECT NO. BRIDGE NO A25162

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SHEET NO

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PLAN OF FLANGE S2 (BOTTOM)

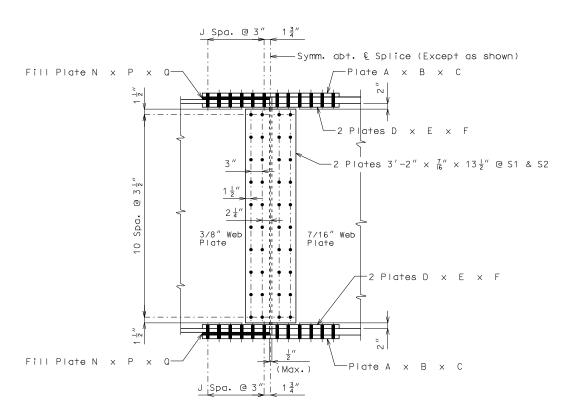


TABLE OF DIMENSIONS - FIELD SPLICE													
LOCATION	Α	В	С	D	Е	F	G	I	J	L	N	Р	Q
S1 & S2 Top	8 "	<u>3</u> "	2'-0½"	3″	<u>3</u> "	2'-0½"	1 ½"	5″	3	0"	8 "	1/4″	12"
S1 Bottom	8 "	3"	2'-0½"	3 "	1/2	2'-0½"	1 ½"	5″	3	0"	8 "	<u>3</u> "	12"
S2 Bottom	15″	1/2	4'-3½"	6 ½"	<u>5</u> "	4'-3½"	1 ½"	7 "	7	2 ½"	0"	0"	0"

DETAIL OF BOLTED FIELD SPLICE

Bolts shall be 7/8"Ø ASTM F3125 Grade A325 Type 1 in 15/16"Ø holes.

Contact surfaces shall be in accordance with Sec 1081 for surface preparation.

The flange and splice plates shall be subject to notch toughness requirements.

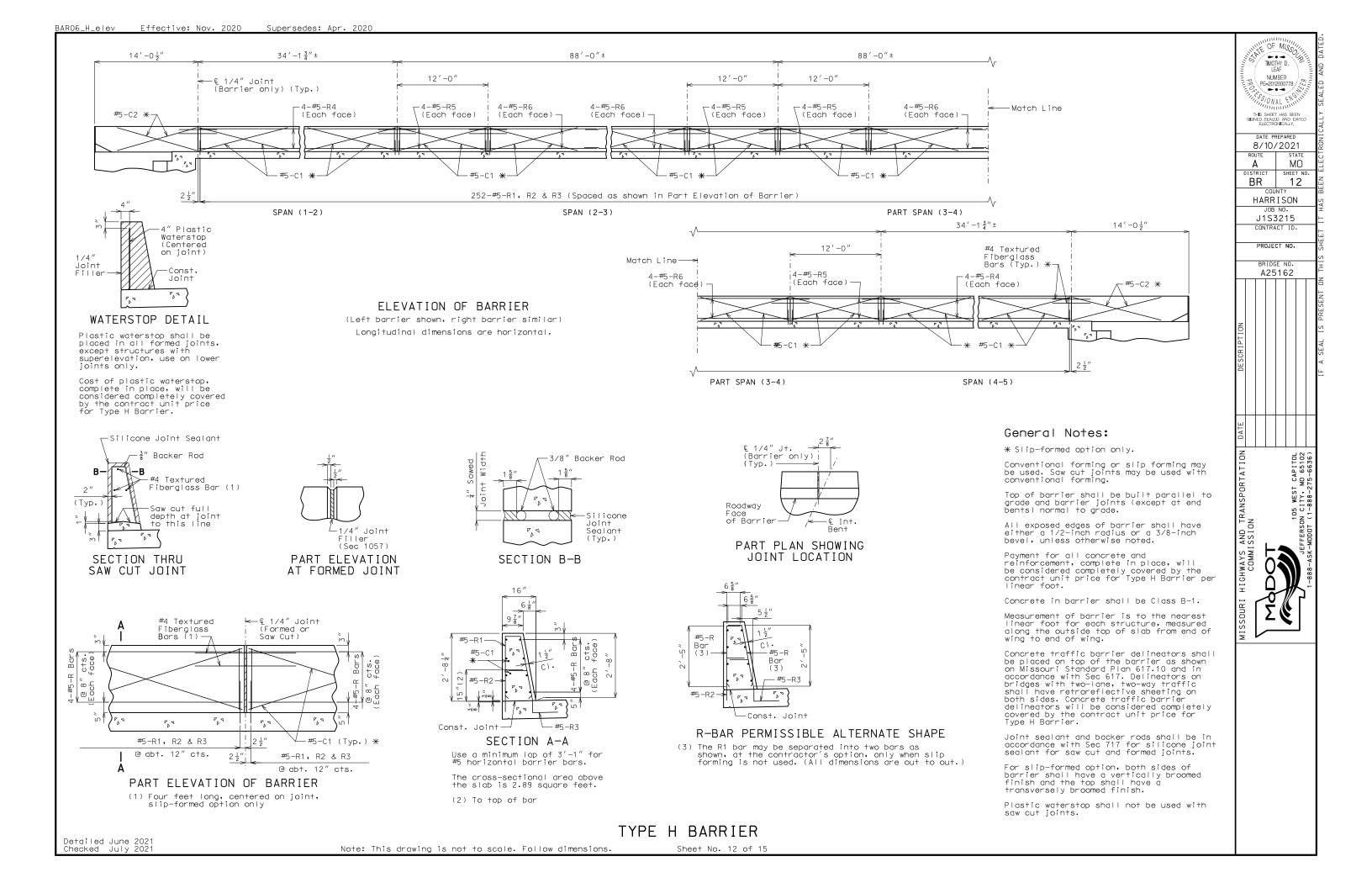
Detailed June 2027 Checked July 2027

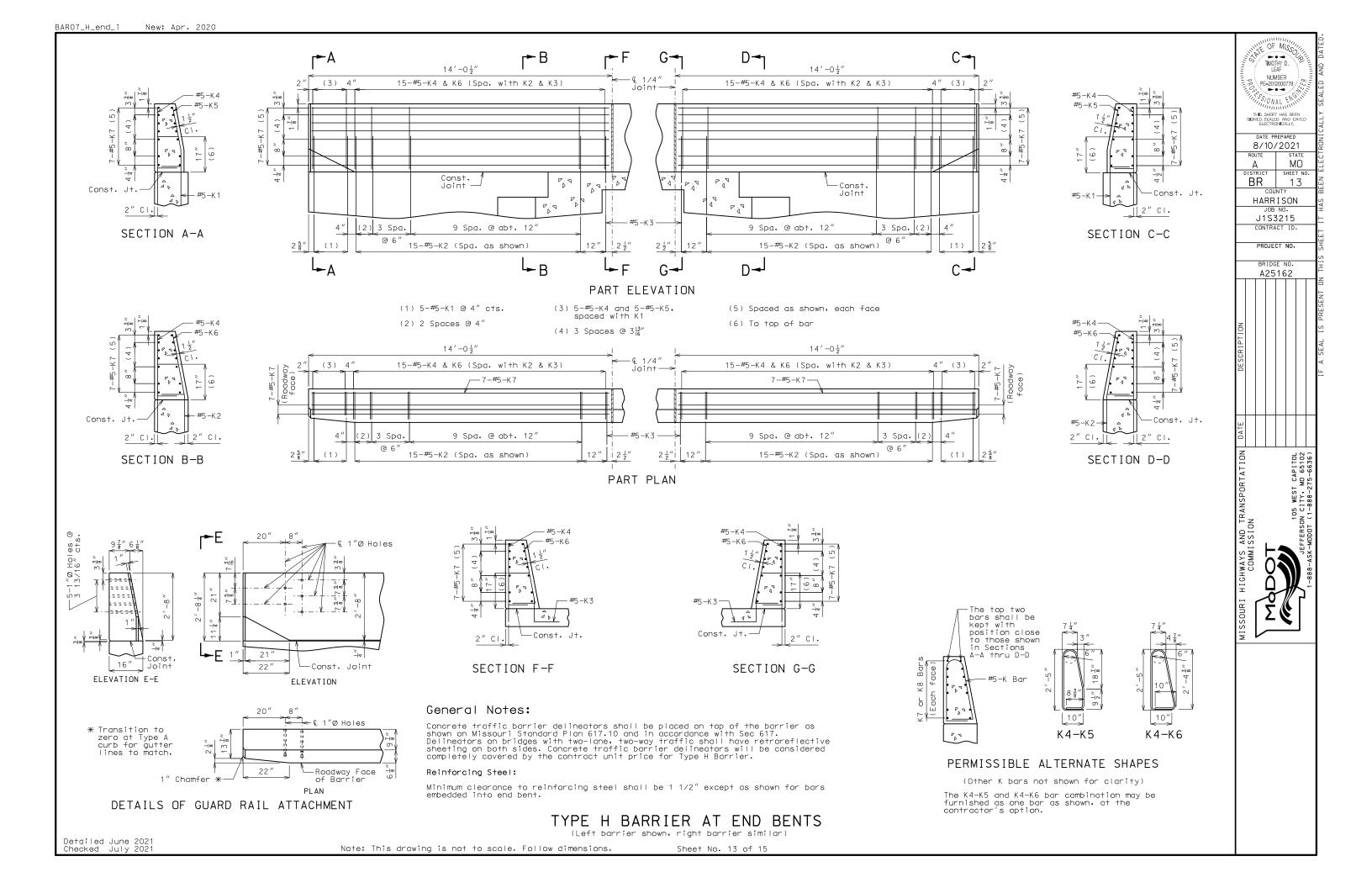
Sheet No. 11 of 15

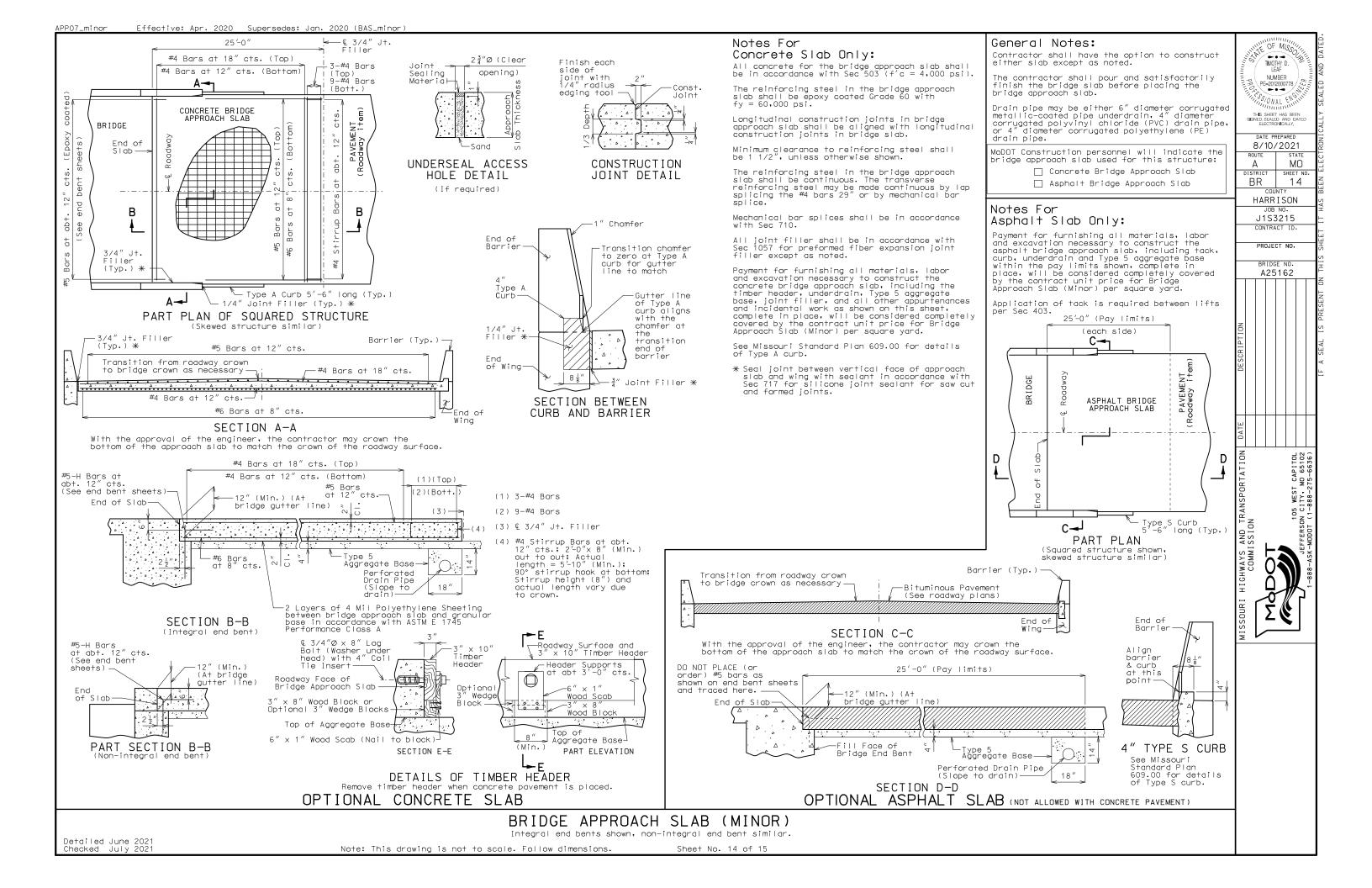
Note: This drawing is not to scale. Follow dimensions.

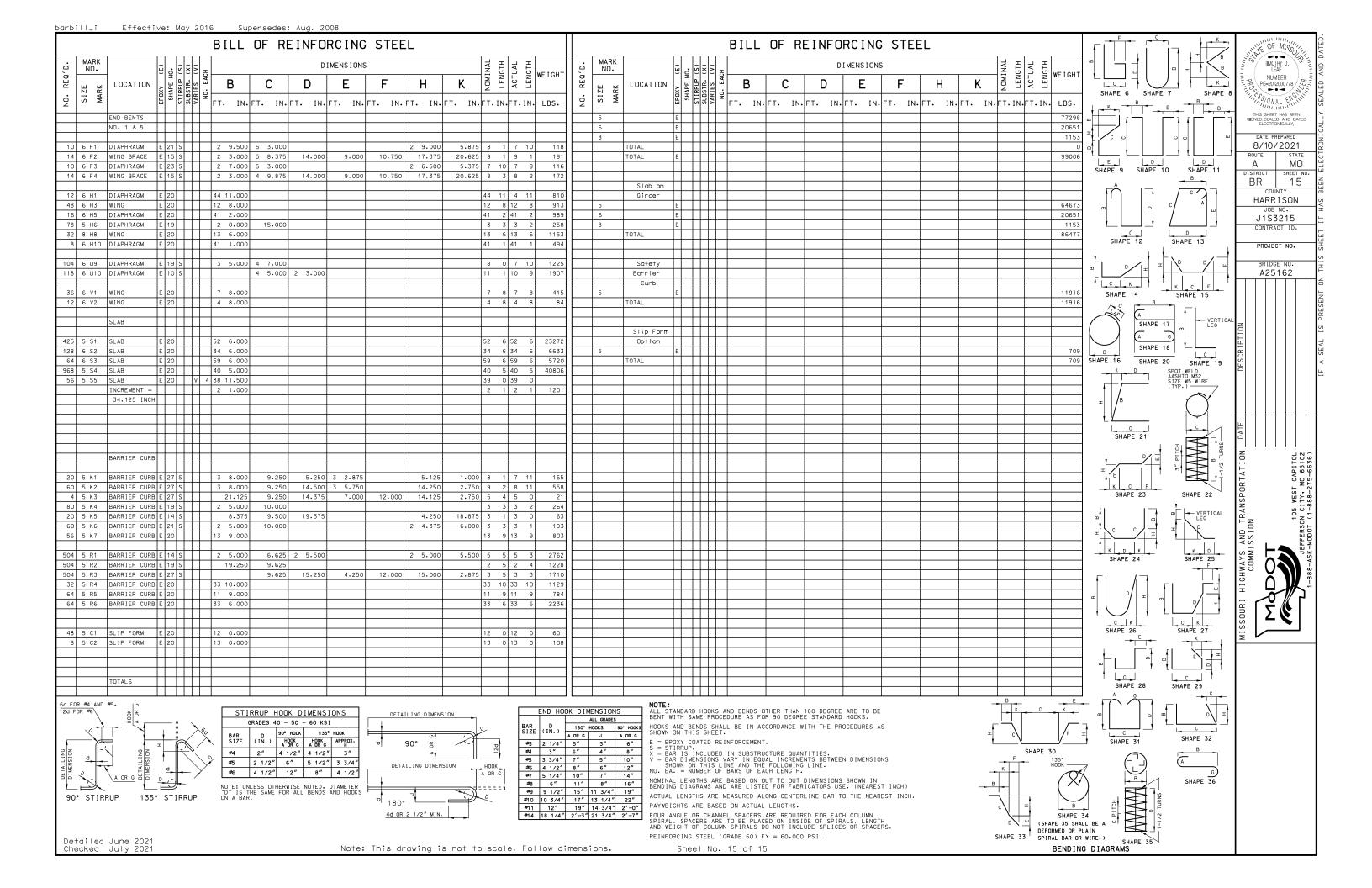
Detailed June 202

PLAN OF FRP DRAIN OPTION









DESIGN DESIGNATION

A.A.D.T. - 2022 = 564A.A.D.T. - 2042 = 784D.H.V. = 9%T = 20%V = 55 M.P.H. D = 51%

FUNCTIONAL CLASSIFICATION - MAJOR COLLECTOR

NORMAL RIGHT OF WAY

CONVENTIONAL SYMBOLS

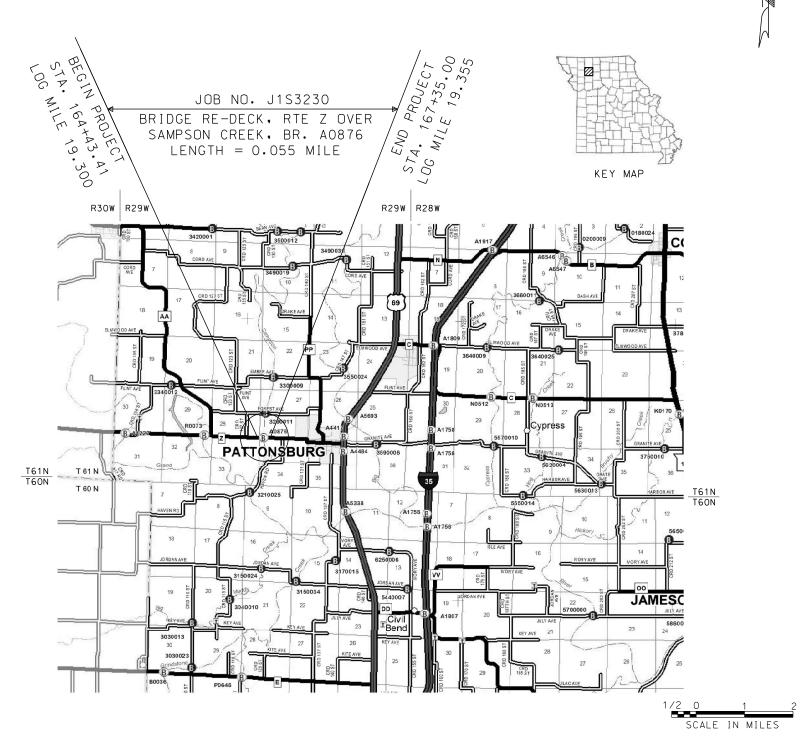
	EXISTING	NEW
BUILDINGS AND STRUCTURES CUARD RAIL CUARD CABLE CONCRETE RIGHT-OF-WAY MARKER STEEL RIGHT-OF-WAY MARKER LOCATION SURVEY MARKER	0000 0000 117	· · · · · · · · · · · · · · · · · · ·
UTILITIES FIBER OPTICS OVERHEAD CABLE TV UNDERGROUND CABLE TV OVERHEAD TELEPHONE UNDERGROUND TELEPHONE OVERHEAD POWER UNDERGROUND POWER SANITARY SEWER STORM SEWER GAS WATER	-F0- -DTV- -UTV- - OT- - UT- - OE- - UE- - S- - SS- - G- - W-	-F0- -0TV- -0T- -0E- -0E- -VE- -S- -SS- -6-
MANHOLE	HYD)
FIRE HYDRANT	w C	
WATER VALVE	WM _	
WATER METER		
DROP INLET		J
DITCH BLOCK	SIGN	-
GROUND MOUNTED SIGN	3101	-
LIGHT POLE]
H-FRAME POWER POLE	_H	
TELEPHONE PEDESTAL FENCE CHAIN LINK WOVEN WIRE GATE POST	PED \(\triangle \) \(\triang	
BENCHMARK	8)

NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

PLANS FOR PROPOSED STATE HIGHWAY

DAVIESS COUNTY



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

INDEX OF SHEETS

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QUANTITIES(QU) (2 SHEETS)	3
PLAN-PROFILE (PP)	4
COORDINATE POINTS (CP)	5
TRAFFIC CONTROL (TC)	6-9
EROSION CONTROL (EC)	10-11
PAVEMENT MARKING (PM)	12
CULVERT SECTION (CS)	13-14
BRIDGE DRAWINGS (B)	
A0876	1 –7
CROSS-SECTIONS (XS)	1 –5

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NICHOLAS THOMAS

NUMBER

LENGTH OF PROJECT

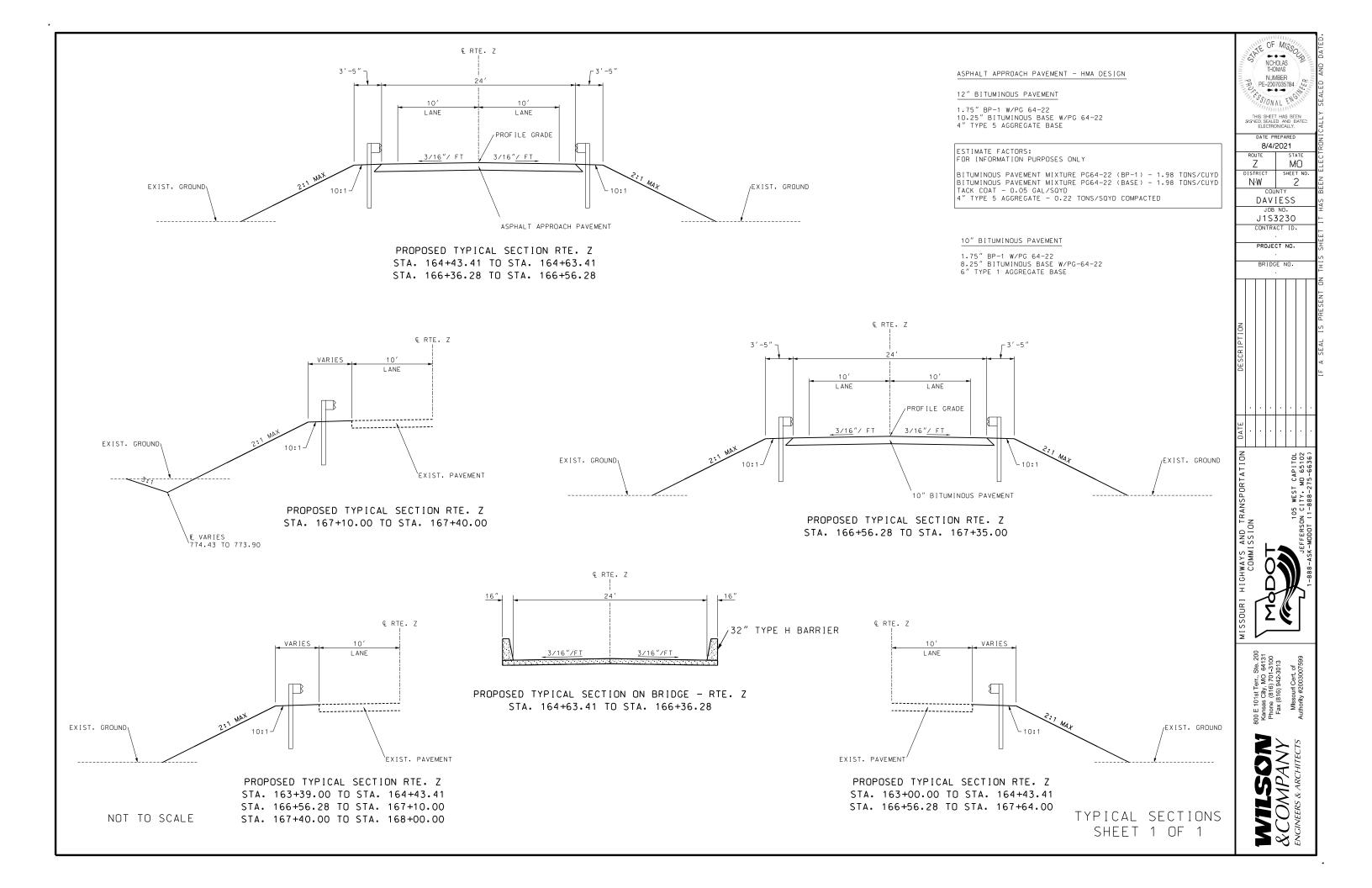
STA. 164+43.41 BEGINNING OF PROJECT STA. 167+35.00 END OF PROJECT 291.59 FEET APPARENT LENGTH

EQUATIONS AND EXCEPTIONS:

0.48 ACRES

TOTAL CORRECTIONS 0.00 FEET NET LENGTH OF PROJECT 291.59 FEET STATE LENGTH 0.055 MILE FOR INFORMATION ONLY ESTIMATED DISTURBED ACRES

800 E 101st Terr.. Ste. 200 Kansas City, MO 64131 Phone (816) 701-3100 Fax (816) 942-3013



				REMOVAL OF	IMPR	OVEMENTS	
SHEET	STA.	STA.	LOCATION	ITEM	UNITS	QUANTITY	REMARKS
4	158+84.83	159+14.98	RTE. Z. RT	18" CMP	LF	30	
4	164+43.41	164+63.41	RTE. Z	PAVEMENT	SY	48	
4	164+43.41		RTE. Z	SAW CUT	LF	22	
4		VARIES	RTE. Z	SIGNS	EΑ	4	OBJECT MARKERS ON BOTH APPROACHES
4	166+00.00	166+66.00	RTE. Z. RT	18" CMP	LF	66	
4	166+36.28	167+35.00	RTE. Z	PAVEMENT	SY	234	
4	167+00.00		RTE. Z	18" CMP	LF	64	
4	167+04.00	167+45.55	RTE. Z	24" PVC	LF	78	
4	167+35.00		RTE. Z	SAW CUT	LF	21	
					TOTAL	= 1 LUMP SUM	

				PERMANE	ENT EROSION CO	INTROL		
				FURNISHING	PLACING	PERMANENT	ROCK LINING	
				TYPE 2 ROCK	TYPE 2 ROCK	EROSION CONTROL	FOR CULVERT	
				BLANKET	BLANKET	GEOTEXTILE	OUTLET	
SHEET	STA.	STA.	LOCATION	(CY)	(CY)	(SY)	(CY)	REMARKS
12	159+35.38		RTE. Z	16	16			BOTH LT & RT
12	164+64.38	165+26,10	RTE. Z	79	79	108		
12	165+73.60	166+35.27	RTE. Z	117	117	165		
12	165+83.20	166+03.20	RTE. Z				15	
12	167+00.00		RTE. Z				15	
			TOTALS	212	212	273	30	
			PAY TOTALS	212	212	273	30	

CONTRACTOR FURNISHED SURVEYING AND STAKING

TOTAL = 1 LUMP SUM

MOBILIZATION

TOTAL = 1 LUMP SUM

	PAVEMENT SUMMARY											
					1.75" BP-1	8.25" BASE	10.25" BASE	4" TYPE 5	6" TYPE 1			
					(PG 64-22)	(PG 64-22)	(PG 64-22)	AGGR. BASE	AGGR. BASE	TACK COAT		
SHEET	STA.	STA.	WIDTH(FT)	LOCATION	(TONS)	(TONS)	(TONS)	(SY)	(SY)	(GAL)		
4	164+43.4	164+63.4	VARIES	RTE. Z	5		28	54		13.5		
4	166+36.3	166+56.3	24	RTE. Z	5		28	54		13.5		
4	166+56.3	167+35.0	VARIES	RTE. Z	20	97			225	56.5		
				TOTALS	30	97	56	108	225	83.5		
				PAY TOTALS	30	97	56	108	225	84.0		

			EARTHWORK	K	
				COMPACTING	EMB IN
				EMB	PLACE
SHEET	STA.	STA.	LOCATION	(CY)	(CY)
4	158+82.06	159+38.53	RTE. Z	13	88
4	163+00.00	164+63.41	RTE. Z		288
4	166+36.28	168+00.00	RTE. Z	158	351
			TOTALS	171	727
1			PAY TOTALS	171	727

		GRAVEL (A)	OR CRUSHED	STONE (B)	
			AREA	6 INCH THICK	
SHEET	STA.	LOCATION	(SF)	(TONS)	REMARKS
4	159+12.50	RTE. Z	701	26	ENTRANCE LT
4	159+10.00	RTE. Z	1571	58	ENTRANCE RT
			TOTAL	84	
			PAY TOTAL	84	

	GROUP 'C' PIPE												
	24 INCH 30 INCH PIPE PIPE CLASS 3 GROUP C GROUP C EXCAVATION												
SHEET	STA.	STA.	LOCATION	(LF)	(LF)	(CY)	REMARKS						
14	158+83.2	159+36.1	RTE. Z	52		12	ENTRANCE PIPE						
14	159+09.5	159+35.5	RTE. Z		26	2	ENTRANCE PIPE						
	TOTALS 52 26 14												
			PAY TOTALS	52	26	14							

	GROUP 'B' PIPE												
				42 INCH	42 INCH								
				PIPE	F.E.S.	AUTO FLOODGATE	CLASS 3						
				GROUP B	GROUP B	(TYPE 2)	EXCAVATION						
SHEET	STA.	STA.	LOCATION	(LF)	(EA)	(EA)	(CY)	REMARKS					
14	166+96.40	167+46.90	RTE. Z	72	2		175	CROSS ROAD PIPE					
14	166+03.20	166+65.94	RTE. Z	63	1	1	130	BERM PIPE					
			TOTALS	135	3	1	305						
			PAY TOTALS	135	3	1	305						

	SEEDI	NG - COOI	_ SEASON MIX	TURE							
	SEEDING										
SHEET	STA.	STA.	LOCATION	(AC)							
12	158+78.12	158+42.11	RTE. Z	0.01							
12	163+00.00	164+63.41	RTE. Z	0.13							
12	166+36.28	168+00.00	RTE. Z	0.15							
	TOTAL 0.29										
			PAY TOTAL	1.00							

			PAVEME	NT MARKING	
SHEET	STATION	STATION	LOCATION	4 IN. YELLOW STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS (LF)	REMARKS
13	164+40	167+40	RTE. Z	300	WB SOLID YELLOW
13	164+40	167+40	RTE. Z	75	EB INTERMITTENT YELLOW
			TOTAL	375	
			PAY TOTAL	375	

				TEMF	PORARY EROSION	N CONTROL		
SHEET	STA.	STA.	LOCATION	SIDE	SILT FENCE	TYPE C BERM	ROCK DITCH CHECK (LF)	SEDIMENT REMOVAL (CY)
11	158+76.4		RTE. Z	RT	35			1
11	159+24.8		RTE. Z	LT	40			1
11	159+33.5		RTE. Z	RT	40		10	1
11	162+98.0	165+26.0	RTE. Z	RT	230			3
11	163+34.4	164+26.0	RTE. Z	LT	215			3
11	165+26.6		RTE. Z			65		
11	165+73.1		RTE. Z			65		
11	165+75.0	167+66.5	RTE. Z	RT	275			3
11	165+75.0	168+01.8	RTE. Z	LT	250			3
11	165+97.3		RTE. Z	RT			10	1
11	167+00.0		RTE. Z	RT			10	1
1			TO.	TALS	1085	130	30	17
1		Г	PAY -	TOTALS	1085	130	30	17

	GUARDRA I L											
					MGS	TYPE A CRASHWORTHY END	MGS BRIDGE APPROACH TRANSITION SECTION					
SHEET	LOCATION	STATION	STATION	SIDE	GUARDRAIL (LF)	TERMINALS (MASH)	(REGULAR/NO CURB) (EA)					
4	RTE Z		164+66.08		50.0	· 1	1					
4	RTE. Z	163+64.96	164+66.08	LT	12.5	1	1					
4	RTE. Z	166+33.61	167+34.72	RT	12.5	1	1					
4	RTE. Z	166+33.61	167+84.68	LT	50.0	1	1					
			TOTAL	S	125	4	4					
			PAY TOT	ALS	125	4	4					

CLEARING AND GRUBBING								
				QUANTITY				
SHEET	STATION	STATION	LOCATION	(AC)				
4	158+78.12	159+42.11	RTE. Z	0.07				
4	163+00.00	165+26.10	RTE. Z	0.20				
4	165+73.60	168+00.00	RTE. Z	0.21				
			TOTAL	0.48				
			PAY TOTAL	0.50				

SUMMARY OF QUANTITIES
SHEET 1 OF 2

TRANSPORTATION	DATE	DESCRIPTION					С		THUNKE
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SON CITY. MO 65102						נ	ATE O T NO		EN DATE
(1-888-275-6636)							٥.		WILLIAM CONTRACTOR

Kansas City, MO 64131
Phone (816) 701-3100
Fax (816) 942-3013
Missouri Cert. of



								EFFECTIVE: 04-01-20
TOTAL QTY	TOTAL SIGN			QTY	TOTAL SIGN			
SIZE AREA QTY AREA RELO	CRELOC NUM.		SIZE AREA QT	Y TOTAL RELO	CRELOC NUM.			
SIGN IN SQ.FT. EACH SQ.FT. EACH	SQ.FT.		SIGN IN SQ.FT EAC	CH SQ.FT. EACH	I SQ.FT.		I ITEM TOTAL	_
WARNING SIGNS	•	DESCRIPTION	GU	IDE SIGNS		DESCRIPTION	NUMBER QTY	DESCRIPTION
WO1-1L 48X48 16.00		TURN (SYMBOL LEFT ARROW)	E05-1 36X48 12.00			GORE EXIT	6122008	IMPACT ATTENUATOR 40 MPH (SAND BARRELS)
WO1-1R 48X48 16.00		TURN (SYMBOL RIGHT ARROW)	E05-2 48X36 12.00			EXIT OPEN	6122009	IMPACT ATTENUATOR 45 MPH (SAND BARRELS)
WO1-2L 48X48 16.00		CURVE (SYMBOL LEFT ARROW)	E05-2a 48X36 12.00			EXIT CLOSED	6122010	IMPACT ATTENUATOR 50 MPH (SAND BARRELS)
WO1-2R 48X48 16.00		CURVE (SYMBOL RIGHT ARROW)	G020-1 60X24 10.00			ROAD WORK NEXT XX MILES	6122012	IMPACT ATTENUATOR 55 MPH (SAND BARRELS)
WO1-3L 48X48 16.00		REVERSE TURN (SYMBOL LEFT ARROW)	GO20-2 48X24 8.00			END ROAD WORK	6122014	IMPACT ATTENUATOR 60 MPH (SAND BARRELS)
WO1-3R 48X48 16.00		REVERSE TURN (SYMBOL RIGHT ARROW)	GO20-4 36X18 4.50			PILOT CAR FOLLOW ME	6122017	IMPACT ATTENUATOR 65 MPH (SAND BARRELS)
WO1-4L 48X48 16.00		REVERSE CURVE (SYMBOL LEFT ARROW)	GO20-4a 42X30 8.75			PILOT CAR IN USE WAIT & FOLLOW		IMPACT ATTENUATOR 70 MPH (SAND BARRELS)
WO1-4R 48X48 16.00		REVERSE CURVE (SYMBOL RIGHT ARROW)	GO20-4a 18X12 1.50			PILOT CAR IN USE WAIT & FOLLOW		REPLACEMENT SAND BARREL
WO1-4bL 48X48 16.00		DOUBLE ARROW REVERSE CURVE (SYMBOL LT ARROWS)	G020-5aP 36X24 6.00			WORK ZONE (PLAQUE)	6122030	IMPACT ATTENUATOR (RELOCATION)
WO1-4bR 48X48 16.00		DOUBLE ARROW REVERSE CURVE (SYMBOL RT ARROWS)		6.00	52	END DETOUR	6123000A	TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA
WO1-4cL 48X48 16.00		TRIPLE ARROW REVERSE CURVE (SYMBOL LT ARROWS)	MD4-9L 48X36 12.00			DETOUR (LEFT ARROW)	6161008 4	ADVANCED WARNING RAIL SYSTEM
WO1-4cR 48X48 16.00		TRIPLE ARROW REVERSE CURVE (SYMBOL RT ARROWS)	MD4-9R 48X36 12.00			DETOUR (RIGHT ARROW)	6161012	BUOYS (BOATS KEEP OUT)
WO1-6 60X30 12.50		HORIZONTAL ARROW (SYMBOL)	MO4-9P 48X12 4.00			STREET NAME (PLAQUE)	6161013	BUOYS (NO WAKE)
WO1-6a 72X36 18.00		HORIZ. ARROW (SYMBOL ON PERMANENT BARRICADE)	MD4-10L 48X18 6.00			DETOUR (ARROW LEFT)	6161014	SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)
WO1-7 60X30 12.50		DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)	MD4-10R 48X18 6.00			DETOUR (ARROW RIGHT)	6161025	CHANNELIZER (TRIM LINE)
WO1-7a 72X36 18.00		DOUBLE HEAD HORIZ, ARROW (SYMBOL ON PERM, BARR.)		REGULATOR	<u>Y SIGNS</u>	1	6161030 12	TYPE III MOVEABLE BARRICADE
WO1-8 18X24 3.00		CHEVRON (SYMBOL)	R1-1 48X48 13.25			STOP	6161033	DIRECTION INDICATOR BARRICADE
W01-8a 30X36 7.50		CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)	R1-2 48TRI 6.93			YIELD TRANSPORTED AND ADDRESS OF THE PROPERTY	6161040	FLASHING ARROW PANEL
W03-1 48X48 16.00		STOP AHEAD (SYMBOL)	R1-2a 36X36 9.00			TO ONCOMING TRAFFIC (PLAQUE)	6161047	TYPE III OBJECT MARKER
W03-2 48X48 16.00		YIELD AHEAD (SYMBOL)	R1-3P 30X12 2.50			ALL WAY (PLAQUE)	6161051	WARNING LIGHT, TYPE A
W03-3 48X48 16.00		SIGNAL AHEAD (SYMBOL)	R2-1 36X48 12.00			SPEED LIMIT XX	6161052	WARNING LIGHT, TYPE B
W03-4 48X48 16.00		BE PREPARED TO STOP	R3-1 48X48 16.00			NO RIGHT TURN (SYMBOL)	6161053	WARNING LIGHT, TYPE C
WO3-5 48X48 16.00		SPEED LIMIT AHEAD	R3-2 48X48 16.00			NO LEFT TURN (SYMBOL)	6161055	SEQUENTIAL FLASHING WARNING LIGHT
W04-1L 48X48 16.00		MERGE (SYMBOL FROM LEFT)	R3-3 36X36 9.00			NO TURNS	6161070	TUBULAR MARKER
W04-1R 48X48 16.00		MERGE (SYMBOL FROM RIGHT)	R3-4 48X48 16.00			NO U-TURN (SYMBOL)	6161095	RADAR SPEED ADVISORY SYSTEM
W04-1aL 48X48 16.00		MERGE (ARROW SYMBOL)	R3-7L 30X30 6.25			LEFT LANE MUST TURN LEFT	1	CHANGEABLE MESSAGE SIGN.
W04-1aR 48X48 16.00		MERGE (ARROW SYMBOL)	R3-7R 30X30 6.25 R4-1 36X48 12.00			RIGHT LANE MUST TURN RIGHT	6161096	COMMISSION FURNISHED/RETAINED
W05-1 48X48 16.00		ROAD/BRIDGE/RAMP NARROWS				DO NOT PASS	1	CHANGEABLE MESSAGE SIGN W/O COMM.
W05-3 48X48 16.00		ONE LANE BRIDGE	R4-2 36X48 12.00			PASS WITH CARE	6161098A	INTERFACE, CONTRACTOR FURNISHED/RETAINED
W05-5 48X48 16.00		NARROW LANES	R4-8a 36X48 12.00			KEEP LEFT (HORIZONTAL ARROW)	11	CHANGEABLE MESSAGE SIGN WITH COMM.
W06-1 48X48 16.00		DIVIDED HIGHWAY (SYMBOL)	R4-7a 36X48 12.00			KEEP RIGHT (HORIZONTAL ARROW)	6161099	INTERFACE, CONTRACTOR FURNISHED/RETAINED
W06-2 48X48 16.00		DIVIDED HIGHWAY END (SYMBOL)	R5-1 30X30 6.25			DO NOT ENTER	6162000A	WORK ZONE TRAFFIC SIGNAL SYSTEM
W06-3 48X48 16.00		TWO WAY TRAFFIC (SYMBOL)	R5-1a 36X24 6.00			WRONG WAY	6162002	TEMPORARY LONG-TERM RUMBLE STRIPS
W07-3a 30X24 5.00		NEXT XX MILES (PLAQUE)	R6-1L 54X18 6.75			ONE WAY ARROW (LEFT)	6162004	TEMPORARY SHORT-TERM RUMBLE STRIPS
WO8-1 48X48 16.00		BUMP	R6-1R 54X18 6.75			ONE WAY ARROW (RIGHT)		TEMPORARY TRAFFIC BARRIER
W08-2 48X48 16.00		DIP	R6-2L 24X30 5.00			ONE WAY (LEFT)	6173600D	CONTRACTOR FURNISHED/RETAINED
WO8-3 48X48 16.00		PAVEMENT ENDS	R6-2R 24X30 5.00			ONE WAY (RIGHT)		TEMPORARY TRAFFIC BARRIER
W08-4 48X48 16.00		SOFT SHOULDER	R9-9 24X12 2.00			SIDEWALK CLOSED	6173602B	CONTRACTOR FURNISHED/COMMISSION RETAINED
WO8-5 48X48 16.00		SLIPPERY WHEN WET (SYMBOL)	41			SIDEWALK CLOSED AHEAD,	6174000A	TEMP. TRAFFIC BARRIER HEIGHT TRANSITION
W08-6 48X48 16.00		TRUCK CROSSING (WITH FLAGS)	R9-11L 24X18 3.00			(ARROW LEFT) CROSS HERE	6175010A	RELOCATING TEMPORARY TRAFFIC BARRIER
W08-6c 48X48 16.00		TRUCK ENTRANCE	11			SIDEWALK CLOSED AHEAD,		TEMPORARY TRAFFIC BARRIER
W08-7 36X36 9.00		LOOSE GRAVEL	R9-11R 24X18 3.00			(ARROW RIGHT) CROSS HERE	6176000B	COMMISSION FURNISHED/RETAINED
W08-7a 36X36 9.00		FRESH OIL/LOOSE GRAVEL	R10-6 24X36 6.00	20.00		STOP HERE ON RED (45° ARROW)	1	TEMP. TRAFFIC BARRIER HEIGHT TRANSITION
W08-9 48X48 16.00		LOW SHOULDER	R11-2 48X30 10.00 2			ROAD CLOSED	6177000B	COMMISSION FURNISHED/RETAINED
W08-11 48X48 16.00		UNEVEN LANES		25.00	2281	ROAD CLOSED XX MILES AHEAD	6208064A	TEMPORARY RAISED PAVEMENT MARKER
W08-12 48X48 16.00		NO CENTER LINE	R11-3a 60X30 12.50	10.50	5500	LOCAL TRAFFIC ONLY	9029400	TEMPORARY TRAFFIC SIGNALS
W08-15 48X48 16.00		GROOVED PAVEMENT	R11-4 60X30 12.50 1	12.50	5582	ROAD CLOSED TO THRU TRAFFIC	9029401	TEMPORARY TRAFFIC SIGNALS AND LIGHTING
W08-15P 30X24 5.00	+ + + + + + + + + + + + + + + + + + + +	MOTORCYCLE (PLAQUE)	CONST-3A 60X48 20.00			FINE SIGN	$H \longrightarrow H$	
W08-17 48X48 16.00		SHOULDER DROP-OFF (SYMBOL)	CONST-3X 56X12 4.67	MICCELLAN	FOLIC CTONC	SPEEDING/PASSING (PLATE)	 	<u> </u>
W08-17P 30X24 5.00	+ + + -	SHOULDER DROP-OFF (PLAQUE)	CONST E 48VZC 40 00	MISCELLAN	EOUS SIGNS	DOINT OF PRESENCE		
W10-1 42RND, 9.62	+ + + -	RAILROAD CROSSING	CONST-5 48X36 12.00		+	POINT OF PRESENCE	+	
W012-1 24X24 4.00		DOUBLE DOWN ARROW (SYMBOL)	CONST-7 48834 8 00		+ + + -	POINT OF PRESENCE	1	
W012-2 48X48 16.00 W012-2X 24X18 3.00	+ + + + + + + + + + + + + + + + + + + +	LOW CLEARANCE (SYMBOL)	CONST-7 48X24 8.00 CONST-7 72X36 18.00		+	RATE OUR WORK ZONE	 	
	+ + + + + + + + + + + + + + + + + + + +	LOW CLEARANCE (PLAQUE)			+	RATE OUR WORK ZONE	 	
W012-2a 84X24 14.00 W012-4 120X60 50.00	+ + + -	OVERHEAD LOW CLEARANCE (FEET AND INCHES)	CONST-8 48X36 12.00 CONST-5P 60X8 3.33		+	WORK ZONE NO PHONE ZONE	-	
		LOW CLEARANCE XX FT XX IN XX MILES AHEAD	1	105.0	504	DETOUD ACCEMBLY	-	
W012-5 120X60 50.00		WIDTH RESTRICTION XX FT XX IN XX MILES AHEAD	SP-50A 36X60 15.00 7 SP-50B 36X60 15.00 7			DETOUR ASSEMBLY	-	
W013-1 30X30 6.25 W016-2 30X24 5.00	+ + -	ADVISORY SPEED (PLAQUE)	SP-50B 36X60 15.00 7 SP-50C 36X60 15.00 12			DETOUR ASSEMBLY	1	
		XXX FEET (PLAQUE)				DETOUR ASSEMBLY	1	
W016-3 30X24 5.00		X MILE (PLAQUE) ROAD/BRIDGE/RAMP WORK AHEAD	SP-50D 36X60 15.00 3			DETOUR ASSEMBLY	-	
W020-1 48X48 16.00	10	DETOUR AHEAD	SP-50E 36X60 15.00 3	45.0	1 50E	DETOUR ASSEMBLY	-	
W020-2 48X48 16.00 6 96.00			W020-34 48V48 46 00 0	32 00	1 204	POAD CLOSED FOO ET	-	
W020-3 48X48 16.00 2 32.00	20	ROAD CLOSED AHEAD	W020-3A 48X48 16.00 2			ROAD CLOSED 500 FT	J	
W020-4 48X48 16.00	+ + -	ONE LANE ROAD AHEAD	616-10.05	TOTAL				
W020-5 48X48 16.00		RIGHT/CENTER/LEFT LANE CLOSED AHEAD	CONSTRUCTION SIGNS	704	TOTAL			
W020-50 48X48 16.00	+ + + + + + + + + + + + + + + + + + + +	2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD	616-10.10		TOTAL			
W020-60 48X48 16.00		RIGHT/CENTER/LEFT LANE CLOSED	RELOCATED SIGNS					
W020-7a 48X48 16.00	+ + + -	FLAGGER (SYMBOL, WITH FLAGS)	-					
W021-2 36X36 9.00	+ + + -	FRESH OIL	-					
W021-5 48X48 16.00	+ + + -	SHOULDER WORK AHEAD	-					
W022-1 48X48 16.00	+ + + + + + + + + + + + + + + + + + + +	BLASTING ZONE AHEAD	-					SUMMARY OF QUANTITIES
W022-2 42X36 10.50	- 1 - I	TURN OFF 2-WAY RADIO AND PHONE	1					CHINICIL OF RUBINITIES

END BLASTING ZONE

WET PAINT (ARROW PIVOTS)

W022-2 42X36 10.50 W022-3 42X36 10.50

G022-1 21X15 2.19

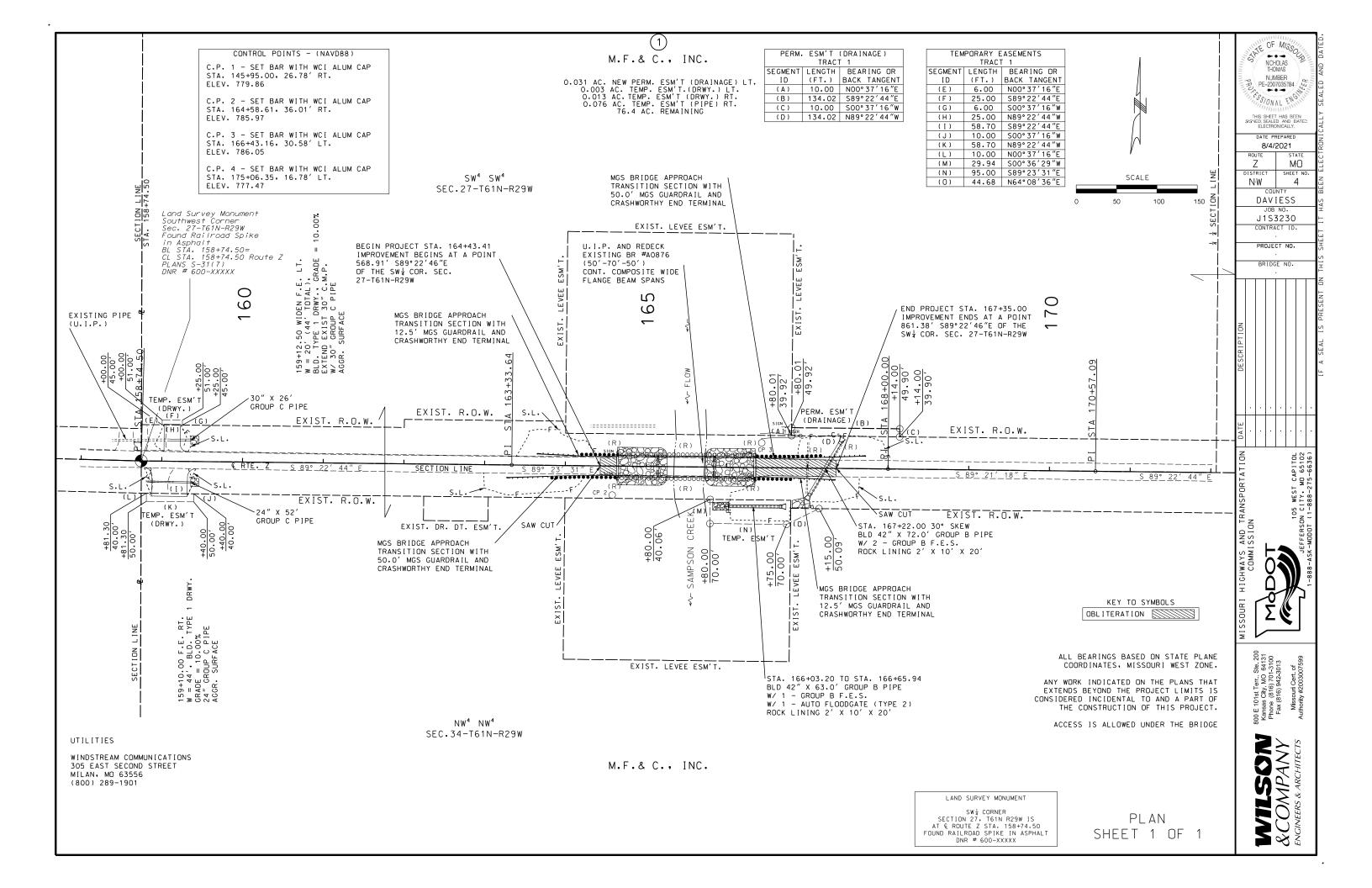
TURN OFF 2-WAY RADIO AND PHONE

NICHOLAS
THOMAS
NUMBER
PE-200705784
THIS SHEET HAS BEEN
SIGNED AND DATE
BECTRONICALLY
DATE PREPARED
8/4/2021 8/4/2021 ROUTE Z DISTRICT N:W STATE M:0 SHEET NO. COUNTY
DAVIESS
JOB NO.
J1S3230
CONTRACT ID. PROJECT NO. BRIDGE NO.

800 E 101st Terr., Ste. 200 Kansas City, MO 64131 Phone (816) 701-3100 Fax (816) 942-3013 Missouri Cert. of Authority #2003007599

WILSON 84 &COMPANY ENCINEERS & ARCHITECTS

SUMMARY OF QUANTITIES SHEET 2 OF 2



DINATES ARE OF THE MISSOURI DINATE (SPC) SYSTEM OF 1983.											
PROJECT COORDINATE INFORMATION											
M MISSOURI STATE PLANE											
NAD 83											
NAVD 88											
GEOID 12B (CONUS)											
STATIC GPS OBSERVATION											
MO VRS											
ON FACTOR 1.0000000											
TROL INFORMATION											
M MISSOURI WEST ZONE 2403											
MOAL											
MODOT ALBANY CORS ARP											
MOAL											
DM4112											
40°15′20,75416″ (N)											

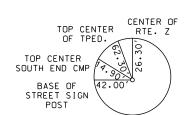
94°17′58.90396″ (W)

453884.890

867039.786

MO WEST

					C00	RDINATE POINT	LISTING		
						STATE PLANE (GF			
				OFFSET	NORTHING	EASTING	ELEVATION		GPK
Ļ	SHEET NO	STATION	LOCATION	(USFT)	(US SURVEY FT)	(US SURVEY FT)	(US SURVEY FT)	DESCRIPTION	POINT ID
L	PROJECT CONTROL POINTS								
ļ	4	145+95.00	ROUTE Z	26.78′ RT	1413676.213	2882108.387	779.86	C.P. 1 - SET BAR W/ WCI ALUM. CAP	•
L	4	164+58.61	ROUTE Z	36.01′ RT	1413626.328	2883971.838	785.97	C.P. 2 - SET BAR W/ WCI ALUM. CAP	
ļ	4	166+43.16	ROUTE Z	30.58' LT	1413690.958	2884157.086	786.05	C.P. 3 - SET BAR W/ WCI ALUM. CAP	•
ļ	4	175+06.35	ROUTE Z	16.78′ LT	1413667.729	2885020.083	777.47	C.P. 4 - SET BAR W/ WCI ALUM, CAP	•
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ļ	·	•			·	·	·		
ļ	ALIGNMENTS		T	1/	T				
ŀ	4	145+72.30	ROUTE Z	0.00′	1413703.589	2882086.416	0.00	BEGIN CENTERLINE CHAIN	RTE_Z
ļ	4	158+74.50	ROUTE Z	0.00′	1413668.643	2883388.147	0.00	P. I.	RTE_Z
ŀ	4	163+33.64	ROUTE Z	0.00′	1413663.666	2883847.257	0.00	P.I.	RTE_Z
ŀ	4	168+00.00	ROUTE Z	0.00′	1413658.717	2884313.594	0.00	P.I.	RTE_Z
ļ	4	170+57.09	ROUTE Z	0.00′	1413655.823	2884570.672	0.00	P.I.	RTE_Z
ļ	4	185+39.12	ROUTE Z	0.00′	1413639.758	2886052.607	0.00	END CENTERLINE CHAIN	RTE_Z
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LONGITUDE

ZONE

NORTHING (M)

EASTING (M)

CONTROL POINT 1

\$\frac{5}{8}" IRON BAR

WEST OF BRIDGE

COORDINATES

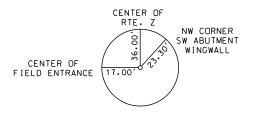
NORTHING = 1,413,676.213

EASTING = 2,882,108.387

ELEVATION = 779.86

(APPROXIMATE STATION 145+95.00

APPROXIMATE OFFSET 26.78' RIGHT)



CONTROL POINT 2

§" IRON BAR

WEST OF BRIDGE

COORDINATES

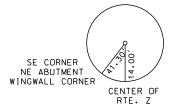
NORTHING = 1,413,626,328

EASTING = 2,883,971.838

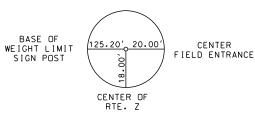
ELEVATION = 785.97

(APPROXIMATE STATION 164+58.61

APPROXIMATE OFFSET 36.01' RIGHT)



CONTROL POINT 3
\$\frac{5}{8}" IRON BAR
EAST OF BRIDGE
COORDINATES
NORTHING = 1,413,690,958
EASTING = 2,884,157.086
ELEVATION = 786.05
(APPROXIMATE STATION 166+43.16
APPROXIMATE OFFSET 30.58' LEFT)



CONTROL POINT 4

§" IRON BAR

EAST OF BRIDGE

COORDINATES

NORTHING = 1,413,667.729

EASTING = 2,885,020.083

ELEVATION = 777.47

(APPROXIMATE STATION 175+06.35

APPROXIMATE OFFSET 16.78' LEFT)

REFERENCE POINTS
AND
COORDINATE POINTS
SHEET 1 OF 1



NICHOLAS THOMAS NUMBER

MISSOURI HICHWAYS AND TRAN

COMMISSION

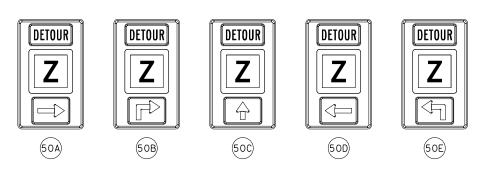
COMMISSION

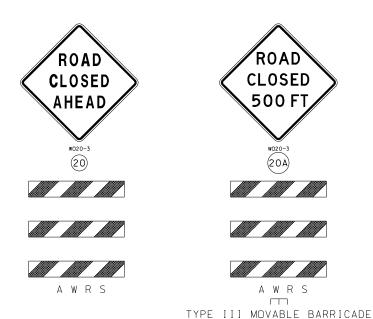
105

1-888-ASK-MODOT (1-8)

800 E 101st Terr., Ste. 200 Kansas City, MO 64131 Phone (816) 701-3100 Fax (816) 942-3013 Missouri Cert. of





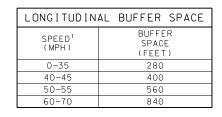


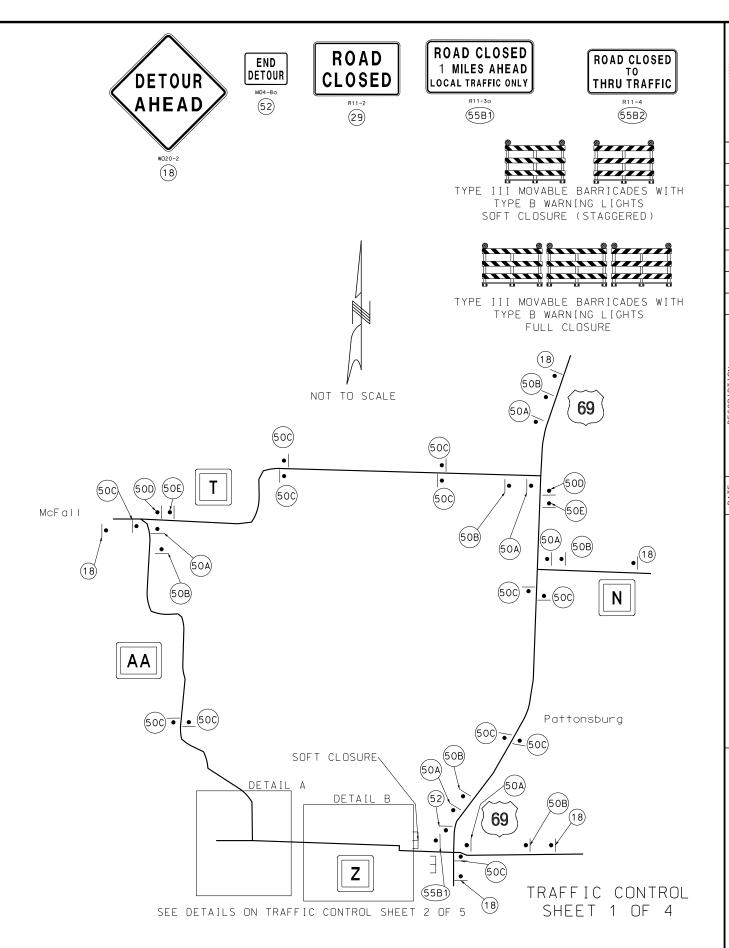
SIGN S	PACING FOR ADVAN	CED SIGNS				
SPEED ¹ (MPH)	SIGN SPAC					
(MPH)	UNDIVIDED HIGHWAY	DIVIDED HIGHWAY				
UP TO 35	200	200				
40 TO 45	350	500				
50 TO 55	500	1000				
		SA-1000				
60 TO 70	1000	SB-1500				
		SC-2640				

WITH TYPE B WARNING LIGHTS

st THE SA DIMENSION IS THE DISTANCE FROM THE TRANSITION OR POINT OF RESTRICTION TO THE FIRST SIGN.

THE SB DIMENSION IS THE DISTANCE BETWEEN THE FIRST AND SECOND SIGNS.





NICHOLAS THOMAS

NUMBER

8/4/2021

DAVIESS J1S3230

CONTRACT ID.

PROJECT NO. BRIDGE NO.

800 E 101st Terr., Ste. 200 Kansas City, MO 64131 Phone (816) 701-3100 Fax (816) 942-3013

S

DISTRICT

N-W

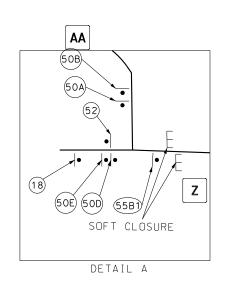
M∙∩

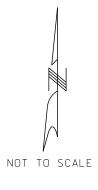
SHEET NO

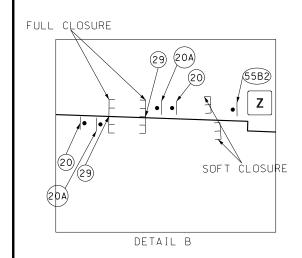
6

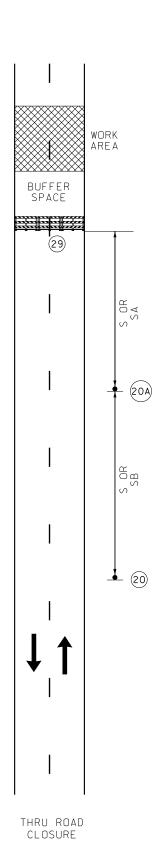
NUMBER PE-2007035784 PS-2007035784

^{&#}x27;SPEED LIMIT IS BASED ON POSTED SPEED LIMIT. ²SIGN SPACING MAY BE ADJUSTED, NORMALLY BY INCREASING IT, TO ACCOMMODATE FIELD CONDITIONS AND VISIBILITY.



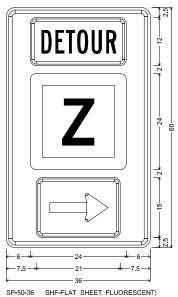






TRAFFIC CONTROL SHEET 2 OF 4

	ROI Z	PE- HIS SEPTION DATE PARTIC W	ON O	REPARENTE S NO NO	RED ST. MHEE	EN MATE	LINITED BOOK OF THE PARTY OF TH
		PRO	DJE:	32: CT CT	NO.	•	
DESCRIPTION							
ш							
DATE							
MISSOURI HIGHWAYS AND TRANSPORTATION DAT	COMMISSION				105 WEST CAPITOL	JEFFERSON CITY, MO 65102	1-888-ASK-MODOT (1-888-275-6636)
			Phone (816) 701-3100 MODOL		Missouri Cert of		1-888-ASK-MODOT (1-888-275-6636)

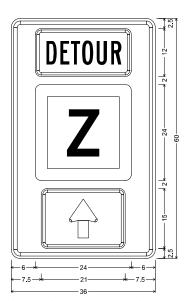


2.250" Radius, 0.875" Border, 0.625" Indent, Black on, Orange, M1-5a;

Table of letter and object lefts

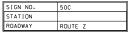
6.000
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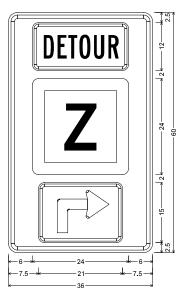
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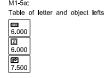
SP-50-36 SHF-FLAT SHEET FLUORESCENT;

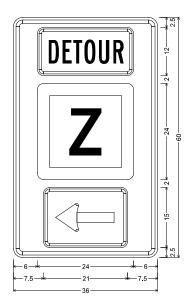






SP-50-36 SHF-FLAT SHEET FLUORESCENT; 2.250" Radius, 0.875" Border, 0.625" Indent, Black on, Orange, M1-5a;





SP-50-36 SHF-FLAT SHEET FLUORESCENT; SP-50-36 SHF-FLAT SHEET FLUORESCENT;
2.250" Radius, 0.875" Border, 0.625" Indent, Black on, Orange;
M1-5a;
Table of letter and object lefts

6.000

7.500



IGN NO.	50B
TATION	
ROADWAY	ROUTE Z

SIGN NO.	50D
STATION	
ROADWAY	ROUTE Z

800 E 101st Terr., Ste. 200 Kansas City, MO 64131 Phone (816) 701-3100 Fax (816) 942-3013

OF WILDOWN NICHOLAS THOMAS NUMBER PE-207035784

8/4/2021

DAVIESS JOB NO.
J1S3230
CONTRACT ID.

PROJECT NO. BRIDGE NO.

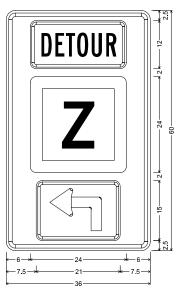
ΜO SHEET NO

8

ROUTE Z DISTRICT

 $N \cdot W$

TRAFFIC CONTROL SHEET 3 OF 4



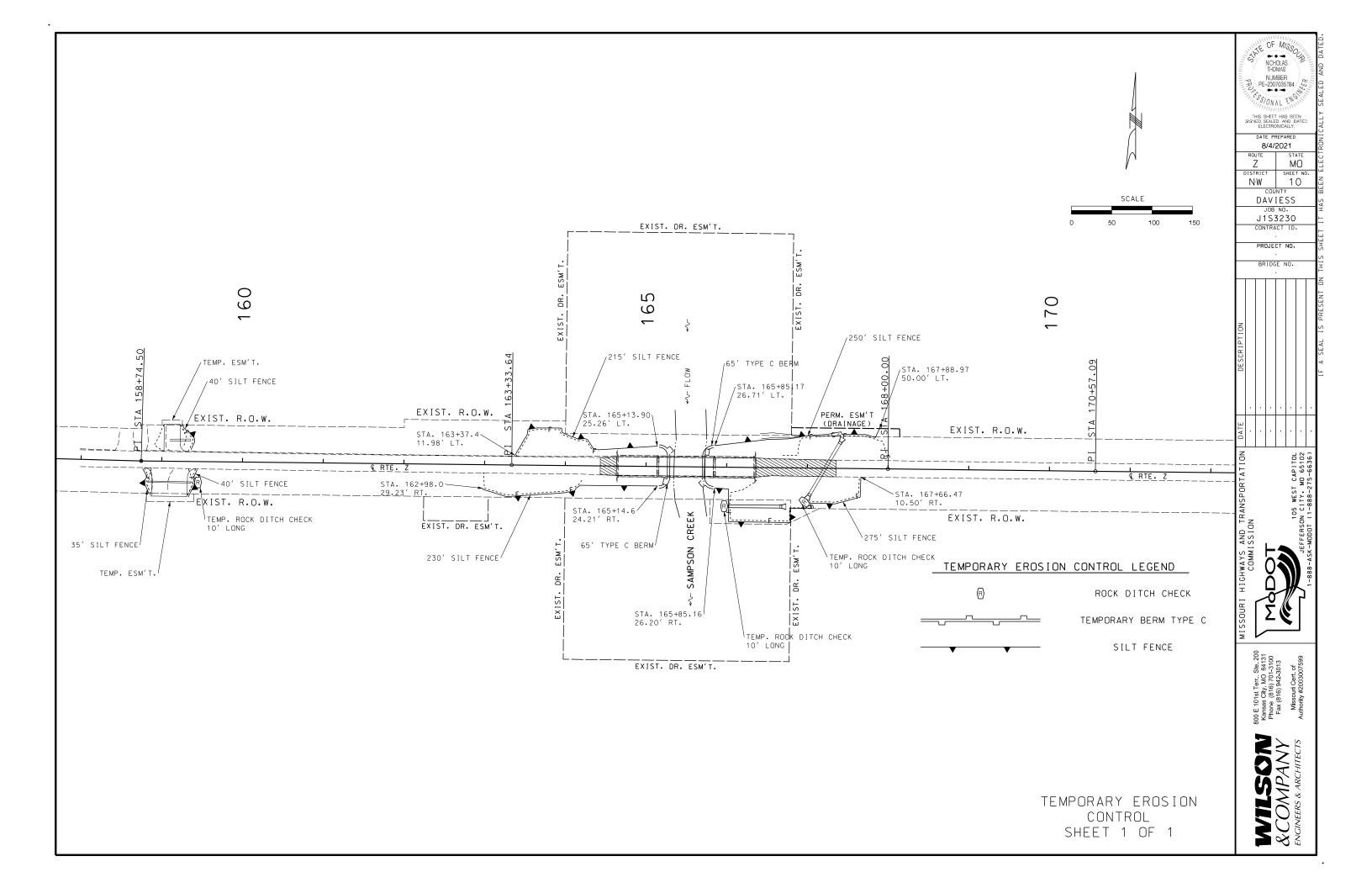
SP-50-36 SHF-FLAT SHEET FLUORESCENT;
2.250" Radjus, 0.875" Border, 0.625" Indent, Black on, Orange;
M1-5a;
Table of letter and object lefts

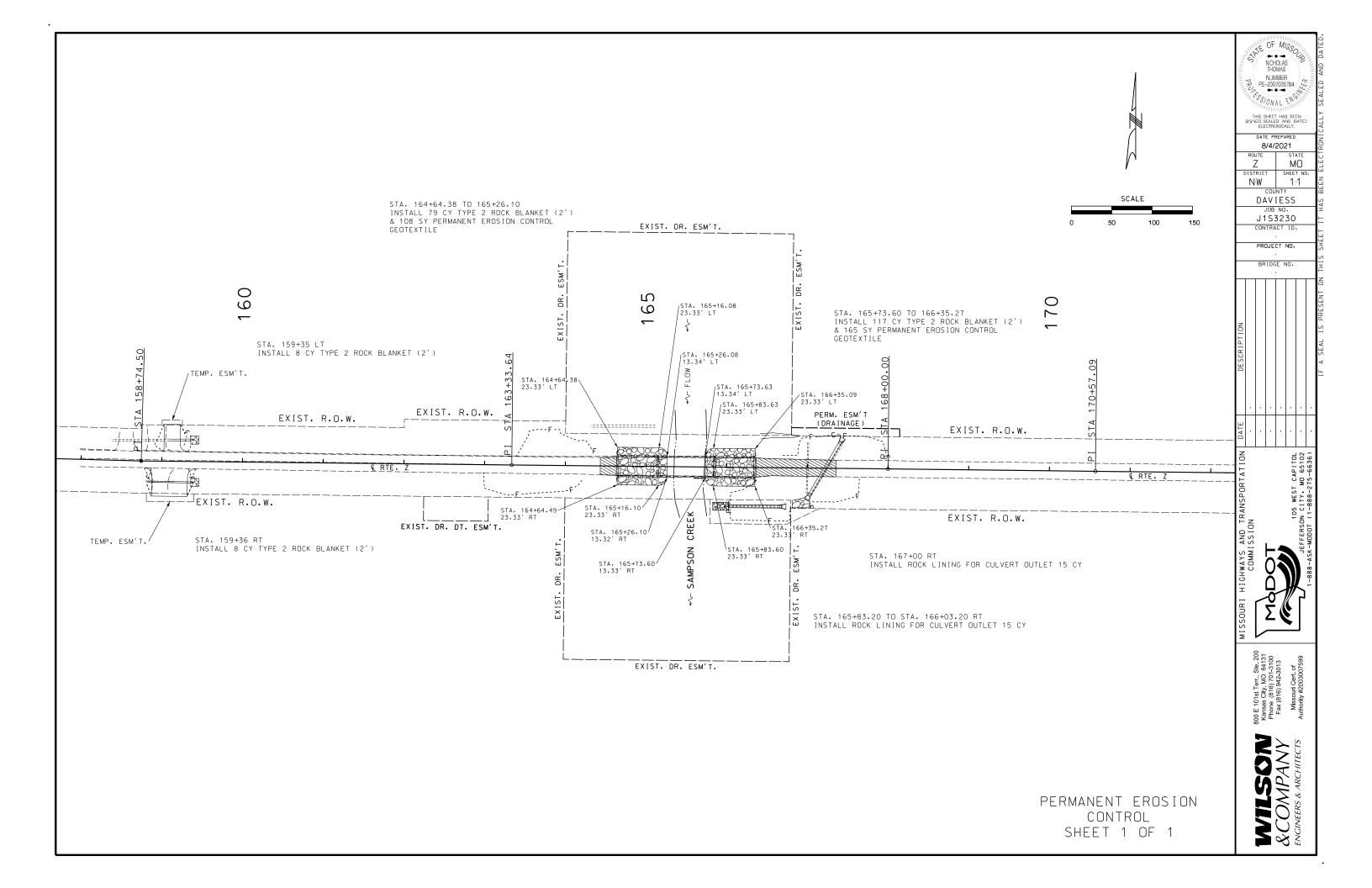
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6.000
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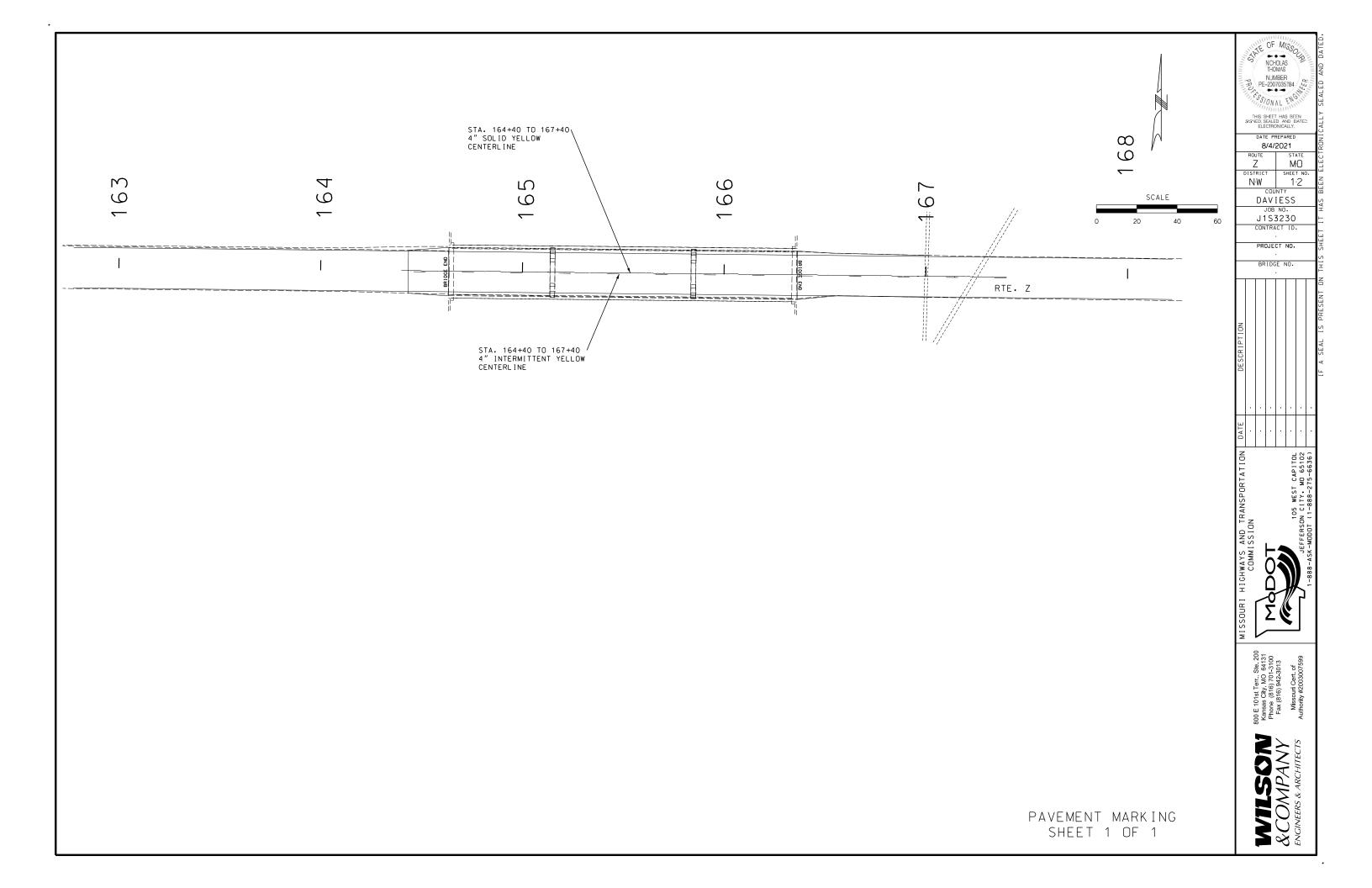
NCHOLAS THOMAS NUMBER PE-2007035784

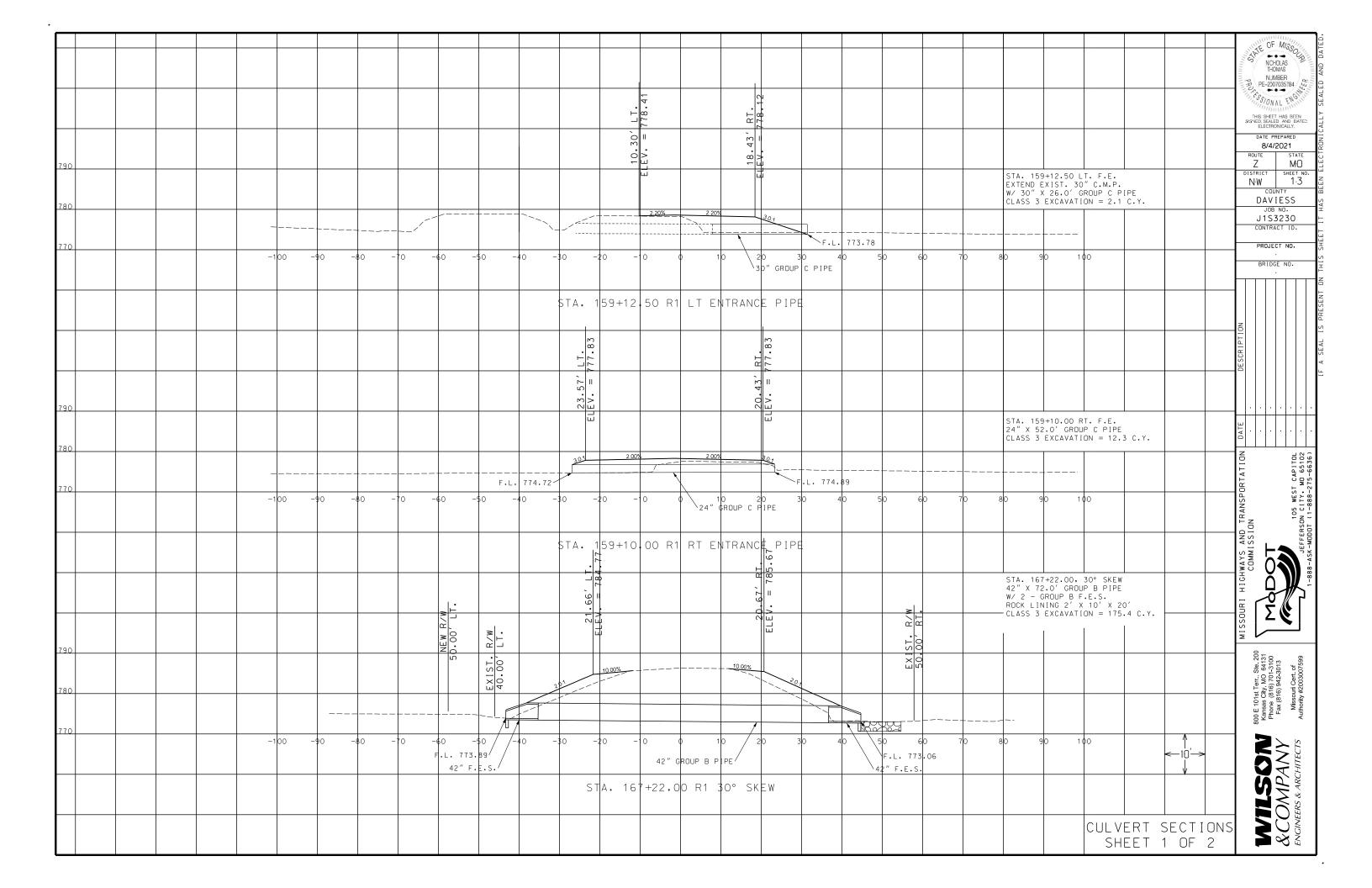
8/4/2021 ROUTE Z
DISTRICT
N·W STATE
MO
SHEET NO.
9 COUNTY JOB NO.
J1S3230
CONTRACT ID. PROJECT NO. BRIDGE NO. 800 E 101st Terr., Ste. 200 Kansas City, MO 64131 Phone (816) 701-3100 Fax (816) 942-3013

TRAFFIC CONTROL SHEET 4 OF 4









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770						<u> </u>	STA. 166+03. DFF. = 48.28	20 7 RT. 50	./							STA. 10 OFF. = F.L. 7	66+65.94 48.00′ R ⁻ 70.91	-	———I ROCK	LINING 2' S 3 EXCAVA	X 10′ X	20′			JOE J1S	3230 ACT ID.
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TED S. KOESTER NUMBER

PE-2013000591

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7/22/2021

DAVIESS

J1S3230

CONTRACT ID

PROJECT NO.

BRIDGE N

A08761

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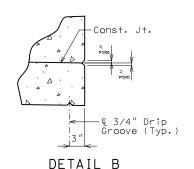
SHEET NO

1

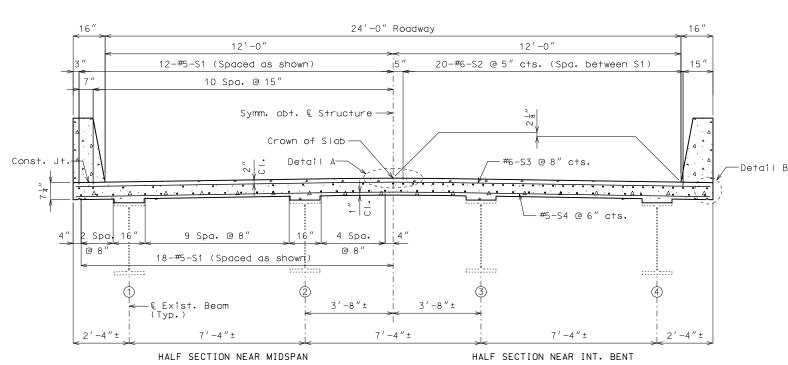
	Table Showing S2 Bar Lengths										
Int. Ber	nt No. 2	Int. Bent No. 3									
Span 1	Span 2	Span 2	Span 3								
21'-6"	20′-6″	20′-6″	21′-6″								

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

* Unless otherwise shown.



OPTIONAL SHIFTING TOP BARS AT BARRIER



TYPICAL SECTION THRU SLAB

General Notes:

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

Design Loading:

HS15-44 (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 II

Design Unit Stresses:

Embricated Steel Connections:

Field connections shall be made with 3/4" diameter ASTM F3125 Grade A325 Type 1 bolts and 13/16" diameter holes, except as noted.

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 old concrete not removed shall be cleanly stripped and embedded into new concrete where possible. If length is available, old bars shall extend into new concrete at least 40 diameters for smooth 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 old work is indicated by light dashed lines. Heavy lines indicate new work.

Contractor shall verify all dimensions in field before ordering new material.

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.

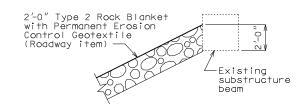
Rubblized concrete from the existing bridge deck that qualifies as clean fill may be placed on spill slopes at end bents above ordinary high water line (Roadway item).

High strength bolts, nuts and washers will be sampled for quality assurance as specified in Sec 106.

Bridge deck may be finished with a vibratory screed.

Traffic Handlina:

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



ROCK BLANKET ON SPILL SLOPES

I tem		Total
Removal of Miscellaneous ACM (Non-Friable)	sq. foot	12
Removal of Existing Bridge Deck	sq. foot	4594
Slab on Steel	sq. yard	512
Type H Barrier	linear foot	346
Protective Coating - Concrete Bents and Piers (Epoxy)	lump sum	1
Strengthening Existing Beams	lump sum	1
Cleaning and Coating Existing Bearings	each	8
Slab Drain	each	30
Non-Destructive Testing	linear foot	19

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

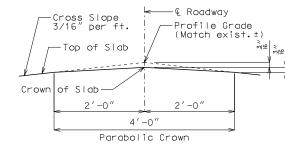
Estimated Quantities for Slab on St	eel
I tem	Total
Class B-2 Concrete cu. yard	111
Reinforcing Steel (Epoxy Coated) pound	37,180

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.



DETAIL A

REPAIRS TO BRIDGE: ROUTE Z OVER SAMPSON CREEK

ROUTE Z FROM ROUTE AA TO ROUTE PP ABOUT 1.1 MILES EAST OF ROUTE AA BEGINNING STATION 164+63.00± (MATCH EXISTING)

General Notes:

Stay-In-Place Forms:

Corrugated steel forms, supports, closure elements and accessories shall be in accordance with grade requirement and coating designation C165 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 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.

Haunchina:

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

Structural Steel Protective Coating (All existing bearings at Int. Bents No. 2 & 3):

Protective Coating: Calcium Sulfonate System in accordance with Sec 1081. All existing bearings shall be overcoated with Calcium Sulfonate System.

Surface Preparation: Surface preparation of the existing steel shall be in accordance with Sec 1081 for Overcoating of Structural Steel (Calcium Sulfonate System). The cost of surface preparation will be considered completely covered by the contract unit price for Cleaning and Coating Existing Bearings.

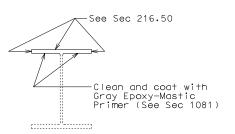
Rust Penetrating Sealer: The rust penetrating sealer shall be applied to the surfaces of all bearings and other locations where rust bleeding, pack rust and layered rust is occurring. The cost of the rust penetrating sealer will be considered completely covered by the contract unit price for Cleaning and Coating Existing Bearings.

Prime Coat: The cost of the prime coat will be considered completely covered by the contract unit price per each for Cleaning and Coating Existing Bearings.

Topcoat: The color of the topcoat shall be Gray (Federal Standard #26373). The cost of the topcoat will be considered completely covered by the contract unit price per each for Cleaning and Coating Existing Bearings.

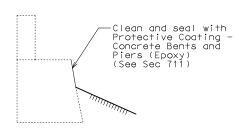
Structural Steel Protective Coating:

Top. sides and bottom of the top flanges of all existing WF beams shall be coated with one 6-mil thickness of gray epoxy-mastic primer (non-aluminum) applied over an SSPC-SP3 surface preparation in accordance with Sec 216 & 1081. The cost of surface preparation and gray epoxy-mastic primer will be considered completely covered by the contract unit price for Removal of Existing Bridge Deck.

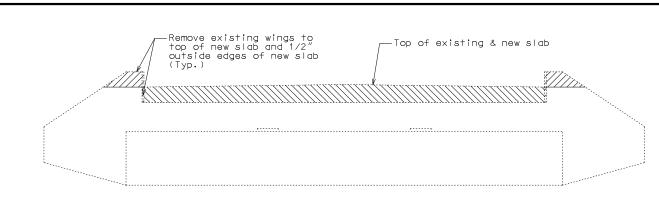


TYPICAL SECTION THRU EXISTING BEAMS SHOWING PROTECTIVE COATING

(All Beams, Full Length)



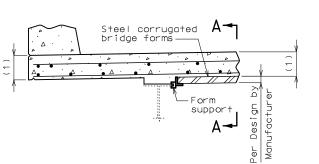
TYPICAL SECTION THRU END BENTS 1 & 4 SHOWING PROTECTIVE COATING

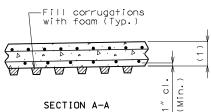


DETAILS OF CONCRETE REMOVAL AT END BENTS NO. 1 & 4

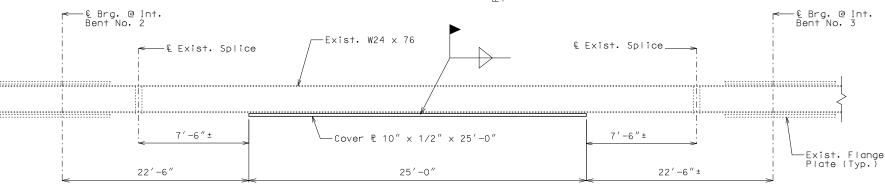
The cost of concrete removal as shown will be considered completely covered by the contract unit price for Removal of Existing Bridge Deck. Vertical backwall and wingwall reinforcement shall be cut off one inch below concrete removal surface and the resulting holes shall be filled with a qualified special mortar.

A smooth, level surface shall be provided at removal lines.

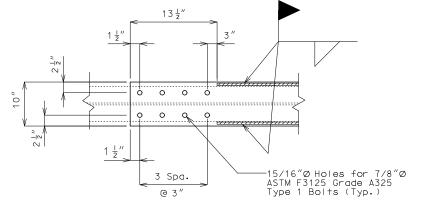




OPTIONAL STAY-IN-PLACE FORM DETAILS



PART ELEVATION OF EXTERIOR BEAM SHOWING COVER PLATE INSTALLATION ON SPAN (2-3)



TYPICAL DETAIL OF THE ENDS OF COVER PLATES (BOTTOM VIEW)

Notes:

Beam with end-bolted cover plates shall be installed in the following sequence after existing bridge deck is removed:

- 1. Drill holes in cover plate and flange.
- 2. Clean faying surfaces. (See Special Provisions)
- 3. Install and tighten bolts.
- 4. Weld cover plate to flange.

Fabricated Structural Steel shall be ASTM A709 Grade 50, except as noted.

Payment for 881 bounds of new cover plates, complete in place, will be considered completely covered by the contract Tump sum price for Strengthening Existing Beams

Notch toughness is required for all cover plates.

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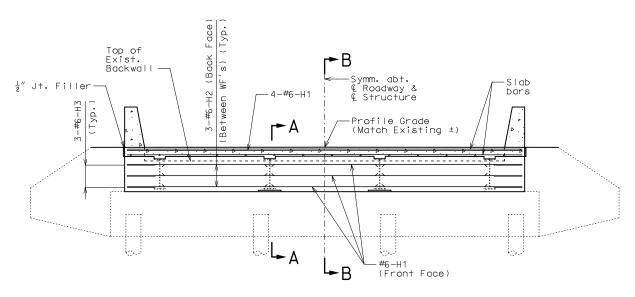
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THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

7/22/2021

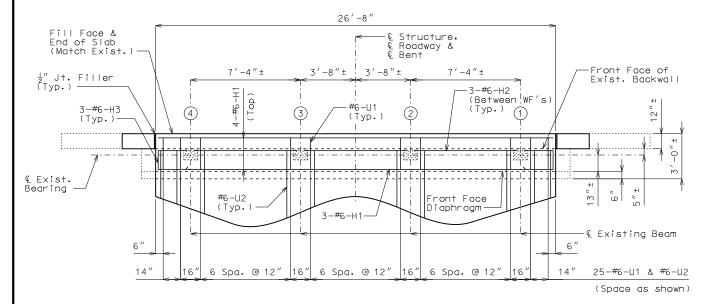


SECTION NEAR END BENTS

(End Bent No. 1 shown, End Bent No. 4 similar)

Notes: Existing steel end diaphragms not shown for clarity(Leave in place).

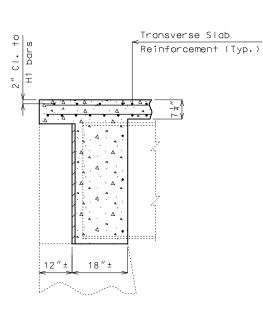
U bars not shown for clarity.



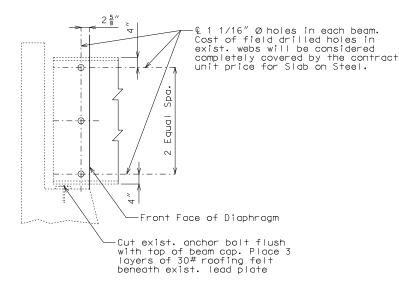
PART PLAN

(End Bent No. 1 shown, End Bent No. 4 similar)

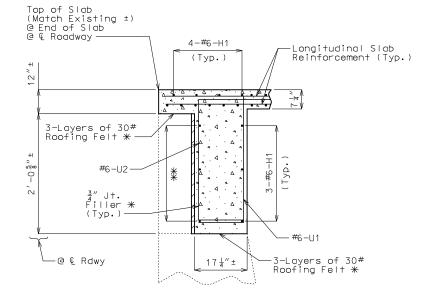
Notes: Slab reinforcing steel not shown for clarity.



SECTION A-A



DETAIL OF WEB HOLES AT END BENT



SECTION B-B

** Entire length of diaphragm (Typ.)
*** 3-#6-H2 (Between WF Beams) (Typ.)

Notes:

Required temporary support load of 10 kips at each bearing is a service load without a factor of safety. It includes the dead load (without the slab) and a construction load of 50 psf applied to the deck area. Live load is not included in the support load (See Special Provisions).

The exposed and accessible surfaces of the existing structural steel and bearings that will be encased in concrete shall be cleaned with a minimum of SSPC-SP-3 surface preparation and coated with a minimum of one coat of gray epoxy-mastic primer (non- aluminum) in accordance with Sec 1081 to produce a dry film thickness of not less than 3 mils before concrete is poured. The surface preparation and coating for 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.

All concrete and reinforcement is included in the table of Estimated Quantities for Slab on Steel and will be considered completely covered by the contract unit price for Slab on Steel.

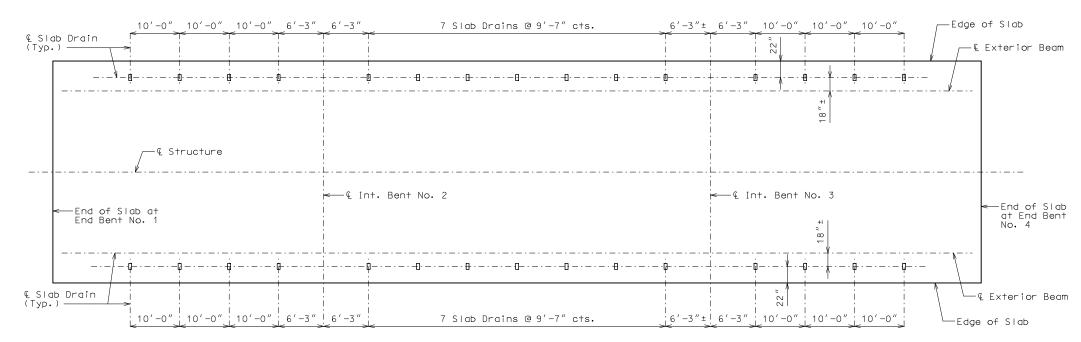
Cost of temporary supports, cutting anchor bolts, and placing roofing felt and joint filler will be considered completely covered by the contract unit price for Slab on Steel.

DETAILS OF END BENTS NO. 1 & 4

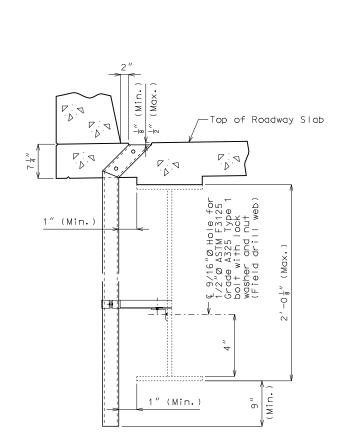


SSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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

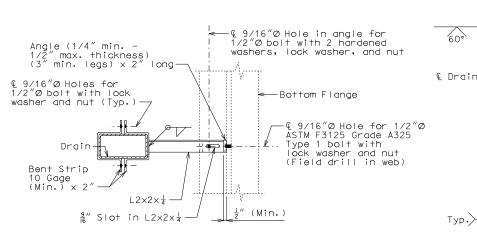


PLAN OF SLAB SHOWING SLAB DRAIN LOCATIONS

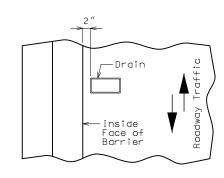


PART SECTION NEAR DRAIN

Detailed May 2021



PART SECTION SHOWING BRACKET ASSEMBLY



PART PLAN OF SLAB AT DRAIN

SLAB DRAINS

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

Sheet No. 4 of 7

600

Typ.>

Piece

8" (Nom.

ELEVATION OF DRAIN

PLAN OF STEEL DRAIN OPTION

 $11\frac{3}{8}$ " (Nom.)

PLAN OF FRP DRAIN OPTION

-1/2"Ø x 3" Rod (ASTM A709 Grade 36) or 1/2"Ø x 3"± Shear

Piece

Connector (Typ.)

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

Washer (Typ.)

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 $1/2''\emptyset$ bolts shall be ASTM A307, except

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 minimum extent necessary to field drill in the existing web.

Notes for Steel Drain:

Slab drains may be fabricated of either 1/4" welded sheets of ASTM A700 0 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 $8" \times 4"$.

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 $8\,^{\prime\prime}$ x $4\,^{\prime\prime}$.

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 accompany of the algorithm. acceptance of the slab drains.

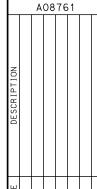
At the contractor's option, drains may be field cut. The method of cutting FRP slab drain shall be as recommended by the manufacturer to ensure a smooth, chip free



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ROUTE	STATE				
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DISTRICT	SHEET NO.				
BR	4				
COUNTY					

J1S3230 CONTRACT ID

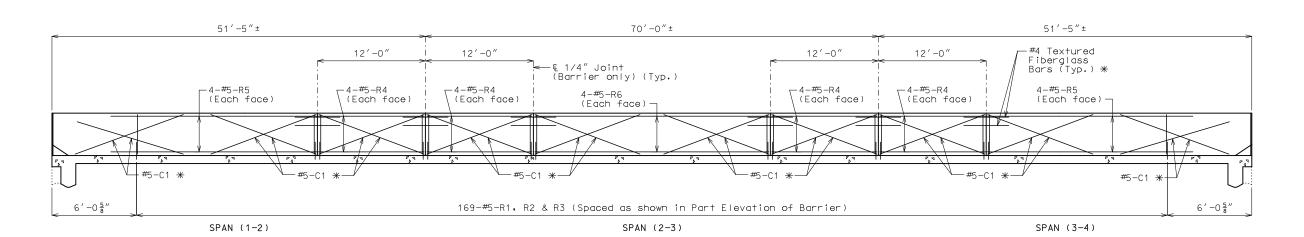
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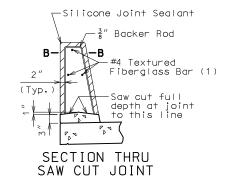
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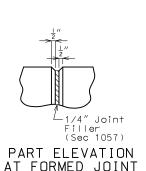
PROJECT NO.

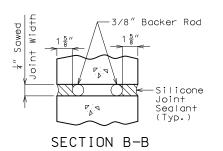


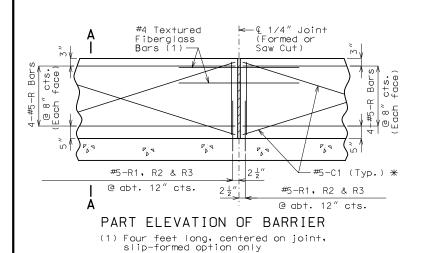
ELEVATION OF BARRIER

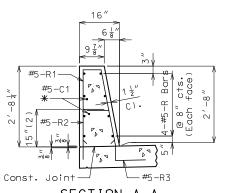
(Left barrier shown, right barrier similar)
Longitudinal dimensions are horizontal.







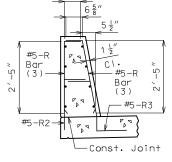




SECTION A-A Use a minimum lap of 3'-1'' for #5 horizontal barrier bars.

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.

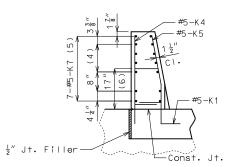
Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered 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.

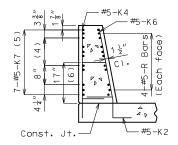
For slip-formed option, both sides of barrier shall have a vertically broomed finish and the top shall have a transversely broomed finish.

TED S. KOESTER NUMBER PE-2013000591 ILSSIONAL EV 7/22/2021 7 MΩ DISTRICT SHEET NO BR 5 DAVIESS J1S3230 CONTRACT ID PROJECT NO. BRIDGE NO A08761 . CAPITOL MO 65102 105 CERSON CI

TYPE H BARRIER



ELEVATION A-A



SECTION B-B

r►B (3) 4" 7-#5-K4 & K6 7-#5-K4 & K6 4" (3) (Spa. with K2) (Spa. with K2) PA 000 Const. Jt.-12" | 3 Spa. 3 Spa. @ 6" 7-#5-K2 #5-R1, R2 & R3 7-#5-K2 (Spa, as shown) (Spa, as shown) @ abt. 12" cts.

PART ELEVATION

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

-€ 1"Ø Holes

-Const. Joint

—Roadway Face of Barrier

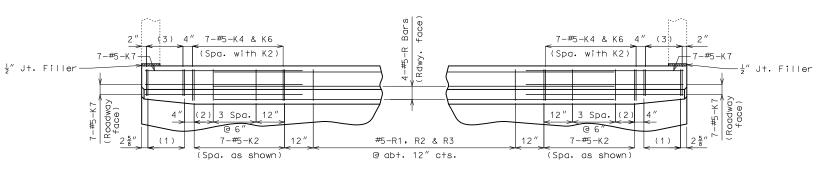
ELEVATION

€ 1″Ø Holes

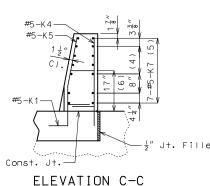
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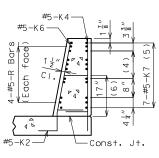
22"

- (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





SECTION D-D



TED S. KOESTER NUMBER

PE-2013000591

7/22/2021

DAVIESS

J1S3230 CONTRACT ID.

PROJECT NO.

BRIDGE NO A08761

DISTRICT

BR

MΩ

SHEET NO

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Reinforcing Steel:

Minimum clearance to reinforcing steel shall be 1 1/2". Use a minimum lap of 3'-1'' between K7 bars and R bars.

TYPE H BARRIER AT END BENTS

(Left barrier shown, right barrier similar)

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

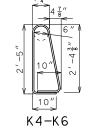
K4-K5

The top two
bars shall be
kept with
position close
to those shown

in Sections A-A thru D-D

#5-K Bar





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.

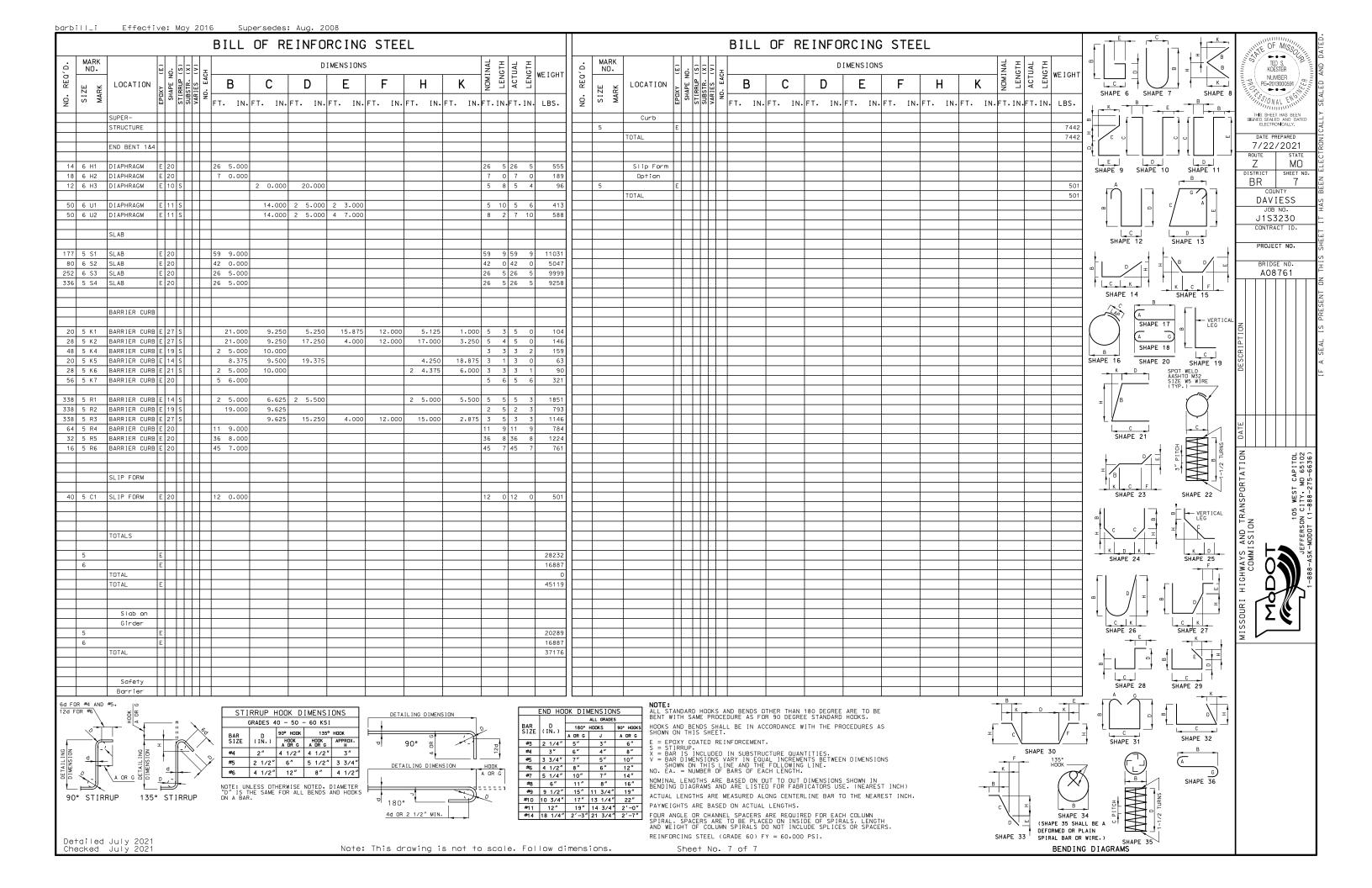
ELEVATION E-E

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

1" Chamfer *—

DETAILS OF GUARD RAIL ATTACHMENT

-1"Ø Holes @ 13/16" cts.



DESIGN DESIGNATION

A.A.D.T. - 2022 = 112 A.A.D.T. - 2042 = 123 D.H.V. = 22% T = 10% V = 55 M.P.H. D = 53%

FUNCTIONAL CLASSIFICATION - MAJOR COLLECTOR

NO RIGHT OF WAY ACQUISITION

CONVENTIONAL SYMBOLS

(USED IN PLANS	,)	
	EXISTING	NEW
BUILDINGS AND STRUCTURES GUARD RAIL GUARD CABLE CONCRETE RIGHT-OF-WAY MARKER STEEL RIGHT-OF-WAY MARKER	0000	••••
LOCATION SURVEY MARKER UTILITIES	0	0
FIBER OPTICS OVERHEAD CABLE TV UNDERGROUND CABLE TV OVERHEAD TELEPHONE UNDERGROUND TELEPHONE OVERHEAD POWER UNDERGROUND POWER SANITARY SEWER STORM SEWER GAS WATER	-F0- -OTV- -UTV- -OT- -UT- -OE- -UE- -S- -SS- -G-	-F0- -0TV- -UTV- -0T- -0E- -UE- -\$- -\$\$- -\$\$- -\$\$- -\$\$-
MANHOLE	MAS DYH	€
FIRE HYDRANT		3
WATER VALVE	wv_C	€
WATER METER	ww ⊕	€
DROP INLET	°'_	
DITCH BLOCK	=	=
GROUND MOUNTED SIGN	SIGN	-
LIGHT POLE		
H-FRAME POWER POLE		
TELEPHONE PEDESTAL FENCE	PED _	7
CHAIN LINK WOVEN WIRE GATE POST	—— \ —— X [2]	<u></u>

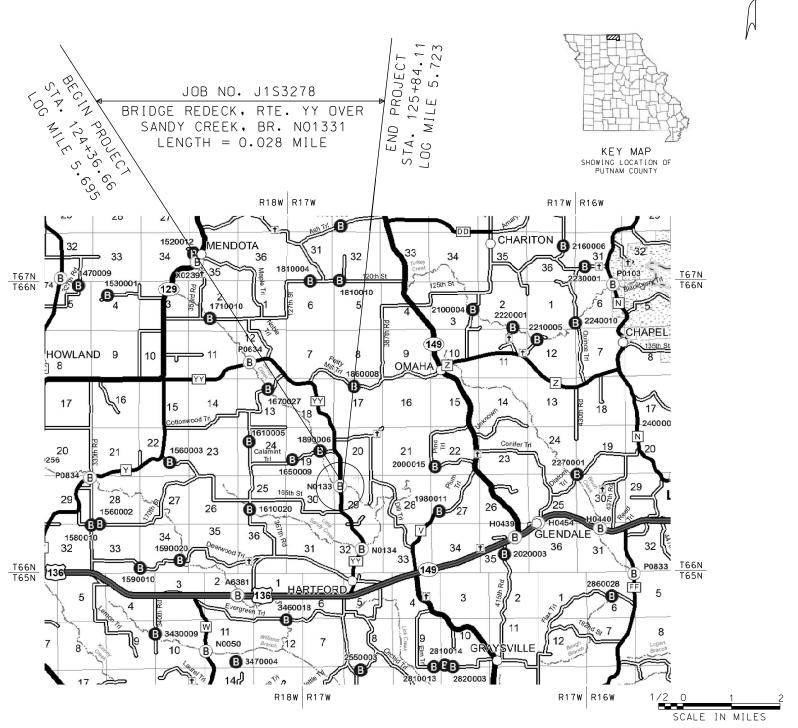
NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES

BENCHMARK

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

PLANS FOR PROPOSED STATE HIGHWAY

PUTNAM COUNTY



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

INDEX OF SHEETS

DESCRIPTION	SHEET NUMBER
TITLE SHEET	1
TYPICAL SECTIONS (TS) (1 SHEET)	2
QUANTITY SHEETS (QU)(2 SHEETS)	- 3
PLAN-PROFILE (PP)	- 4
REFERENCE AND CONTROL POINTS (RP)	- 5
TRAFFIC CONTROL (TC)	- 6
EROSION CONTROL (EC)	- 7-8
SIGNING & PAVEMENT MARKING (SN)	- 9
BRIDGE DRAWINGS (B)	-
NO1331	- 1-8

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CONTRACT ID.							SHFFT
PROJECT NO.							
•							
BRIDGE NO.							
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LENGTH OF PROJECT

BEGINNING OF PROJECT STA. 124+36.66
END OF PROJECT STA. 125+84.11

APPARENT LENGTH 147.45 FEET

EQUATIONS AND EXCEPTIONS:

800 E 101st Terr., Ste. 200 Kansas City, MO 64131 Phone (816) 701-3100 Fax (816) 942-3013 Missouri Cert, of

0.00 FEET 47.45 FEET 0.028 MILE

TOTAL CORRECTIONS

NET LENGTH OF PROJECT

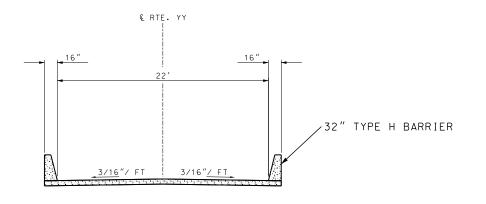
STATE LENGTH

FOR INFORMATION ONLY
ESTIMATED DISTURBED ACRES

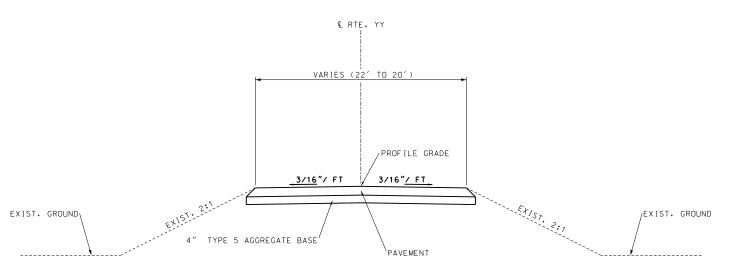
0.00 FEET
147.45 FEET
0.028 MILE

OO.028 MILE

OO.028 MILE



PROPOSED TYPICAL SECTION ON BRIDGE - RTE. YY STA. 124+56.66 TO STA. 125+64.11



PROPOSED TYPICAL SECTION RTE. YY STA. 124+36.66 TO STA. 124+56.66 STA. 125+64.11 TO STA. 125+84.11 PAVEMENT - HMA DESIGN

12" BITUMINOUS PAVEMENT

1.75" BP-1 W/PG 64-22 10.25" BITUMINOUS BASE W/PG 64-22

ESTIMATE FACTORS: FOR INFORMATION PURPOSES ONLY

BITUMINOUS PAVEMENT MIXTURE PG64-22 (BP-1) - 1.98 TONS/CUYD BITUMINOUS PAVEMENT MIXTURE PG64-22 (BASE) - 1.98 TONS/CUYD TACK CDAT - 0.05 GAL/SQYD 4" TYPE 5 AGGREGATE - 0.22 TONS/SQYD COMPACTED

NICHOLAS THOMAS NUMBER PE-2207035784

8/4/2021 Y·Y ΜO DISTRICT SHEET NO.

N·W 2 PUTNAM

J1S3278 CONTRACT ID.

PROJECT NO.

BRIDGE NO.

800 E 101st Terr.. Ste. 200 Kansas City, MO 64131 Phone (816) 701-3100 Fax (816) 942-3013



	REMOVAL OF IMPROVEMENTS							
SHEET	STA.	STA.	LOCATION	ITEM	UNITS	QUANTITY	REMARKS.	
4	VARIES		RTE. YY	SIGNS	EΑ	12	EXISTING OBJECT MARKERS	
4	124+36.66		RTE. YY	SAW CUT	FT	24		
4	124+36.66	124+56.66	RTE. YY	PAVEMENT	SY	46	REMOVAL OF EXISTING PAVEMENT	
4	125+64.11	125+84.11	RTE. YY	PAVEMENT	SY	44	REMOVAL OF EXISTING PAVEMENT	
4	125+84.11		RTE. YY	SAW CUT	FT	22		
	TOTAL = 1 LUMP SUM							

CONTRACTOR FURNISHED SURVEYING AND STAKING

TOTAL = 1 LUMP SUM

MOBILIZATION
TOTAL = 1 LUMP SUM

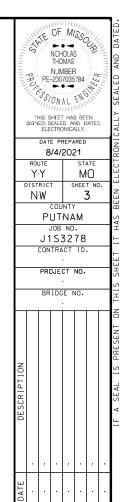
	BITUMINOUS PAVEMENT								
					1.75″ BP-1	10.25" BASE	4" TYPE 5		
					(PG 64-22)	(PG 64-22)	AGGR. BASE	TACK COAT	
SHEET	STA.	STA.	WIDTH(FT)	LOCATION	(TONS)	(TONS)	(SY)	(GAL)	
4	124+36.7	124+56.7	VARIES	RTE. YY	4.7	27.3	53.0	13.3	
4	125+64.1	125+84.1	VARIES	RTE. YY	4.5	26.6	51.5	12.9	
				TOTALS	9.2	53.9	104.5	26.2	
				PAY TOTALS	9.2	53.9	104.5	27	

	LINEAR GRADING, CLASS 2						
SHEET	STA.	STA.	LOCATION	QUANTITY (STA)			
4	124+32.3	124+56.6	RTE. YY, RT	0.2			
4	124+41.1	124+61.1	RTE. YY, LT	0.2			
4	125+59.6	125+79.7	RTE. YY, RT	0.2			
4	125+68.6	125+88.0	RTE. YY, LT	0.2			
			TOTAL	0.8			
			PAY TOTAL	0.8			

	PERMANENT EROSION CONTROL							
				FURNISHING TYPE 2 ROCK BLANKET	PLACING TYPE 2 ROCK BLANKET	PERMANENT EROSION CONTROL GEOTEXTILE	GAB I ONS	
SHEET	STA.	STA.	LOCATION	(CY)	(CY)	(SY)	(CY)	
9	124+51.01	125+00.08	RTE. YY	32	32	63	22	
9	125+22.37	125+69.35	RTE. YY	21	21	44	22	
			TOTALS	53	53	107	44	
			PAY TOTALS	53	53	107	44	

	TEMPORARY EROSION CONTROL							
						SEDIMENT		
					SILT FENCE	REMOVAL		
SHEET	STA.	STA.	LOCATION	SIDE	(LF)	(CY)		
8	124+32.3	124+56.6	RTE. YY	RT	20	1		
8	124+41.1	124+61.1	RTE. YY	LT	20	1		
8	125+59.6	125+79.7	RTE. YY	RT	20	1		
8	125+68.6	125+88.0	RTE. YY	LT	20	1		
		TOTALS		80	4			
		PAY T	OTALS	80	4			

	PAVEMENT MARKING						
SHEET	STATION	STATION	LOCATION	4 IN. YELLOW STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS (LF)	REMARKS		
10	124+35.00	125+90.00	RTE. YY	310.0	DOUBLE YELLOW CENTERLINE		
			TOTALS	310.0			
			PAY TOTALS	310			



800 E 101st Terr., Ste. 200 Kansas Chy, MO 64131 Phone (816) 701-3100 Fax (816) 942-3013 Missouri Cert. of Authority #2003007599



						EFFECTIVE: 04-01-202
TOTAL	QTY TOTAL SIGN		QTY TOTAL SIGN			
SIZE AREA QTY AREA	RELOCRELOC NUM.	SIZE AREA QTY TOTAL RI	ELOC RELOC NUM.			
SIGN IN. SQ.FT. EACH SQ.FT.		SIGN IN SQ.FT. EACH SQ.FT.		ITEM	TOTAL	
WARNING S		GUIDE SIGNS		NUMBER		DESCRIPTION
WD1-1L 48X48 16.00	TURN (SYMBOL LEFT ARROW)	E05-1 36X48 12.00	GORE EXIT	6122008		CT ATTENUATOR 40 MPH (SAND BARRELS)
VO1-1R 48X48 16.00	TURN (SYMBOL RIGHT ARROW)	E05-2 48X36 12.00	EXIT OPEN	6122009		CT ATTENUATOR 45 MPH (SAND BARRELS)
VO1-2L 48X48 16.00	CURVE (SYMBOL LEFT ARROW)	E05-2a 48X36 12.00	EXIT CLOSED	6122010		CT ATTENUATOR 50 MPH (SAND BARRELS)
01-2R 48X48 16.00	CURVE (SYMBOL RIGHT ARROW)	GD20-1 60X24 10.00	ROAD WORK NEXT XX MILES	6122012		CT ATTENUATOR 55 MPH (SAND BARRELS)
01-3L 48X48 16.00	REVERSE TURN (SYMBOL LEFT ARROW)	GD20-2 48X24 8.00	END ROAD WORK	6122014		CT ATTENUATOR 60 MPH (SAND BARRELS)
01-3R 48X48 16.00	REVERSE TURN (SYMBOL RIGHT ARROW)	GD20-4 36X18 4.50	PILOT CAR FOLLOW ME	6122017		CT ATTENUATOR 65 MPH (SAND BARRELS)
01-4L 48X48 16.00	REVERSE CURVE (SYMBOL LEFT ARROW)	GD20-4a 42X30 8.75	PILOT CAR IN USE WAIT & FOLLOW	6122019		CT ATTENUATOR 70 MPH (SAND BARRELS)
01-4R 48X48 16.00	REVERSE CURVE (SYMBOL RIGHT ARROW)	GD20-4a 18X12 1.50	PILOT CAR IN USE WAIT & FOLLOW			ACEMENT SAND BARREL
01-4bL 48X48 16.00	DOUBLE ARROW REVERSE CURVE (SYMBOL LT ARROWS)	GD20-5aP 36X24 6.00	WORK ZONE (PLAQUE)	6122030		CT ATTENUATOR (RELOCATION)
D1-4bR 48X48 16.00	DOUBLE ARROW REVERSE CURVE (SYMBOL RT ARROWS)	MO4-8a 24X18 3.00	END DETOUR	6123000A		K OR TRAILER MOUNTED ATTENUATOR (TMA
01-4cL 48X48 16.00	TRIPLE ARROW REVERSE CURVE (SYMBOL LT ARROWS)	MD4-9L 48X36 12.00	DETOUR (LEFT ARROW)	6161008		NCED WARNING RAIL SYSTEM
01-4cR 48X48 16.00	TRIPLE ARROW REVERSE CURVE (SYMBOL RT ARROWS)	MD4-9R 48X36 12.00	DETOUR (RIGHT ARROW)	6161012		S (BOATS KEEP OUT)
01-6 60X30 12.50	HORIZONTAL ARROW (SYMBOL)	MD4-9P 48X12 4.00	STREET NAME (PLAQUE)	6161013		S (NO WAKE)
01-6a 72X36 18.00	HORIZ. ARROW (SYMBOL ON PERMANENT BARRICADE)	MD4-10L 48X18 6.00	DETOUR (ARROW LEFT)	6161014		IAL SIGN ASSEMBLY (BOATS KEEP OUT)
01-7 60X30 12.50	DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)	MD4-10R 48X18 6.00	DETOUR (ARROW RIGHT)	6161025		NELIZER (TRIM LINE)
01-7a 72X36 18.00	DOUBLE HEAD HORIZ. ARROW (SYMBOL ON PERM. BARR.	1	TORY SIGNS	6161030		III MOVEABLE BARRICADE
11-8 18X24 3.00	CHEVRON (SYMBOL)	R1-1 48X48 13.25	STOP	6161033		CTION INDICATOR BARRICADE
11-8a 30X36 7.50	CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)	R1-2 48TRI. 6.93	YIELD	6161040		HING ARROW PANEL
3-1 48X48 16.00	STOP AHEAD (SYMBOL)	R1-2a 36X36 9.00	TO ONCOMING TRAFFIC (PLAQUE)	6161047		III OBJECT MARKER
3-2 48X48 16.00	YIELD AHEAD (SYMBOL)	R1-3P 30X12 2.50	ALL WAY (PLAQUE)	6161051		ING LIGHT, TYPE A
3-3 48X48 16.00	SIGNAL AHEAD (SYMBOL)	R2-1 36X48 12.00	SPEED LIMIT XX	6161052		ING LIGHT, TYPE B
3-4 48X48 16.00	BE PREPARED TO STOP	R3-1 48X48 16.00	NO RIGHT TURN (SYMBOL)	6161053		ING LIGHT, TYPE C
3-5 48X48 16.00	SPEED LIMIT AHEAD	R3-2 48X48 16.00	NO LEFT TURN (SYMBOL)	6161055		ENTIAL FLASHING WARNING LIGHT
4-1L 48X48 16.00	MERGE (SYMBOL FROM LEFT)	R3-3 36X36 9.00	NO TURNS	6161070		LAR MARKER
4-1R 48X48 16.00	MERGE (SYMBOL FROM RIGHT)	R3-4 48X48 16.00	NO U-TURN (SYMBOL)	6161095		R SPEED ADVISORY SYSTEM
4-1aL 48X48 16.00	MERGE (ARROW SYMBOL)	R3-7L 30X30 6.25	LEFT LANE MUST TURN LEFT	1		GEABLE MESSAGE SIGN.
4-1aR 48X48 16.00	MERGE (ARROW SYMBOL)	R3-7R 30X30 6.25	RIGHT LANE MUST TURN RIGHT	6161096		ISSION FURNISHED/RETAINED
5-1 48X48 16.00	ROAD/BRIDGE/RAMP NARROWS	R4-1 36X48 12.00	DO NOT PASS	1101030		GEABLE MESSAGE SIGN W/O COMM.
5-3 48X48 16.00	ONE LANE BRIDGE	R4-2 36X48 12.00	PASS WITH CARE	1 6161098A		RFACE, CONTRACTOR FURNISHED/RETAINED
5-5 48X48 16.00	NARROW LANES	R4-8a 36X48 12.00	KEEP LEFT (HORIZONTAL ARROW)	101010307		GEABLE MESSAGE SIGN WITH COMM.
5-1 48X48 16.00	DIVIDED HIGHWAY (SYMBOL)	R4-7a 36X48 12.00	KEEP RIGHT (HORIZONTAL ARROW)	6161099		RFACE, CONTRACTOR FURNISHED/RETAINED
5-2 48×48 16.00	DIVIDED HIGHWAY END (SYMBOL)	R5-1 30X30 6.25	DO NOT ENTER	6162000A		ZONE TRAFFIC SIGNAL SYSTEM
6-3 48X48 16.00	TWO WAY TRAFFIC (SYMBOL)	R5-1a 36X24 6.00	WRONG WAY	6162002		ORARY LONG-TERM RUMBLE STRIPS
17-3a 30X24 5.00	NEXT XX MILES (PLAQUE)	R6-1L 54X18 6.75	ONE WAY ARROW (LEFT)	6162004		ORARY SHORT-TERM RUMBLE STRIPS
8-1 48X48 16.00	BUMP	R6-1R 54X18 6.75	ONE WAY ARROW (RIGHT)	1 3132331		ORARY TRAFFIC BARRIER
8-2 48X48 16.00	DIP	R6-2L 24X30 5.00	ONE WAY (LEFT)	1 6173600D		RACTOR FURNISHED/RETAINED
8-3 48×48 16.00	PAVEMENT ENDS	R6-2R 24X30 5.00	ONE WAY (RIGHT)	101130000		ORARY TRAFFIC BARRIER
8-4 48×48 16.00	SOFT SHOULDER	R9-9 24X12 2.00	SIDEWALK CLOSED	1 6173602B		RACTOR FURNISHED/COMMISSION RETAINED
8-5 48×48 16.00	SLIPPERY WHEN WET (SYMBOL)	113 3 24×12 2:00	SIDEWALK CLOSED AHEAD,	6174000A		. TRAFFIC BARRIER HEIGHT TRANSITION
8-6 48×48 16.00	TRUCK CROSSING (WITH FLAGS)	R9-11L 24X18 3.00	(ARROW LEFT) CROSS HERE	6175010A		CATING TEMPORARY TRAFFIC BARRIER
8-6c 48X48 16.00	TRUCK ENTRANCE	N3 11E 21X10 3.00	SIDEWALK CLOSED AHEAD.	101130107		ORARY TRAFFIC BARRIER
3-7 36X36 9.00	LOOSE GRAVEL	R9-11R 24X18 3.00	(ARROW RIGHT) CROSS HERE	6176000B		ISSION FURNISHED/RETAINED
8-7a 36X36 9.00	FRESH OIL/LOOSE GRAVEL	R10-6 24X36 6.00	STOP HERE ON RED (45° ARROW)	101100000		. TRAFFIC BARRIER HEIGHT TRANSITION
3-9 48X48 16.00	LOW SHOULDER	R11-2 48X30 10.00 2 20.00	29 ROAD CLOSED	1 6177000B		ISSION FURNISHED/RETAINED
3-11 48X48 16.00	UNEVEN LANES	111 2 140,30 10:00 2 20:00	ROAD CLOSED XX MILES AHEAD	6208064A		ORARY RAISED PAVEMENT MARKER
3-12 48X48 16.00	NO CENTER LINE	R11-3a 60X30 12.50 2 25.00	30 LOCAL TRAFFIC ONLY	9029400		ORARY TRAFFIC SIGNALS
8-15 48X48 16.00	GROOVED PAVEMENT	R11-4 60X30 12.50	ROAD CLOSED TO THRU TRAFFIC	9029401		ORARY TRAFFIC SIGNALS AND LIGHTING
8-15P 30X24 5.00	MOTORCYCLE (PLAQUE)	CDNST-3A 60X48 20.00	FINE SIGN	1 302 3401	I E IVII C	JRAKT TRAFFIC STONALS AND LIGHTING
3-15F 30X24 5.00 3-17 48X48 16.00	SHOULDER DROP-OFF (SYMBOL)	CONST-3X 56X12 4.67	SPEEDING/PASSING (PLATE)	1	+ + + -	
3-17 48X48 16.00	SHOULDER DROP-OFF (STMBOL)		ANEOUS SIGNS	11	+ + + -	
0-1 42RND. 9.62	RAILROAD CROSSING	CONST-5 48X36 12.00	POINT OF PRESENCE	1	+ + + -	
12-1 24X24 4.00	DOUBLE DOWN ARROW (SYMBOL)	CONST-5 96X48 32.00	POINT OF PRESENCE	1	+ + + -	
2-1	LOW CLEARANCE (SYMBOL)	CDNST-7 48X24 8.00	RATE OUR WORK ZONE	1	+ + + -	
2-2 48X48 16.00 2-2X 24X18 3.00	LOW CLEARANCE (STMBOL)	CONST-7 48X24 8.00 CONST-7 72X36 18.00	RATE OUR WORK ZONE	1	+ + + -	
12-24 24X18 3.00 12-29 84X24 14.00	OVERHEAD LOW CLEARANCE (FEET AND INCHES)	CONST-8 48X36 12.00	WORK ZONE NO PHONE ZONE	+		
12-4 120×60 50.00	LOW CLEARANCE XX FT XX IN XX MILES AHEAD	CONST-5P 60X8 3.33	POINT OF PRESENCE	1		
12-4 120x60 50.00	WIDTH RESTRICTION XX FT XX IN XX MILES AHEAD	CONST 31 00A0 3.33	LOTHI OF LIVE SENCE	1		
13-1 30X30 6.25	ADVISORY SPEED (PLAQUE)	11		1		
6-2 30X24 5.00	XXX FEET (PLAQUE)	W020-3A 48X48 16.00 2 32.00	20A ROAD CLOSED 500 FT	1		
6-2 30X24 5.00 6-3 30X24 5.00	XXX FEET (PLAQUE) X MILE (PLAQUE)	1 1020-JA 10040 10.00 2 32.00	ZOA KUAD CLUSED SUU FI	1		
20-1 48X48 16.00	ROAD/BRIDGE/RAMP WORK AHEAD	1		1		
0-1 48X48 16.00	DETOUR AHEAD			1		
20-2 48X48 16.00 20-3 48X48 16.00 2 32.00				1		
	20 ROAD CLOSED AHEAD	616-10-05		J		
20-4 48X48 16.00	ONE LANE ROAD AHEAD	616-10.05 TOTAL				
20-5 48X48 16.00	RIGHT/CENTER/LEFT LANE CLOSED AHEAD	CONSTRUCTION SIGNS 109	TOTAL			
20-5a 48X48 16.00	2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD	1 616-10.10	TOTAL			
20-6a 48X48 16.00	RIGHT/CENTER/LEFT LANE CLOSED	RELOCATED SIGNS				
20-70 48X48 16.00	FLAGGER (SYMBOL, WITH FLAGS)	-				
021-2 36X36 9.00	FRESH OIL	-				
1-5 48X48 16.00	SHOULDER WORK AHEAD	1				
2-1 48X48 16.00	BLASTING ZONE AHEAD	-			SHMM	MARY OF QUANTITIES
22-2 42X36 10.50	TURN OFF 2-WAY RADIO AND PHONE	i			0 0 1 1 1 1 1	3. 30/11/11/12

END BLASTING ZONE WET PAINT (ARROW PIVOTS)

W022-2 42X36 10.50 W022-3 42X36 10.50

G022-1 21X15 2.19

SUMMARY OF QUANTITIES SHEET 2 OF 2

NCHOLAS
NUMBER
PE-2007035784

THIS SHEET HAS BEEN
RISHED AND DATED
ELECTRONICALLY.

DATE PREPARED
8/44/2021

DATE PREPARED
8/4/2021

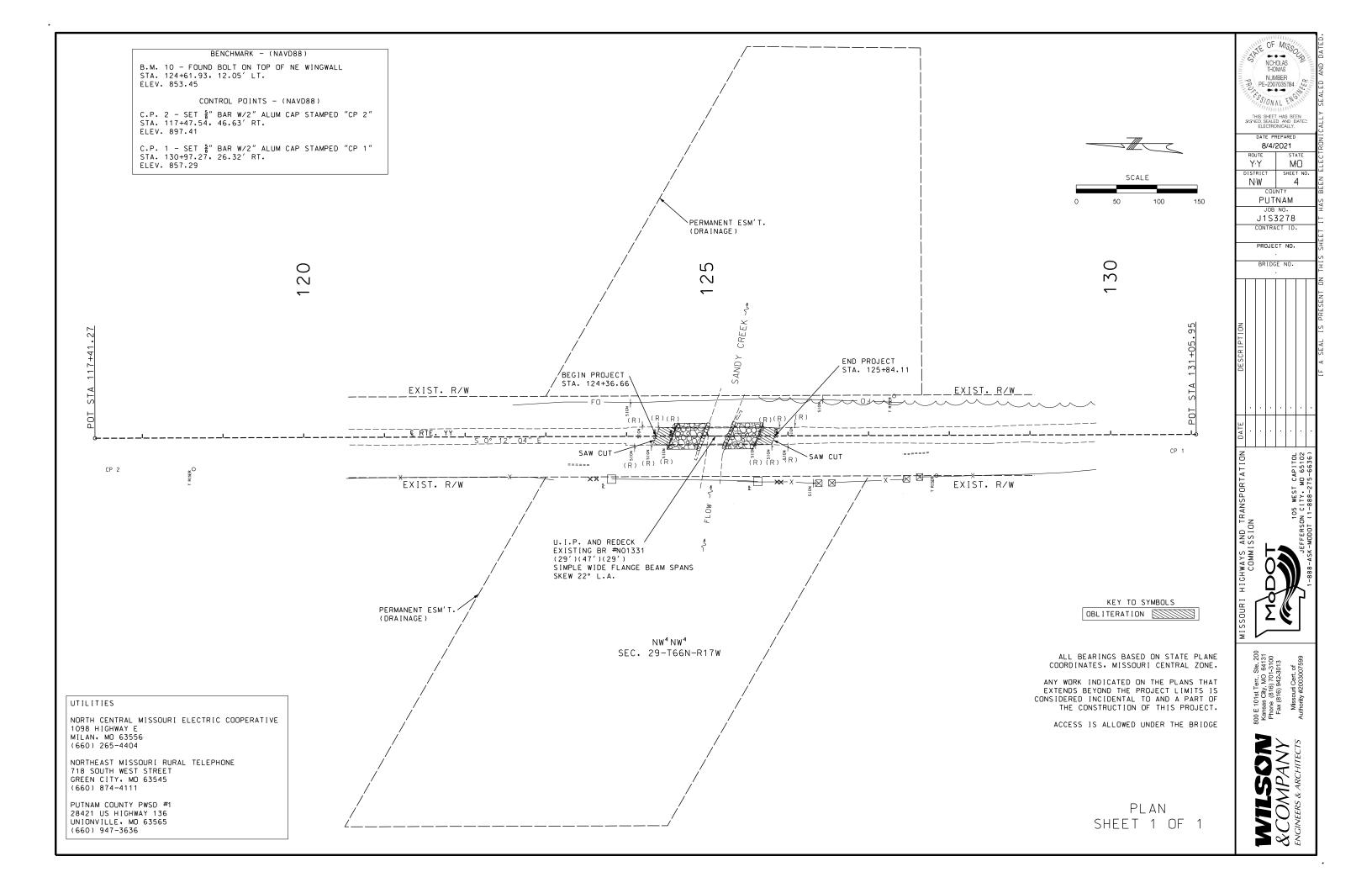
ROUTE
Y.Y MO
STRICT SHEET NO.
N.W 3

COUNTY
PUTNAM
JOB NO.
J153278
CONTRACT ID.

PROJECT NO.

BRIDGE NO.

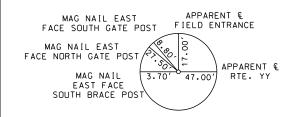
800 E 101st Terr., Ste. 200 Kanasa City, MO 64131 Phone (816) 701-3100 Fax (816) 942-3013 Missouri Cert. of Authority #2003007599



ALL PROJECT COORDINATES ARE OF THE MISSOURI STATE PLANE COORDINATE (SPC) SYSTEM OF 1983.					
PROJECT COORD	ΙN	ATE INFORMATION			
COORDINATE SYSTE	М	MISSOURI STATE PLANE			
HORIZONTAL DATUM	1	NAD 83			
VERTICAL DATUM		NAVD 88			
GEOID MODEL		GEOID 12B (CONUS)			
ELEVATIONS		STATIC GPS OBSERVATION			
DETERMINED BY		MO VRS			
PROJECT PROJECTI	ON	FACTOR 1.0000000			
REFERENCE CON	TR	OL INFORMATION			
COORDINATE SYSTE	М	MISSOURI CENTRAL ZONE 2402			
CONTROL STATION		·I AC1			
DESIGNATION					
CORS_ID	Ν	/A			
PID N		/A			
LATITUDE					
LONGITUDE	93°00′09.35603″ (W)				
NORTHING (M)	5	44692.869			
EASTING (M)	4	57550.523			

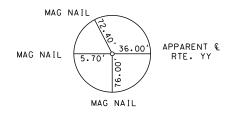
MO CENTRAL/IOWA SOUTH

					RDINATE POINT				PE-PE-	NUMBER E-2007035784
					STATE PLANE (GF				THIS S SIGNED, S	SHEET HAS BEE SEALED AND D. ECTRONICALLY.
			OFFSET	NORTHING	EASTING	ELEVATION		GPK		ECTRONICALLY. TE PREPARED
SHEET NO		LOCATION	(USFT)	(US SURVEY FT)	(US SURVEY FT)	(US SURVEY FT)	DESCRIPTION	POINT ID		8/4/2021
	NTROL POINT			T					ROUTE	
4	117+47.54	ROUTE YY	46.63′ RT	1698313.941	1545732.740	897.41	C.P. 2 - SET BAR W/2" ALUM. CAP	•	Y.Y DISTRIC	M-
4	130+97.27	ROUTE YY	26.32′ RT	1699663.585	1545707.692	857.29	C.P. 1 - SET BAR W/2" ALUM. CAP		— N·W	
•	·		*	,	•	'	·			COUNTY
•	·		•		•		·	•		JOB NO.
•	·	·	-		•	·	·	•	— J1	1S3278
•	•		•	*	•	·	·	•	CON	NTRACT ID.
•	•						·	•		OJECT NO.
•	•		•		•			•		
•							·		BR	RIDGE NO.
•			-				·	•	\dashv	$\dot{\Box}$
LIGNMENTS		·	•	<u>'</u>	·	· ·	· .	·	$-\parallel \parallel \parallel \parallel \parallel$	
4	117+41.27	ROUTE YY	0.00′	1699670.024	1545754.300	0.00	BEGIN CENTERLINE CHAIN	RTEYY	$-\parallel \parallel \parallel \parallel \parallel$	
4	131+05.95	ROUTE YY	0.00	1698305.349	1545759.090	0.00	END CENTERLINE CHAIN	RTE-TT	$-\parallel \parallel \parallel \parallel \parallel$	
<u>4</u>	131703.93	KOUTE II		1636303.343	1545759.090		END CENTERLINE CHAIN		- ĕ '	
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ZONE

CONTROL POINT 2 5g" IRON BAR NORTH OF BRIDGE COORDINATES NORTHING = 1.698.313.941EASTING = 1.545.732.740ELEVATION = 897.41(APPROXIMATE STATION 117+47.54 APPROXIMATE OFFSET 46.63' RIGHT)



CONTROL POINT 1
\$ IRON BAR
SOUTH OF BRIDGE COORDINATES NORTHING = 1.699.663.585EASTING = 1.545.707.692ELEVATION = 857.29(APPROXIMATE STATION 130+97.27 APPROXIMATE OFFSET 26.32' RIGHT)

REFERENCE POINTS AND COORDINATE POINTS SHEET 1 OF 1



800 E 101st Terr., Ste. 200 Kansas City, MO 64131 Phone (816) 701-3100 Fax (816) 942-3013

NICHOLAS THOMAS NUMBER

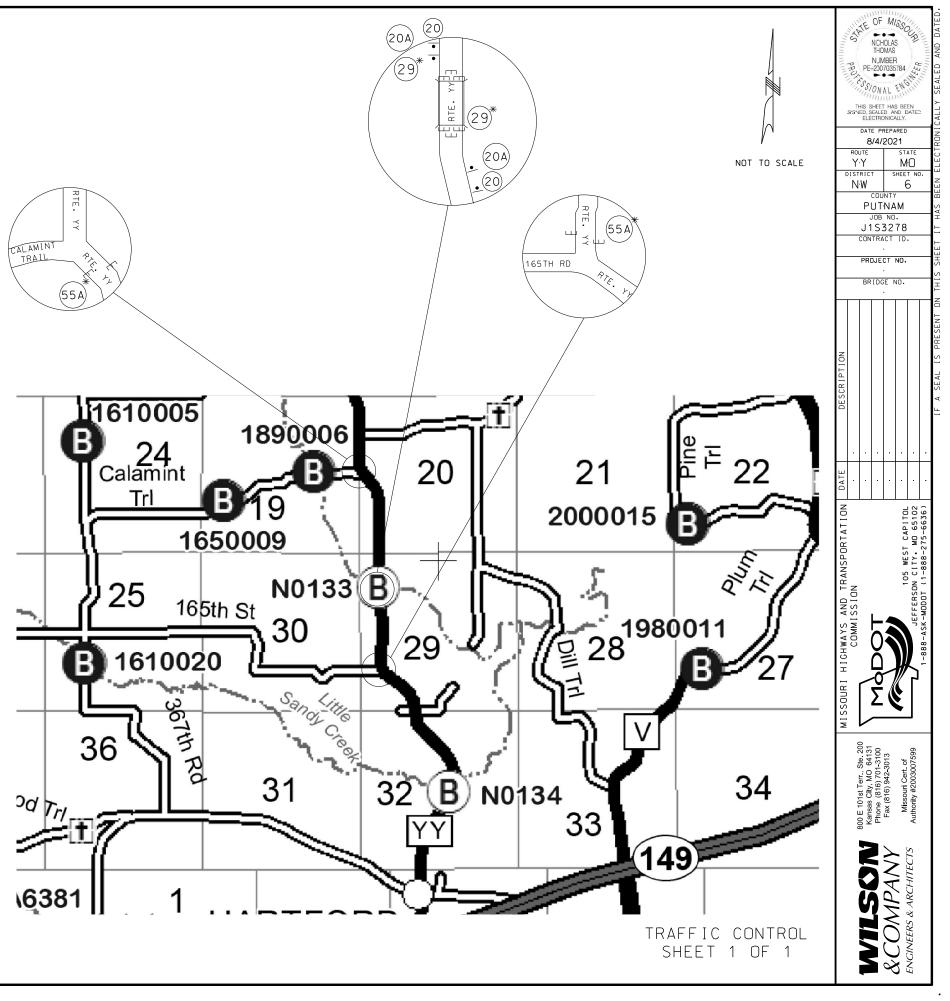


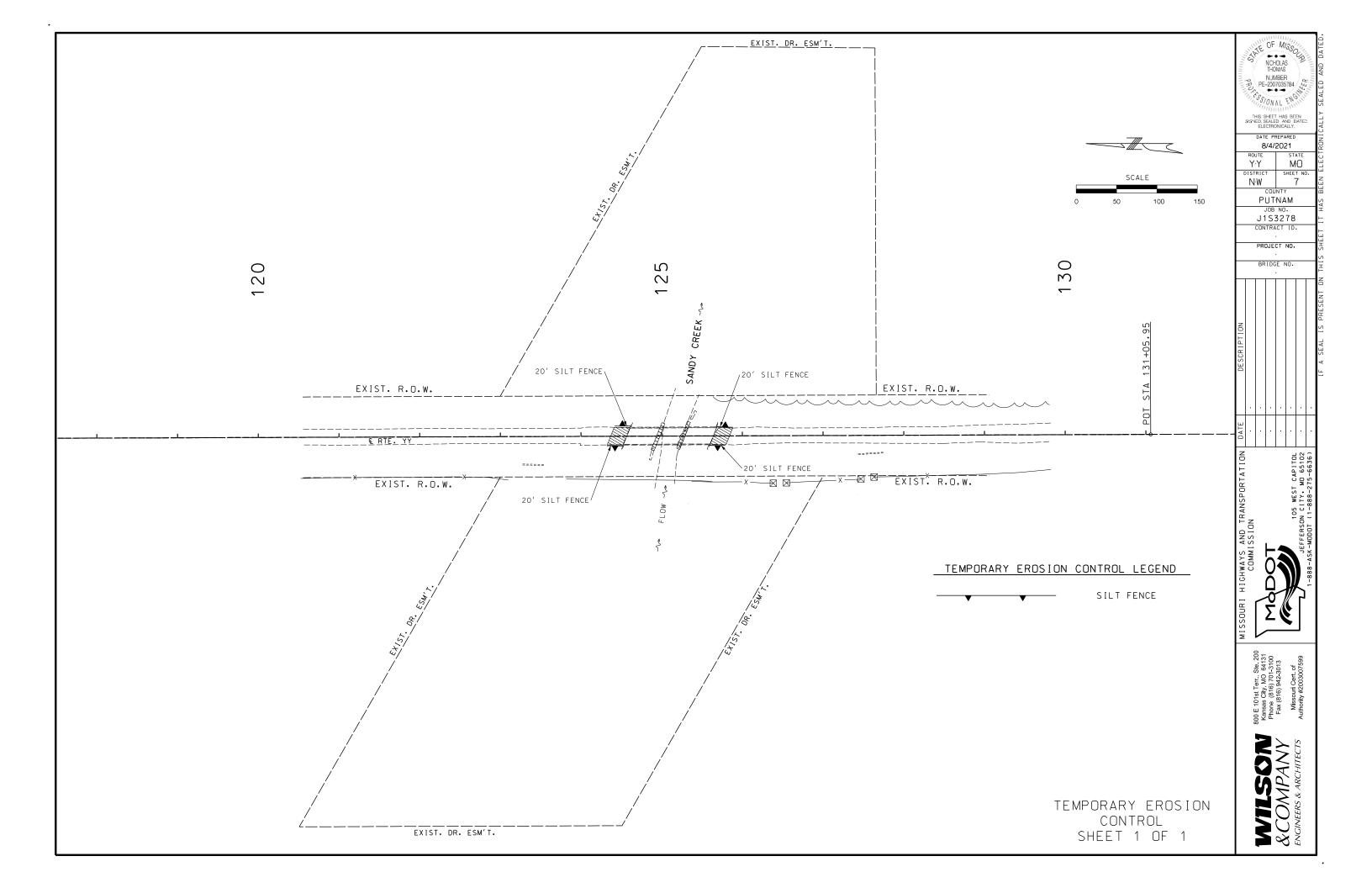
NOTES:

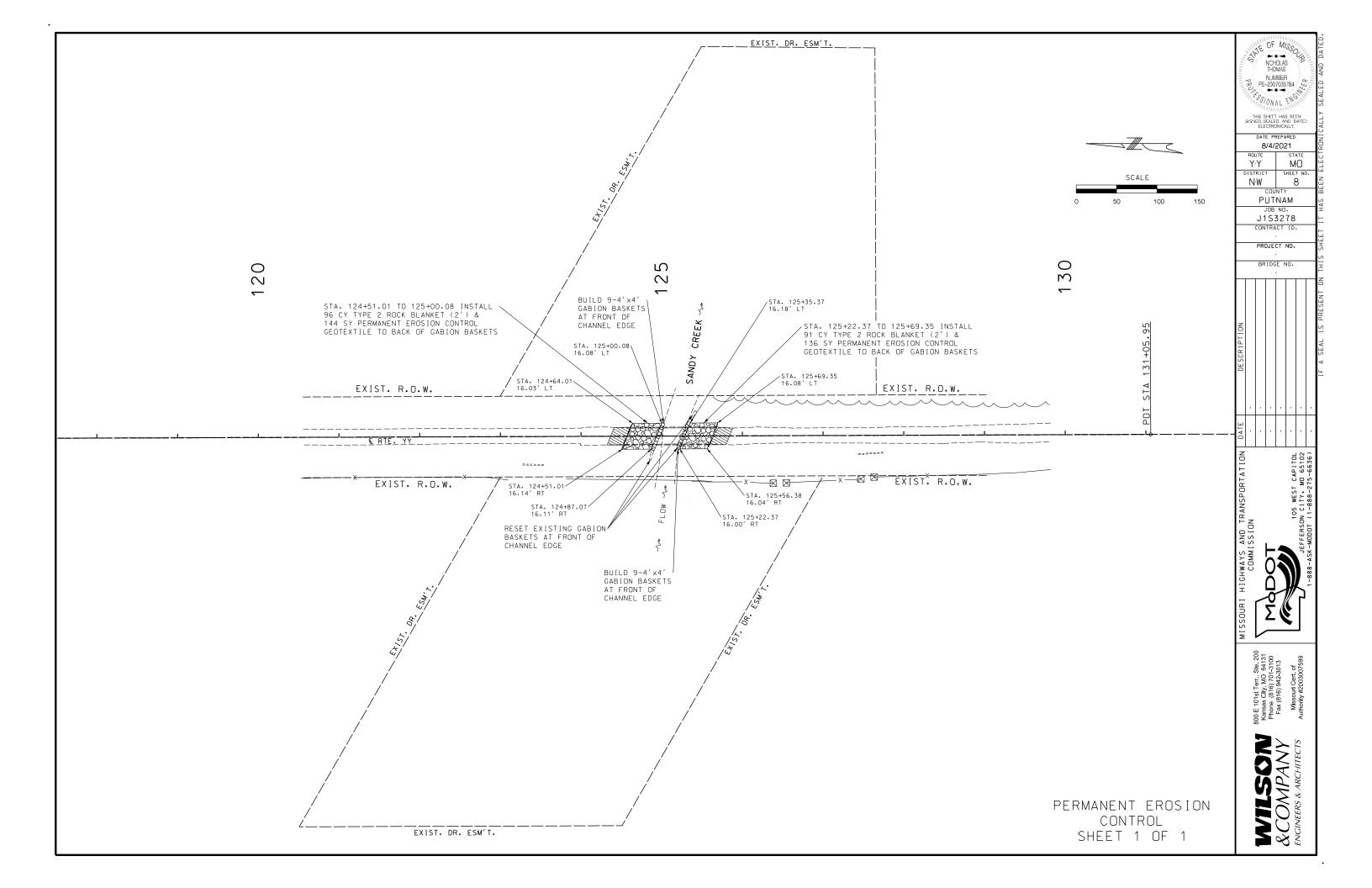
ALL STATIONS, SPACING, AND DISTANCES OF TRAFFIC CONTROL DEVICES ARE APPROXIMATE AND MAY BE REVISED AS DIRECTED BY THE ENGINEER TO FIT FIELD CONDITIONS.

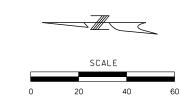
ANY EXISTING SIGNS THAT CONFLICT WITH THIS TRAFFIC CONTROL PLAN SHALL BE COVERED.

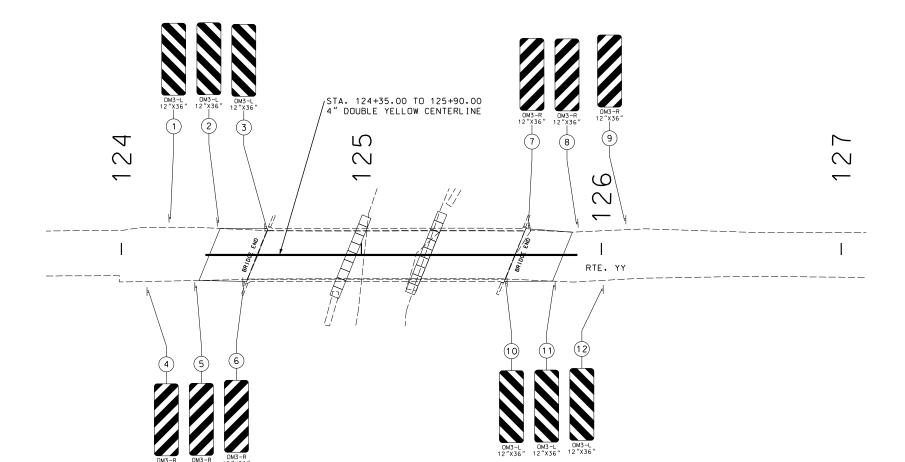
* SIGN MOUNTED TO BARRICADE











PERFORATED

SQUARE STEEL TUBE POST

TOTAL

ITEM NO 9031270A

8.5

6.0

SIGN POST DETAIL NO 1 SHEET NO

14.0' L STD 11.0 11.0

14.0' R STD 11.0 11.0

STD 8.5

STD 6.0

STD 8.5

STD 6.0

STD 6.0

STD 11.0

STD 6.0

12.5' R STD 8.5 8.5

126+00 | 14.0' R | STD | 11.0 | 11.0

STD 8.5 8.5

ANCHOR

12 GA

9031271

3.0

3.0

3.0

3.0

3.0

3.0

3.0

3.0

3.0

3.0

SIGNS

STATION

124+20

124+40

124+60

124+10

124+30

124+50

125+70

125+90

126+10

125+60

125+80

LOCATION

12.5′ L

12.5′ R

14.0' L

11.5′ R

SIGN·SIZE

12"X36"

12"X36"

12"X36"

12"X36"

12"X36'

12"X36"

12"X36"

12"X36"

12"X36"

11 12"X36"

12 12"X36"

STANDARD SIGN ASSEMBLIES								
	SIGN·SIZE	STATION	FLAT SHEET FLUORESCENT					
IBER			SIGN DESCRIPTION, SIZES & NUMBER OF EACH					
SIGN NUMBER			OM3-L 12"x36"	OM3-R 12"x36"				
1	12"X36"	124+20	1					
2	12"X36"	124+40	1					
3	12"X36"	124+60	1					
4	12"X36"	124+10		1				
5	12"X36"	124+30		1				
6	12"X36"	124+50		1				
7	12"X36"	125+70		1				
8	12"X36"	125+90		1				
9	12"X36"	126+10		1				
10	12"X36"	125+60	1					
11	12"X36"	125+80	1					
12	12"X36"	126+00	1					
		TOTALS	6	6				

SIGN SUMMARY							
STANDARD	SIGN DETAIL	NO EACH	SIZE, TYPE & SQ FT				
SIGN	SHEET NO		SIZE	FLAT SHE FLUORESCE ITEM NO 9035069A			
OM3-L	STD	6	12"x36"	18			
OM3-R	STD	6	12"x36"	18			
	•		TOTAL	36			
				*Y			

NICHOLAS THOMAS NUMBER PE-2007035784 8/4/2021 $Y \cdot Y$ ΜO DISTRICT SHEET NO N·W 9 PUTNAM JOB NO. J1S3278 CONTRACT ID. PROJECT NO. BRIDGE NO. 800 E 101st Terr., Ste. 200 Kansas City, MO 64131 Phone (816) 701-3100 Fax (816) 942-3013

SIGNING AND PAVEMENT MARKING SHEET 1 OF 1

U.I.P., REDECK AND MAKE COMPOSITE EXISTING (29', 47', 29') SIMPLE WIDE FLANGE BEAM SPANS (SKEW: 22° L.A.)

Table Showing S2 Bar Lengths							
Int. Bent No. 2 Int. Bent No. 3							
Span 1	Span 2	Span 2	Span 3				
5′-0″	5′-0″	5′-0″	5′-0″				

General Notes:

Design Specifications:

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

Desian Loadina:

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, Int. Bents & Superstructure, except Barrier) Reinforcing Steel (Grade 60)

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

Reinforcina Steel:

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

Miscellaneous:

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

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

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

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

Contractor shall verify all dimensions in field before ordering new material.

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).

See roadway plans for additional work on existing rock blanket and gabion wall

Bridge deck may be finished with a vibratory screed.

Traffic Handling:

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

Estimated Quantities for Slab on St	eel			
I tem	Total			
Class B-2 Concrete cu. yard				
Reinforcing Steel (Epoxy Coated) pound	20,920			

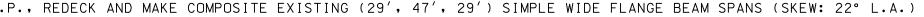
The table of Estimated Quantities for Slab on Steel represents the quantities used by the State in preparing the cost estimate for concrete slabs. The area of the concrete slab will be measured to the nearest square yard longitudinally from end of slab to end of slab and transversely from out to out 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.

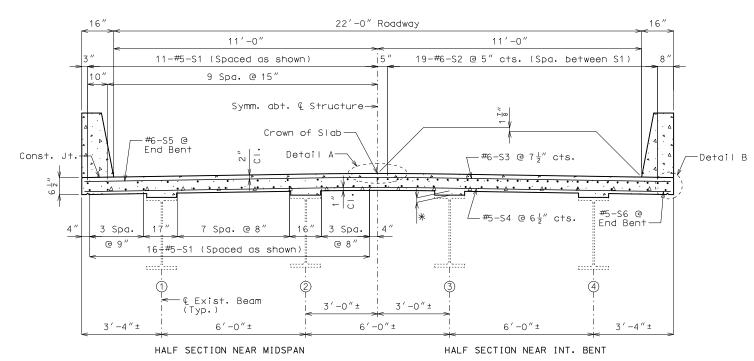
Method of forming the slab shall be as shown on the plans and in accordance with Sec 703. All hardware for forming the slab to be left in place as a permanent part of the structure shall be coated in accordance with ASTM A123 or ASTM B633 with a thickness Class SC 4 and a finish Type I, II or III.

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.

Detailed May 202





TYPICAL SECTION THRU SLAB

Removal of Existing Bridge Deck

Substructure Repair (Formed)

Substructure Repair (Unformed)

lab on Steel

Type H Barrier

Shear Connectors

lab Drain

* Increase existing haunch $\frac{3}{8}$ " \pm at interior beams to match grade shown in Detail A.

Protective Coating - Concrete Bents and Piers (Epoxy

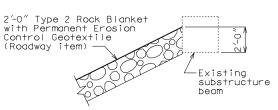
Required Lap Length For Bar Splices XX					
Bar Size	Splice Length				
4	2′-7″				
5	3'-3"				
6	3′-10″				
7	4′-11″				

f'c = 4,000 psi f'c = 4,000 psi

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

= 60,000 psi

** Unless otherwise shown.

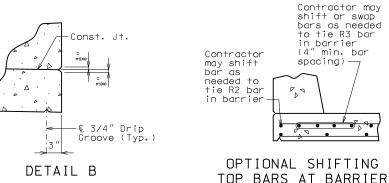


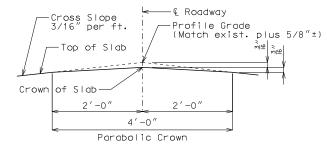
Cost of any required	excavation ·	for bridge	will be	considered	completely
covered by the contro	ict unit pri	ca for oth	ar itame		

Item

Estimated Quantities

ROCK BLANKET ON SPILL SLOPES





DETAIL A

BEGINNING STATION 124+56.50 ± (MATCH EXISTING)

REPAIRS TO BRIDGE: ROUTE YY OVER SANDY CREEK ROUTE YY FROM ROUTE 136 TO ROUTE 129 ABOUT 2.5 MILES NORTH OF ROUTE 136

SEC/SUR 29

TWP 66N

RGE 17W

Total

2399

294

214

10

10

856

16

sq. foot

sq. yard

sa. foot

sq. foot

lump sum

each

each

linear foot

TED S. KOESTER NUMBER PE-2013000591 S/ONAL S 7/22/2021 ΥY MΩ DISTRIC SHEET NO BR 1 PUTNAM J1S3278 CONTRACT ID PROJECT NO. N01332



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 shall 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 removal lines.

General Notes:

Stay-In-Place Forms:

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

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

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

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

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 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.

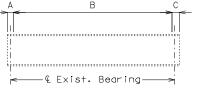
Haunchina:

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

Structural Steel Protective Coating

(Full-length of exterior WF beams):

Sides and bottom of the top flanges of exterior WF beams shall be coated with one 6-mil thickness coat of gray epoxy-mastic primer (non-aluminum) applied over an SSPC-SP3 surface preparation in accordance with Sec 1081. The cost of surface preparation and gray epoxy-mastic primer will be considered completely covered by the contract unit price for Removal of Existing bridge Deck.

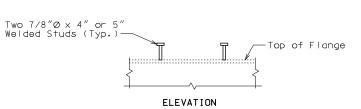


ELEVATION SHOWING SHEAR CONNECTOR SPACING

TABLE SHOWING SHEAR CONNECTOR UNIT SPACING								
Span	S.C. per unit	Α	В	С				
1	2	2 ½" ±	32 Units @ 11" cts.	2 ½" ±				
2	2	8 " ±	43 Units @ 13" cts.	8″±				
3	2	2 ½" ±	32 Units @ 11" cts.	2 ½" ±				
Total shear connectors required								

₩ 2″ Minimum

** Min. Haunch = 0" Max. Haunch = 3'



---TED S. KOESTER

NUMBER

PE-2013000591

SONAL E

7/22/2021

PUTNAM

J1S3278

CONTRACT ID

PROJECT NO.

N01332

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SHEET NO

2

MO MO

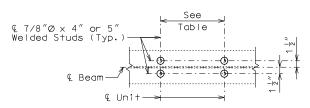
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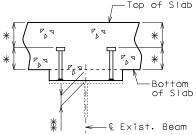


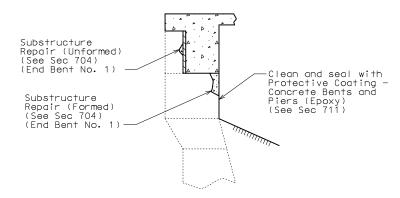
PLAN OF SHEAR CONN. (2 PER UNIT)

DETAILS OF SHEAR CONNECTORS

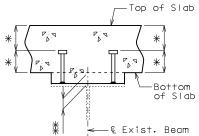
The cost of supplying and installing shear connectors will be considered completely covered by the contract unit price for Shear Connectors.

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

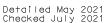




TYPICAL SECTION THRU END BENTS 1 & 4 SHOWING PROTECTIVE COATING AND SUBSTRUCTURE REPAIR



SECTION THRU EXIST. BEAM SHOWING SHEAR CONNECTORS



Steel corrugated A-

Form support

See Sec 216.50

Clean and coat with Gray Epoxy-Mastic

Primer (See Sec 1081)

bridge forms

—Fill corrugations with foam (Typ.)

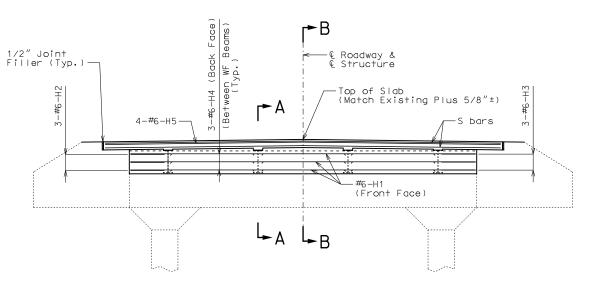
OPTIONAL STAY-IN-PLACE

FORM DETAILS

TYPICAL SECTION THRU EXTERIOR BEAMS SHOWING PROTECTIVE COATING

SECTION A-A

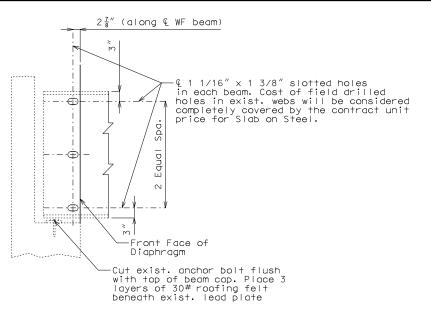
abla



SECTION NEAR END BENTS

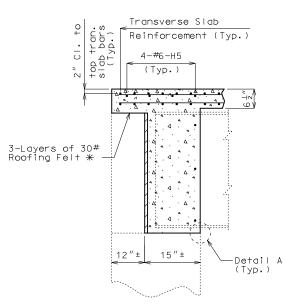
(End Bent No. 1 shown, End Bent No. 4 similar)

Notes: Existing steel end diaphragms not shown for clarity (U.I.P.). U bars not shown for clarity.

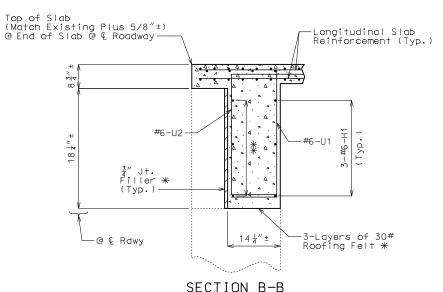


DETAIL A

DETAIL OF WEB HOLES AT END BENT



SECTION A-A



* Entire length of diaphragm (Typ.)

** 3-#6-H4 (Between WF beams)

Notes:

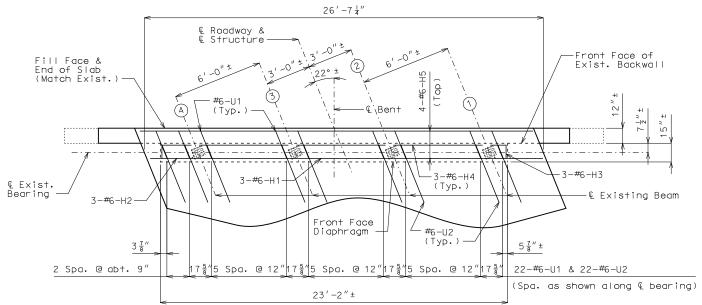
Required temporary support load of 10 kips at each bearing is a service load without a factor of safety. It includes the dead load (without the slab) and a construction load of 50 psf applied to the deck area. Live load is not included in the support load (See Special Provisions).

The exposed and accessible surfaces of the existing structural The exposed and accessible surfaces of the existing structura steel and bearings that will be encased in concrete shall be cleaned with a minimum of SSPC-SP-3 surface preparation and coated with a minimum of one coat of gray epoxy-mastic primer (non- aluminum) in accordance with Sec 1081 to produce a dry film thickness of not less than 3 mils before concrete is poured. The surface preparation and coating for 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 Removal of Existing Bridge Deck.

All concrete and reinforcement in end bents, complete in place, is included in the table of Estimated Quantities for Slab on Steel and will be considered completely covered by the contract unit price for Slab on Steel.

Cost of cutting anchor bolts, temporary supports, and placing roofing felt and joint filler will be considered completely covered by the contract unit price for Slab on Steel.

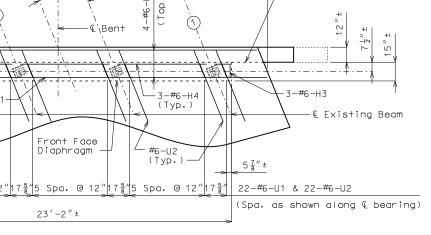
For details and reinforcement of barrier, see Sheets No. 6 & 7.



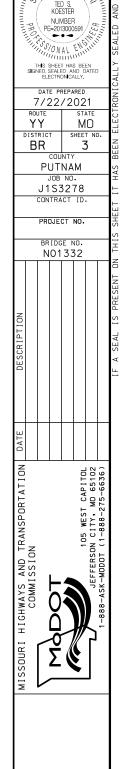
PART PLAN

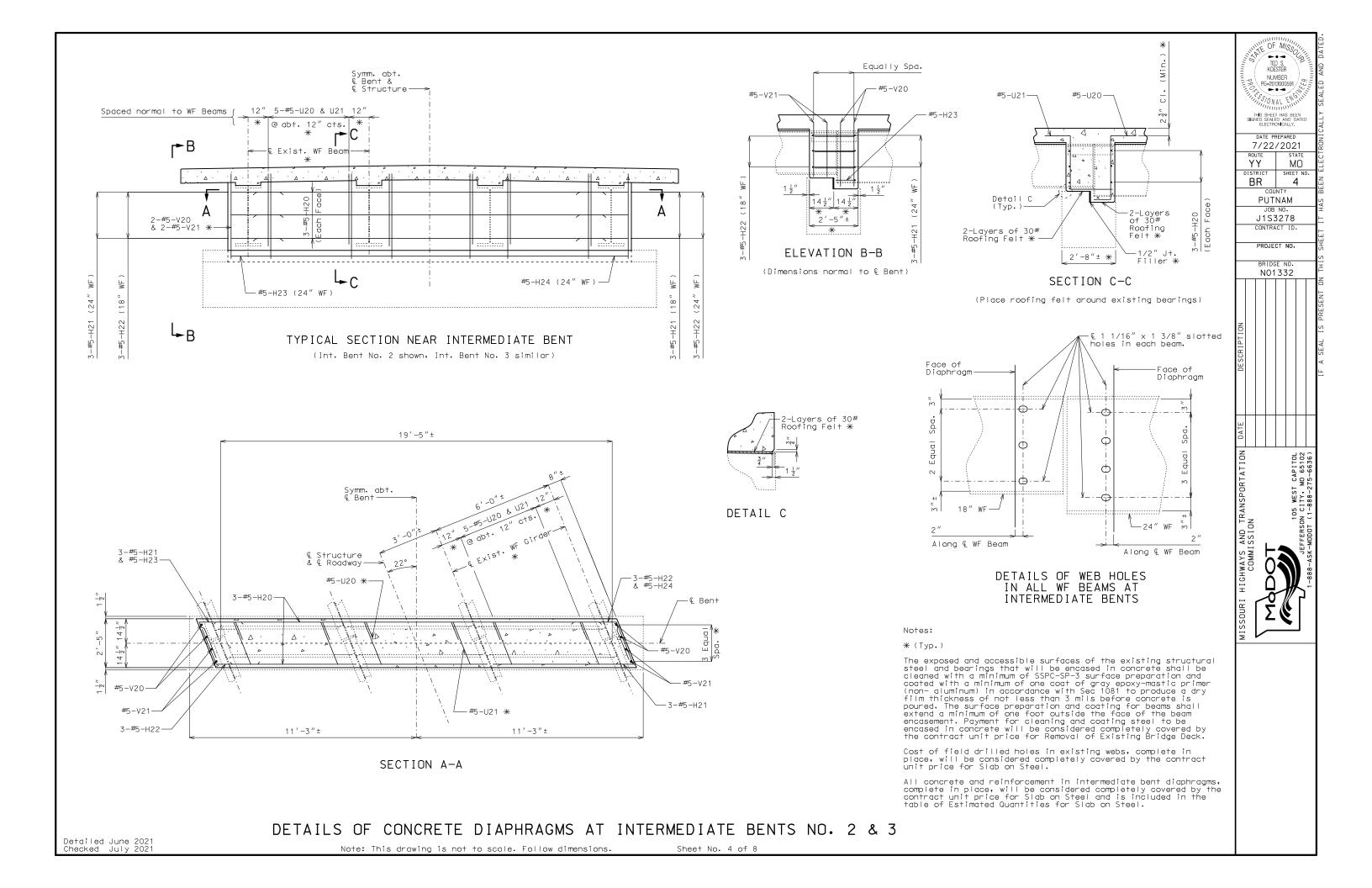
(End Bent No. 1 shown, End Bent No. 4 similar)

Notes: Slab reinforcing steel not shown for clarity.



DETAILS OF END BENTS NO. 1 & 4

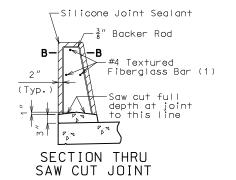




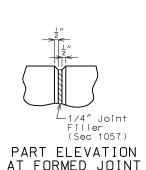
100-#5-R1, R2 & R3 (Spaced as shown in Part Elevation of Barrier) SPAN (1-2) SPAN (2-3) SPAN (3-4)

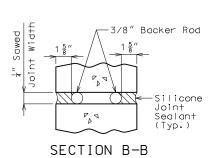
ELEVATION OF BARRIER

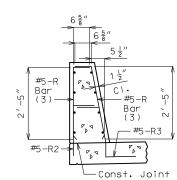
(Left barrier shown, right barrier similar) Longitudinal dimensions are horizontal.

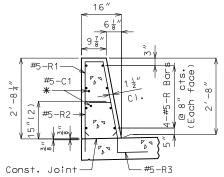


6'-05









Use a minimum lap of 3'-1" for

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

#5 horizontal barrier bars.

SECTION A-A

(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.)

R-BAR PERMISSIBLE ALTERNATE SHAPE

€ 1/4" J+. (Barrier only)

PART PLAN SHOWING

JOINT LOCATION

(Typ.)

Roadway

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.

6'-05"

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

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

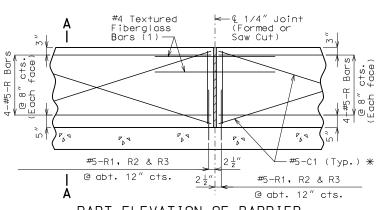
Concrete in barrier shall be Class B-1.

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.



PART ELEVATION OF BARRIER

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

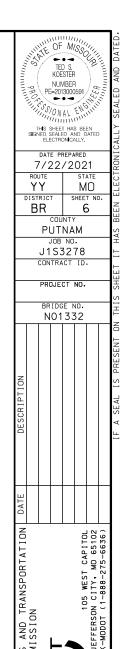
TYPE H BARRIER

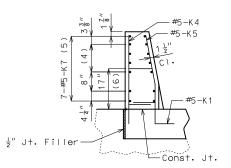
Detailed June 202

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

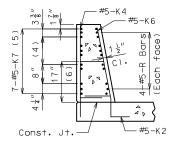
(2) To top of bar

Sheet No. 6 of 8

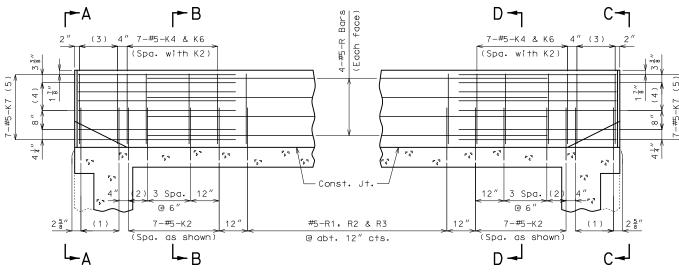




ELEVATION A-A

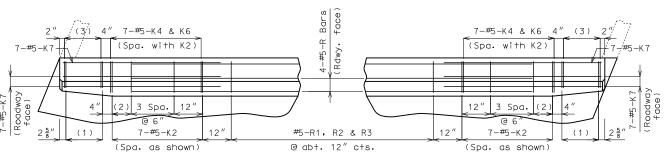


SECTION B-B

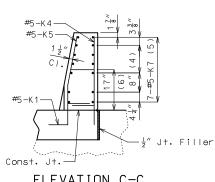


PART ELEVATION

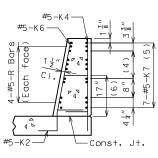
- (1) 5-#5-K1 @ 4" cts.
- (2) 2 Spaces @ 4"
- (3) 5-#5-K4 and 5-#5-K5, spaced with K1
- (4) 3 Spaces @ 3¹³"
- (5) Spaced as shown, each face
- (6) To top of bar



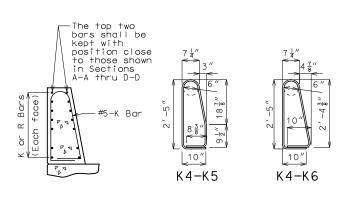
PART PLAN



ELEVATION C-C



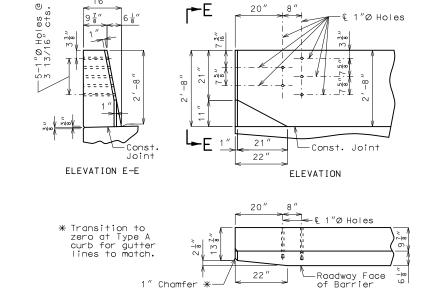
SECTION D-D



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.



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

Reinforcing Steel:

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

Use a minimum lap of 3'-1'' between K7 bars and R bars.

TYPE H BARRIER AT END BENTS

(Left barrier shown, right barrier similar)

Detailed June 2027 Checked July 2027

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

Sheet No. 7 of 8

TED S. KOESTER

PE-2013000591

SONAL E

7/22/2021

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J1S3278 CONTRACT ID

PROJECT NO.

N01332

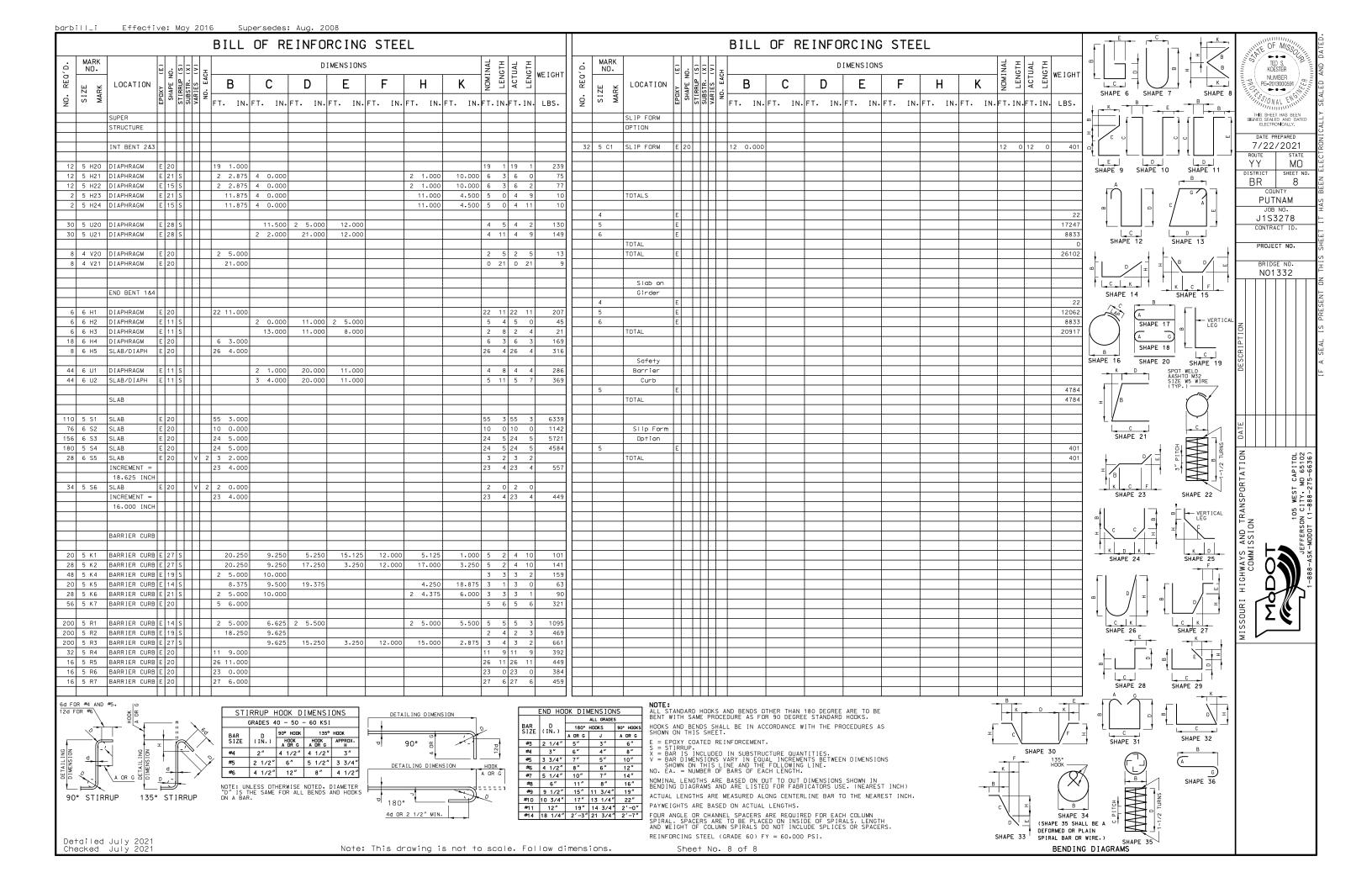
MΩ

SHEET NO 7

ΥY

DISTRICT

BR



DESIGN DESIGNATION

A.A.D.T. - 2022 = 113 A.A.D.T. - 2042 = 124 D.H.V. = 7% T = 13% V = 55 M.P.H. D = 53%

FUNCTIONAL CLASSIFICATION - MAJOR COLLECTOR

NO RIGHT OF WAY ACQUISITION

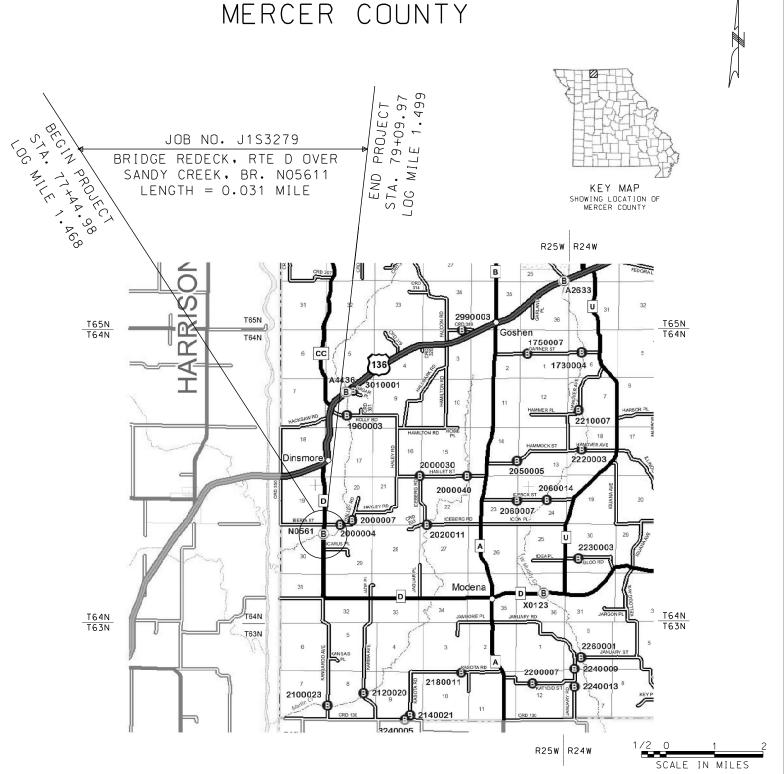
CONVENTIONAL SYMBOLS

BUILDINGS AND STRUCTURES ニュニコ GUARD RAIL GUARD CABLE CONCRETE RIGHT-OF-WAY MARKER STEEL RIGHT-OF-WAY MARKER LOCATION SURVEY MARKER \circ UTILITIES FIBER OPTICS -F0- OVERHEAD CABLE TV -DTV-OTV -UTV--OT--UT--OE--UE--S--UTV -OT -UT -OE UNDERGROUND CABLE TV OVERHEAD TELEPHONE UNDERGROUND TELEPHONE OVERHEAD POWER UNDERGROUND POWER SANITARY SEWER STORM SEWER WATER MANHOLE FIRE HYDRANT WATER VALVE WATER METER °' DROP INLET DITCH BLOCK = GROUND MOUNTED SIGN LIGHT POLE H-FRAME POWER POLE TELEPHONE PEDESTAL Δ FENCE CHAIN LINK WOVEN WIRE GATE POST \boxtimes BENCHMARK

NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

PLANS FOR PROPOSED STATE HIGHWAY



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 NUMBEF
	TITLE SHEET	1
	TYPICAL SECTIONS (TS) (1 SHEET)	. 2
	QUANTITY SHEETS (QU)(2 SHEETS)	- 3
	PLAN-PROFILE (PP)	- 4
	REFERENCE AND CONTROL POINTS (CP)	- 5
	TRAFFIC CONTROL (TC)	- 6
	EROSION CONTROL (EC)	- 7-8
	SIGNING & PAVEMENT MARKING (SN)	- 9
	BRIDGE DRAWINGS (B)	-
	N05611	- 1-8
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NUN PE-200 PE-200 THIS SHEET SYGVED, SEALE ELECTRO		TINGUIS SEALES ON THE					
DATE PE	REPARED	7					
8/4/	2021	C					
ROUTE	STATE	٦,					
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	3279	ŀ					
CONTRA	CT ID.	٦.					
		L					
PROJE	CT NO.	11110					
•							
BRIDGE NO.							
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		2					
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LENGTH OF PROJECT

BEGINNING OF PROJECT STA. 77+44.98
END OF PROJECT STA. 79+09.97

APPARENT LENGTH 164.99 FEET

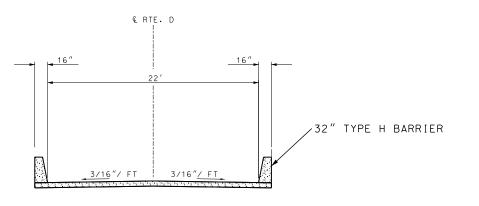
EQUATIONS AND EXCEPTIONS:

ESTIMATED DISTURBED ACRES

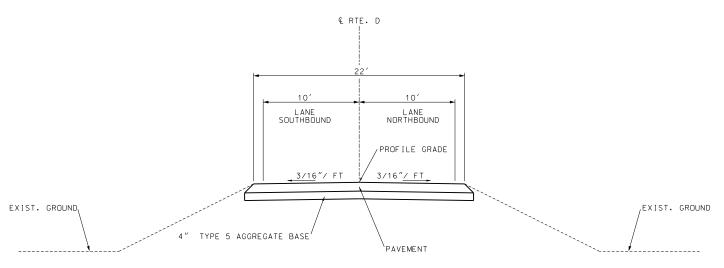
800 E 101st Terr., Ste., 200 Kansas City, MO 64131 Phone (816) 701-3100 Fax (816) 942-3013

0.00 FEET 64.99 FEET 0.031 MILE

TOTAL CORRECTIONS 0.00 FEET
NET LENGTH OF PROJECT 164.99 FEET
STATE LENGTH 0.031 MILE
FOR INFORMATION ONLY



PROPOSED TYPICAL SECTION ON BRIDGE - RTE. D STA. 77+64.98 TO STA. 78+89.97



PROPOSED TYPICAL SECTION RTE. D STA. 77+44.98 TO STA. 77+64.98 STA. 78+89.97 TO STA. 79+09.97

PAVEMENT - HMA DESIGN

12" BITUMINOUS PAVEMENT

1.75" BP-1 W/PG 64-22 10.25" BITUMINOUS BASE W/PG 64-22

ESTIMATE FACTORS: FOR INFORMATION PURPOSES ONLY

BITUMINOUS PAVEMENT MIXTURE PG64-22 (BP-1) - 1.98 TONS/CUYD BITUMINOUS PAVEMENT MIXTURE PG64-22 (BASE) - 1.98 TONS/CUYD TACK COAT - 0.05 GAL/SQYD 4" TYPE 5 AGGREGATE - 0.22 TONS/SQYD COMPACTED

NICHOLAS THOMAS NUMBER PE-2007035784 DATE PREPARED 8/4/2021 Ð ΜO DISTRICT SHEET NO. N·W 2 MER∙CER JOB NO.
J1S3279
CONTRACT ID. PROJECT NO. BRIDGE NO.

800 E 101st Terr., Ste. 200 Kansas City, MO 64131 Phone (816) 701-3100 Fax (816) 942-3013

	REMOVAL OF IMPROVEMENTS								
SHEET	STA.	STA.	LOCATION	ITEM	UNITS	QUANTITY	REMARKS		
4	VARIES		RTE. D	SIGN	EΑ	12	EXISTING OBJECT MARKERS		
4	77+44.98		RTE. D	SAW CUT	FT	18			
4	77+44.98	77+64.98	RTE. D	PAVEMENT	SY	39.5	REMOVAL OF EXISTING PAVEMENT		
4	78+89.97	79+09.97	RTE. D	PAVEMENT	SY	40.0	REMOVAL OF EXISTING PAVEMENT		
4	79+09.97		RTE. D	SAW CUT	FT	18			
					TOTAL	1 LUMP SUM			

CONTRACTOR FURNISHED SURVEYING AND STAKING

TOTAL = 1 LUMP SUM

MOBILIZATION

TOTAL = 1 LUMP SUM

	BITUMINOUS PAVEMENT									
					1.75" BP-1	10.25" BASE	4" TYPE 5			
					(PG 64-22)	(PG 64-22)	AGGR. BASE	TACK COAT		
SHEET	STA.	STA.	LOCATION	WIDTH(FT)	(TONS)	(TONS)	(SY)	(GAL)		
4	77+45.0	77+65.0	RTE. D	VARIES	4.3	25.0	49.0	13.0		
4	78+90.2	79+10.0	RTE. D	VARIES	4.3	25.2	49.0	13.0		
				TOTALS	8.6	50.2	98.0	26.0		
				PAY TOTALS	8.6	50.2	98.0	26		

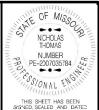
	LINEAR GRADING, CLASS 2								
				QUANTITY					
SHEET	STA.	STA.	LOCATION	(STA)					
4	77+45.0	77+65.0	RTE. D, LT	0.2					
4	77+45.0	77+65.0	RTE. D, RT	0.2					
4	78+90.2	79+10.0	RTE. D, LT	0.2					
4	78+90.2	79+10.0	RTE. D, RT	0.2					
			TOTAL	0.8					
			PAY TOTAL	0.8					

	С	LEARING .	AND GRUBBING	
				AREA
SHEET	STA.	STA.	LOCATION	(AC)
4	77+35	78+28	RTE. D	0.17
4	78+47	79+19	RTE. D	0.13
			TOTAL	0.30
			PAY TOTAL	1.0

PERMANENT EROSION CONTROL								
				FURNISHING	PLACING	PERMANENT		
				TYPE 2 ROCK	TYPE 2 ROCK	EROSION CONTROL		
				BLANKET	BLANKET	GEOTEXTILE		
SHEET	T STA. ST		LOCATION	(CY)	(CY)	(SY)		
9	77+35.06	78+28.33	RTE. D	613	613	875		
9	78+47.22	2 79+19.78 RTE. D		476	476	654		
			TOTALS	1089	1089	1529		
			PAY TOTALS	1089	1089	1529		

	TEMPORARY EROSION CONTROL										
SHEET	STA.	STA.	LOCATION	SIDE	SILT FENCE	TYPE C BERM	SEDIMENT REMOVAL (CY)				
8	77+44.3	77+64.2	RTE. D	LT	20		1				
8	77+44.3	77+64.2	RTE. D	RT	20		1				
8	77+10.0	77+10.0	RTE. D			100					
8	78+43.4	78+43.4	RTE. D			140					
8	78+91.4	79+08.5	RTE. D	LT	20		1				
8	78+91.3	79+10.2	RTE. D	RT	20		1				
			TO	TALS	80	240	4				
			PAY	TOTALS	80	240	4				

	PAVEMENT MARKING									
SHEET	STA.	STA.	LOCATION	4 IN. YELLOW STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS (LF)	REMARKS					
10	77+40	79+10	RTE. D	42.5	INTERMITTENT YELLOW CENTERLINE					
			TOTAL	42.5						
			PAY TOTAL	43						



ELECTRONICALLY.

DATE PREPARED

8/4/2021

ROUTE STATE

ROUTE STATE

D MO

DISTRICT SHEET NO.

N-W 3

COUNTY

MERCER

COUNTY
MERCER
JOB NO.
J1S3279
CONTRACT ID.

PROJECT NO.
BRIDGE NO.

PAIE UESCRIFIION

SSGURI HIGHWAYS AND TRANSPORTATION
COMMISSION

105 WEST CAPITOL
HEFERSON CITY, MO 65102

i00 E 101\$t left., Ste. 20c Kansas City, MO 64131 Phone (816) 701-3100 Fax (816) 942-3013 Missouri Cert. of

WILSON &COMPANY ENGINEERS & ARCHITECTS

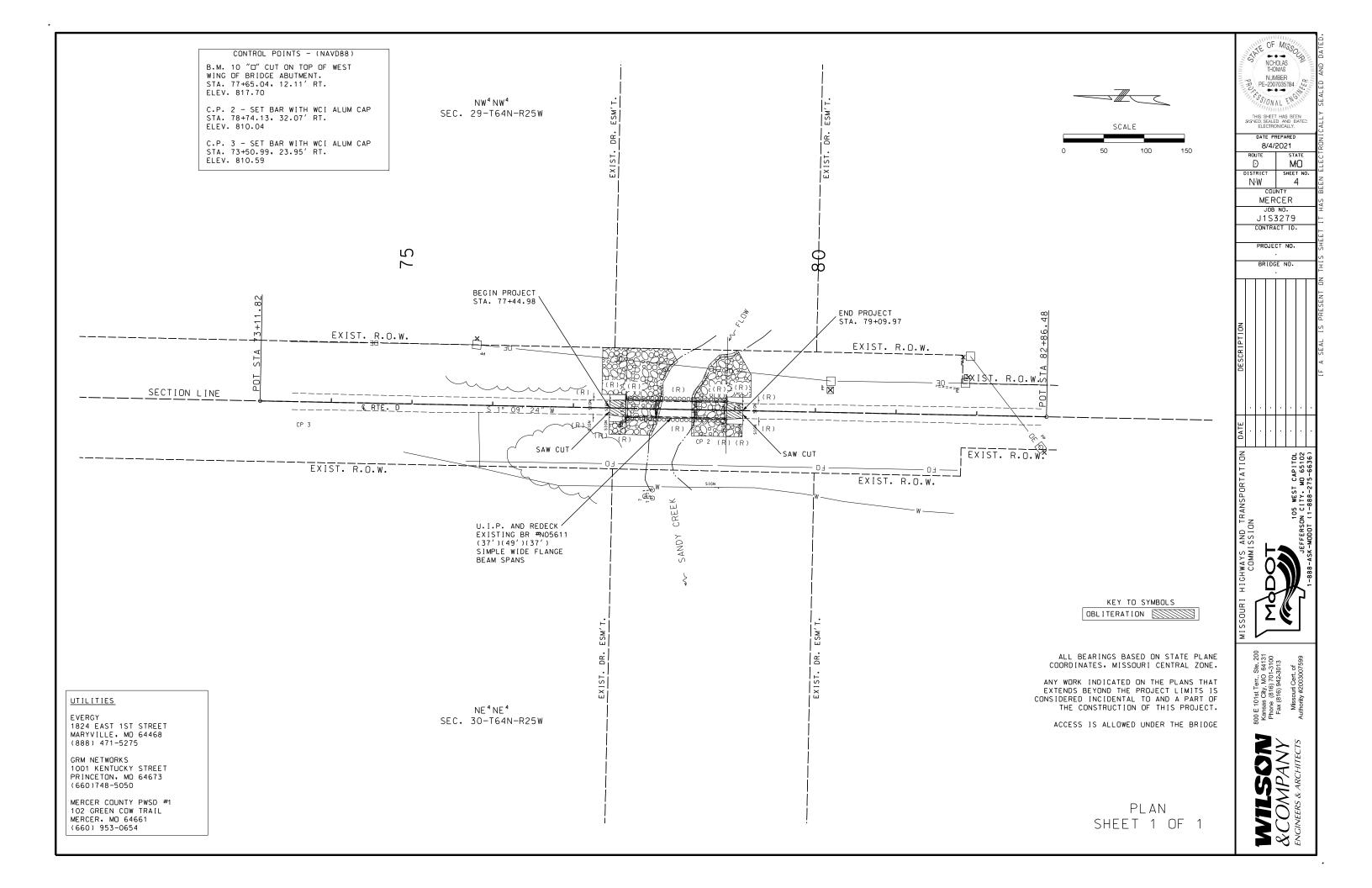
							EFFECTIVE: 04-01-202
	QTY TOTAL SIGN		,	QTY TOTAL SIGN			
SIZE AREA QTY AREA RI			SIZE AREA QTY TOTAL F			1 '	
SIGN IN SQ.FT. EACH SQ.FT. E			IN. SQ.FT. EACH SQ.FT.		1	ITEM	TOTAL
WARNING SIC	<u> </u>		GUIDE SIGN		DESCRIPTION	NUMBER	- · · · -
W01-1L 48X48 16.00	TURN (SYMBOL LEFT ARROW)	E05-1 3	36X48 12.00	<u> </u>	GORE EXIT	6122008	
WO1-1R 48X48 16.00	TURN (SYMBOL RIGHT ARROW)	E05-2 4	48X36 12.00		EXIT OPEN	6122009	9 IMPACT ATTENUATOR 45 MPH (SAND BARRELS)
WO1-2L 48X48 16.00	CURVE (SYMBOL LEFT ARROW)		48X36 12.00		EXIT CLOSED	6122010	
WO1-2R 48X48 16.00	CURVE (SYMBOL RIGHT ARROW		60X24 10.00		ROAD WORK NEXT XX MILES	6122012	
W01-3L 48X48 16.00	REVERSE TURN (SYMBOL LEFT		48X24 8.00		END ROAD WORK	6122014	
W01-3R 48X48 16.00	REVERSE TURN (SYMBOL RIGH		36X18 4.50		PILOT CAR FOLLOW ME	6122017	
W01-4L 48X48 16.00	REVERSE CURVE (SYMBOL LEF		42X30 8.75 18X12 1.50	+ + -	PILOT CAR IN USE WAIT & FOLLOW PILOT CAR IN USE WAIT & FOLLOW		
W01-4R 48X48 16.00 W01-4bL 48X48 16.00	REVERSE CURVE (SYMBOL RIC		18X12 1.50 36X24 6.00	 	WORK ZONE (PLAQUE)	6122020	
W01-4bL 48X48 16.00 W01-4bR 48X48 16.00	DOUBLE ARROW REVERSE CURV		24X18 3.00		END DETOUR	6122030 6123000A	
W01-4DR 48X48 16.00	TRIPLE ARROW REVERSE CURV		48X36 12.00		DETOUR (LEFT ARROW)	6161008	
WD1-4cR 48X48 16.00	TRIPLE ARROW REVERSE CURV	RVE (SYMBOL RT ARROWS) MO4-9R 4	48X36 12.00		DETOUR (RIGHT ARROW)	6161012	2 BUOYS (BOATS KEEP OUT)
WO1-6 60X30 12.50	HORIZONTAL ARROW (SYMBOL)	MO4-9P 4	48X12 4.00		STREET NAME (PLAQUE)	6161013	BUOYS (NO WAKE)
WO1-6a 72X36 18.00	HORIZ, ARROW (SYMBOL ON F	PERMANENT BARRICADE) MO4-10L 4	48X18 6.00		DETOUR (ARROW LEFT)	6161014	4 SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)
W01-7 60X30 12.50	DOUBLE HEAD HORIZONTAL AR		48X18 6.00		DETOUR (ARROW RIGHT)	6161025	
W01-7a 72X36 18.00	DOUBLE HEAD HORIZ. ARROW			ATORY SIGNS		6161030	
W01-8 18X24 3.00	CHEVRON (SYMBOL)		48X48 13.25	+	STOP	6161033	
W01-8a 30X36 7.50	CHEVRON (SYMBOL FOR DIVID		48TRI. 6.93	+ + + - + -	YIELD TO ONCOMING TRAFFIC (PLACUE)	6161040	
W03-1 48X48 16.00 W03-2 48X48 16.00	STOP AHEAD (SYMBOL) YIELD AHEAD (SYMBOL)		36X36 9.00 30X12 2.50	+ + + -	TO ONCOMING TRAFFIC (PLAQUE) ALL WAY (PLAQUE)	6161047	
W03-2 48X48 16.00 W03-3 48X48 16.00	YIELD AHEAD (SYMBOL) SIGNAL AHEAD (SYMBOL)		30X12 2.50 36X48 12.00	 	SPEED LIMIT XX	6161051	
W03-3 48X48 16.00 W03-4 48X48 16.00	BE PREPARED TO STOP		48X48 16.00		NO RIGHT TURN (SYMBOL)	6161052	
W03-5 48X48 16.00	SPEED LIMIT AHEAD		48X48 16.00		NO LEFT TURN (SYMBOL)	6161055	
W04-1L 48X48 16.00	MERGE (SYMBOL FROM LEFT)		36X36 9.00		NO TURNS	6161070	
W04-1R 48X48 16.00	MERGE (SYMBOL FROM RIGHT)		48X48 16.00		NO U-TURN (SYMBOL)	6161095	
WO4-1aL 48X48 16.00	MERGE (ARROW SYMBOL)	R3-7L 3	30X30 6.25		LEFT LANE MUST TURN LEFT		CHANGEABLE MESSAGE SIGN.
WO4-1aR 48X48 16.00	MERGE (ARROW SYMBOL)	R3-7R 3	30X30 6.25		RIGHT LANE MUST TURN RIGHT	6161096	6 COMMISSION FURNISHED/RETAINED
W05-1 48X48 16.00	ROAD/BRIDGE/RAMP NARROWS		36X48 12.00		DO NOT PASS	1	CHANGEABLE MESSAGE SIGN W/O COMM.
W05-3 48X48 16.00	ONE LANE BRIDGE		36X48 12.00		PASS WITH CARE	6161098A	
W05-5 48X48 16.00	NARROW LANES		36X48 12.00		KEEP LEFT (HORIZONTAL ARROW)	1	CHANGEABLE MESSAGE SIGN WITH COMM.
W06-1 48X48 16.00	DIVIDED HIGHWAY (SYMBOL)		36X48 12.00		KEEP RIGHT (HORIZONTAL ARROW)	6161099	
W06-2 48X48 16.00	DIVIDED HIGHWAY END (SYME		30X30 6.25 36X24 6.00	+	DO NOT ENTER WRONG WAY	6162000A	
W06-3 48X48 16.00 W07-3a 30X24 5.00	TWO WAY TRAFFIC (SYMBOL) NEXT XX MILES (PLAQUE)		36X24 6.00 54X18 6.75	+ + -	WRONG WAY ONE WAY ARROW (LEFT)	6162002	
W07-3a 30X24 5.00 W08-1 48X48 16.00	NEXT XX MILES (PLAQUE)		54X18 6.75 54X18 6.75	 	ONE WAY ARROW (LEFT) ONE WAY ARROW (RIGHT)	1 610200.	4 TEMPORARY SHORT-TERM RUMBLE STRIPS TEMPORARY TRAFFIC BARRIER
W08-1 48X48 16.00 W08-2 48X48 16.00	DIP		24X30 5.00		ONE WAY ARROW (RIGHT)	6173600D	
W08-2 48X48 16.00 W08-3 48X48 16.00	PAVEMENT ENDS		24X30 5.00		ONE WAY (RIGHT)	1 01133	TEMPORARY TRAFFIC BARRIER
W08-4 48X48 16.00	SOFT SHOULDER		24X12 2.00		SIDEWALK CLOSED	6173602B	
WO8-5 48X48 16.00	SLIPPERY WHEN WET (SYMBOL	DL)	17/12/21/21		SIDEWALK CLOSED AHEAD,	6174000A	TEMP. TRAFFIC BARRIER HEIGHT TRANSITION
WO8-6 48X48 16.00	TRUCK CROSSING (WITH FLAG		24X18 3.00	1	(ARROW LEFT) CROSS HERE	6175010A	RELOCATING TEMPORARY TRAFFIC BARRIER
WO8-6c 48X48 16.00	TRUCK ENTRANCE				SIDEWALK CLOSED AHEAD,		TEMPORARY TRAFFIC BARRIER
WO8-7 36X36 9.00	LOOSE GRAVEL		24X18 3.00	1	(ARROW RIGHT) CROSS HERE	6176000B	
W08-7a 36X36 9.00	FRESH DIL/LOOSE GRAVEL		24X36 6.00		STOP HERE ON RED (45° ARROW)		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION
W08-9 48X48 16.00	LOW SHOULDER	R11-2 4	48X30 10.00 2 20.00	29		6177000B	
W08-11 48X48 16.00	UNEVEN LANES				ROAD CLOSED XX MILES AHEAD	6208064A	
W08-12 48X48 16.00	NO CENTER LINE		60X30 12.50 2 25.00		A LOCAL TRAFFIC ONLY	9029400	
W08-15 48X48 16.00	GROOVED PAVEMENT		60X30 12.50 1 12.50	1 30	O ROAD CLOSED TO THRU TRAFFIC	9029401	1 TEMPORARY TRAFFIC SIGNALS AND LIGHTING
W08-15P 30X24 5.00 W08-17 48X48 16.00	MOTORCYCLE (PLAQUE) SHOULDER DROP-OFF (SYMBOL		60X48 20.00 56X12 4.67	+ + -	FINE SIGN SPEEDING/PASSING (PLATE)	4	
W08-17 48X48 16.00	SHOULDER DROP-OFF (SYMBOL SHOULDER DROP-OFF (PLAQUE			LLANEOUS SIGNS		1	+ +
W10-1 42RND. 9.62	RAILROAD CROSSING		MISCEL 48X36 12.00	LANEUUS SIGNS	POINT OF PRESENCE	1	+
W012-1 24X24 4.00	DOUBLE DOWN ARROW (SYMBOL		96X48 32.00		POINT OF PRESENCE	1	+ +
W012-1 24X24 4.00 W012-2 48X48 16.00	LOW CLEARANCE (SYMBOL)		48X24 8.00		RATE OUR WORK ZONE	1	+ +
W012-2 48X48 16.00 W012-2X 24X18 3.00	LOW CLEARANCE (STMBOL)		72X36 18.00		RATE OUR WORK ZONE	1	+ +
W012-2a 84X24 14.00	OVERHEAD LOW CLEARANCE (F		48X36 12.00		WORK ZONE NO PHONE ZONE	1	
W012-4 120X60 50.00	LOW CLEARANCE XX FT XX IN	IN XX MILES AHEAD CONST-5P 6	60X8 3.33		POINT OF PRESENCE	1	
W012-5 120X60 50.00	WIDTH RESTRICTION XX FT X		, some			1	
WO13-1 30X30 6.25	ADVISORY SPEED (PLAQUE)				,	1	
W016-2 30X24 5.00	XXX FEET (PLAQUE)	W020-3A △	48X48 16.00 2 32.00	20A	A ROAD CLOSED 500 FT	1	
WO16-3 30X24 5.00	X MILE (PLAQUE)					1	
W020-1 48X48 16.00	ROAD/BRIDGE/RAMP WORK AHE	.EAD	,		T,	1	
W020-2 48X48 16.00	DETOUR AHEAD						
W020-3 48X48 16.00 2 32.00	20 ROAD CLOSED AHEAD		TOTAL			ل	
W020-4 48X48 16.00	ONE LANE ROAD AHEAD	616-10.0		1			
W020-5 48X48 16.00	RIGHT/CENTER/LEFT LANE CL		UCTION SIGNS 122	TOTAL			
W020-5a 48X48 16.00	2 RIGHT/CENTER/LEFT LANE CL			TOTAL			
W020-6a 48X48 16.00	RIGHT/CENTER/LEFT LANE CL		TED SIGNS				
W020-7a 48X48 16.00	FLAGGER (SYMBOL, WITH FLA	<u>.4GS)</u>					
W021-2 36X36 9.00 W021-5 48X48 16.00	FRESH OIL SHOULDER WORK AHEAD						
W021-5 48X48 16.00 W022-1 48X48 16.00	BLASTING ZONE AHEAD						
W022-1 48X48 16.00 W022-2 42X36 10.50	TURN OFF 2-WAY RADIO AND	PHONE					SUMMARY OF QUANTITIES
W022-3 42X36 10.50	END BLASTING ZONE	THORE					SHEET 2 OF 2
1,022 3 12,00 10:00	1 1000 00000 0000						

END BLASTING ZONE WET PAINT (ARROW PIVOTS)

W022-3 42X36 10.50 G022-1 21X15 2.19

SUMMARY OF QUANTITIES SHEET 2 OF 2

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		NATES ARE OF THE MISSOURI NATE (SPC) SYSTEM OF 1983.				
PROJECT COORD	ĪN.	ATE INFORMATION				
COORDINATE SYSTE	М.	MISSOURI STATE PLANE				
HORIZONTAL DATUM	1	NAD 83				
VERTICAL DATUM		NAVD 88				
GEOID MODEL		GEOID 12B (CONUS)				
ELEVATIONS		STATIC GPS OBSERVATION				
DETERMINED BY		MO VRS				
PROJECT PROJECTI	ON	FACTOR 1.0000000				
REFERENCE CON	TR	OL INFORMATION				
COORDINATE SYSTE	М_	MISSOURI CENTRAL ZONE 2402				
CONTROL STATION		MOPN				
DESIGNATION	М	ODOT PRINCETON CORS ARP				
CORS_ID	М	OPN				
PID	DI)M2692				
LATITUDE	4(0°25′02.46875″ (N)				
LONGITUDE	9:	3°34′39.03753″ (W)				
NORTHING (M)	NORTHING (M) 509345.124					

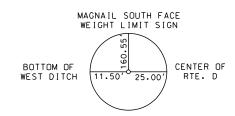
408555.082

MO CENTRAL

EASTING (M)

ZONE

					COO	RDINATE POINT	T LISTING			PROCE	NUMBEI PE-200703	1784 ENG
				OFFSET	NORTHING	STATE PLANE (GF EASTING	ELEVATION		GPK	SIGNE	S SHEET HAD, SEALED A	S BEEN IND DATED ALLY.
	SHEET NO		LOCATION	(USFT)	(US SURVEY FT)	(US SURVEY FT)	(US SURVEY FT)	DESCRIPTION	POINT ID	∐ '	8/4/20	
		ONTROL POINTS		T /	T	T	1			ROU		STATE
	4	73+50.99	ROUTE D	23.95' RT	1636375.376	1292833.560	810.59	C.P. 3 - SET BAR W/ WCI ALUM, CAP	•	DISTR		MO.
4	4	78+74.13	ROUTE D	32.07′ RT	1635852.504	1292814.887	810.04	C.P. 2 - SET BAR W/ WCI ALUM, CAP	•	- N-1		5
	•	•		•	•	'		•			COUNT	
	•	·		•	•	•	·	•	•	⊣	MERCE JOB NO	
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	4	73+11.82	ROUTE D	0.00′	1636414.051	1292858.300	0.00	BEGIN CENTERLINE CHAIN	RTE_D	_		
	4	82+86.48	ROUTE D	0.00′	1635439.592	1292838.624	0.00	END CENTERLINE CHAIN	RTE_D	_		
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CONTROL POINT 3 §" IRON BAR NORTH OF BRIDGE COORDINATES NORTHING = 1.636.375.376EASTING = 1.292.833.560ELEVATION = 810.59(APPROXIMATE STATION 73+50.99 APPROXIMATE OFFSET 23.95' RIGHT) HIGH BANK SW QUADRANT OF BRIDGE

WEST BOTTOM EDGE OF STEEL BEAM NW CORNER SW ABUTMENT WINGWALL

SOUTHERN MOST DELINEATOR SIGN BASE

CONTROL POINT 2
\$\frac{5}{8}\times IRON BAR
SOUTH OF BRIDGE COORDINATES NORTHING = 1.635.852.504EASTING = 1.292.814.887ELEVATION = 810.04(APPROXIMATE STATION 78+74.13 APPROXIMATE OFFSET 32.07' RIGHT)

REFERENCE POINTS AND COORDINATE POINTS SHEET 1 OF 1

WAYS AND TR COMMISSION

800 E 101st Terr., Ste. 200 Kansas City, MO 64131 Phone (816) 701-3100 Fax (816) 942-3013

NICHOLAS THOMAS NUMBER



- SIGN (SINGLE SIDED)
- TYPE III MOVABLE
 BARRICADE WITH LIGHT



WO20-3A WITH AWRS

20















R11-2 (29)

NOTES:

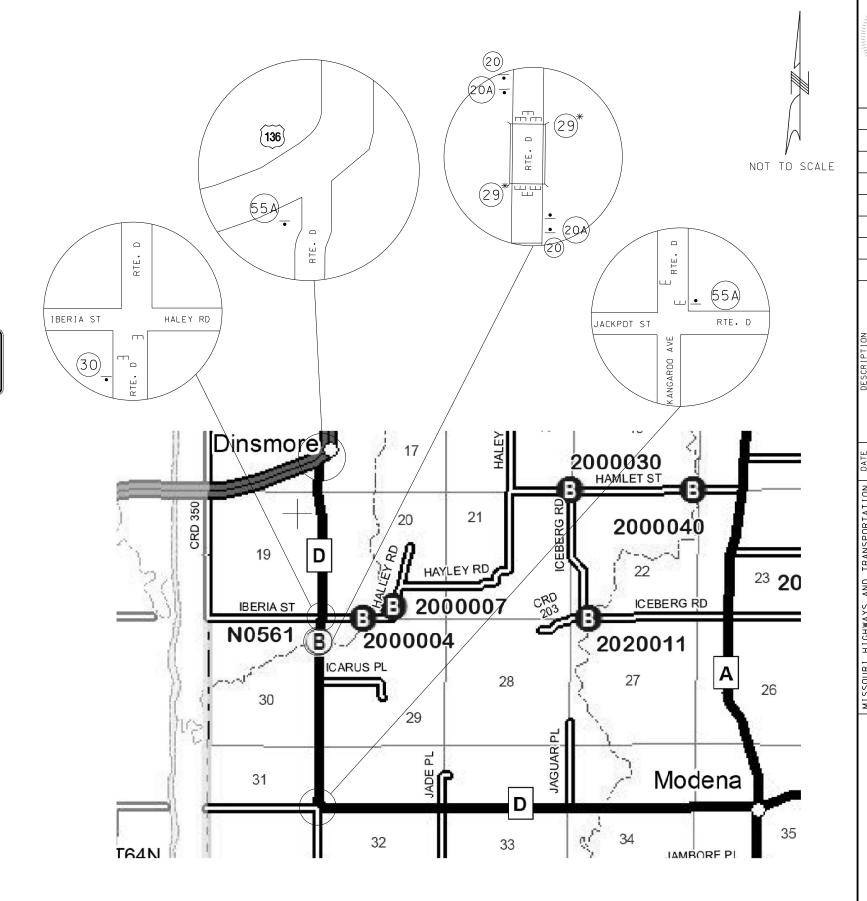
TYPE III MOVABLE BARRICADES FOR BRIDGE CLOSURE WORKZONE SHALL BE WITH LIGHTS. SEE STD 616.10 FOR PLACEMENT OF LIGHTS AND SIGNS ON BARRICADES.

ALL SIGNS SHOULD BE PLACED APPROXIMATELY 500' APART UNLESS OTHERWISE SHOWN.

ALL STATIONS, SPACING, AND DISTANCES OF TRAFFIC CONTROL DEVICES ARE APPROXIMATE AND MAY BE REVISED AS DIRECTED BY THE ENGINEER TO FIT FIELD CONDITIONS.

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

* SIGN MOUNTED TO BARRICADE



NICHOLAS THOMAS NUMBER

PE-2007035784

8/4/2021

MERCER

J1S3279

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

800 E 101st Terr., Ste. 200 Kansas City, MO 64131 Phone (816) 701-3100 Fax (816) 942-3013

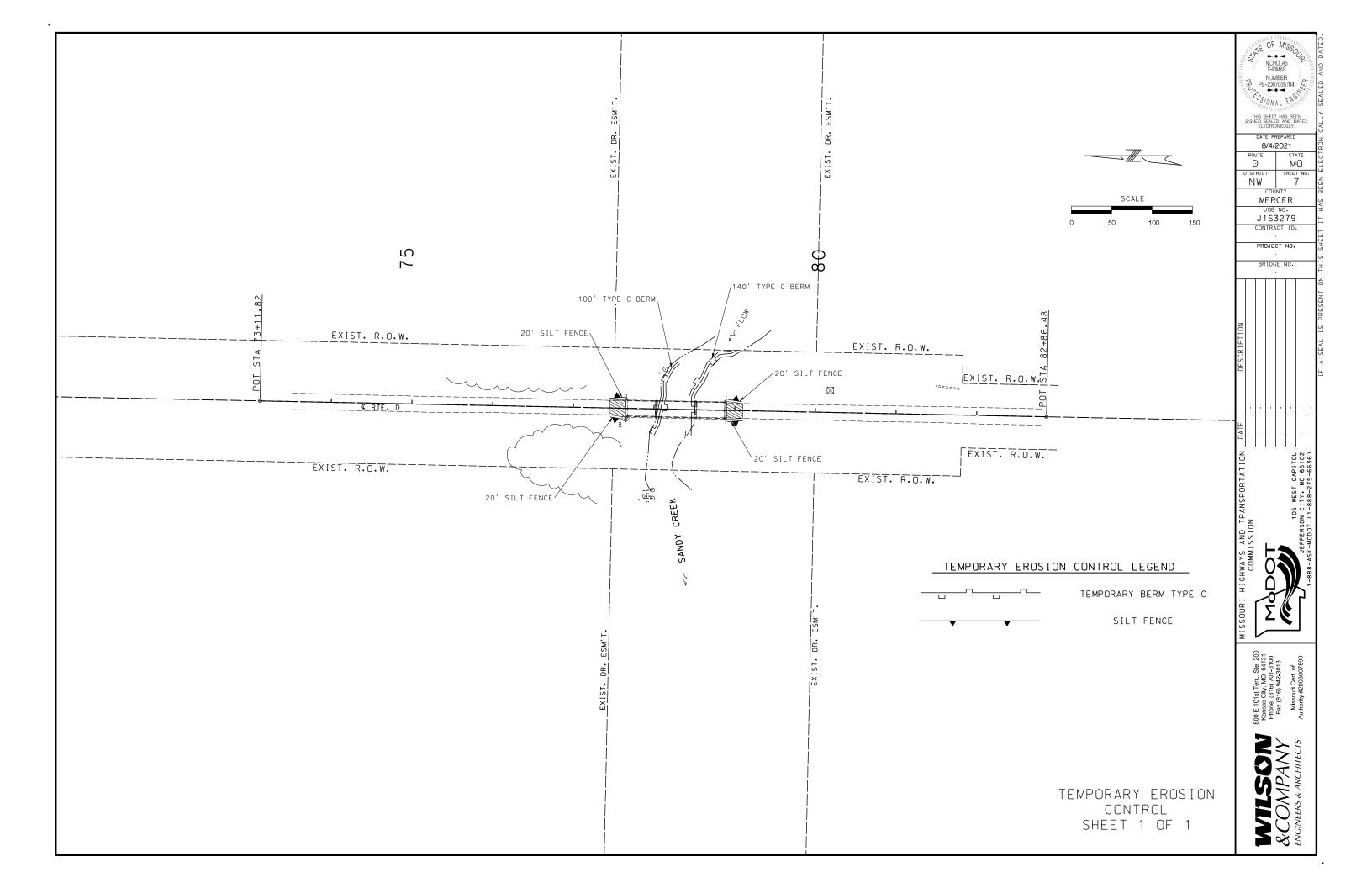
TRAFFIC CONTROL SHEET 1 OF 1

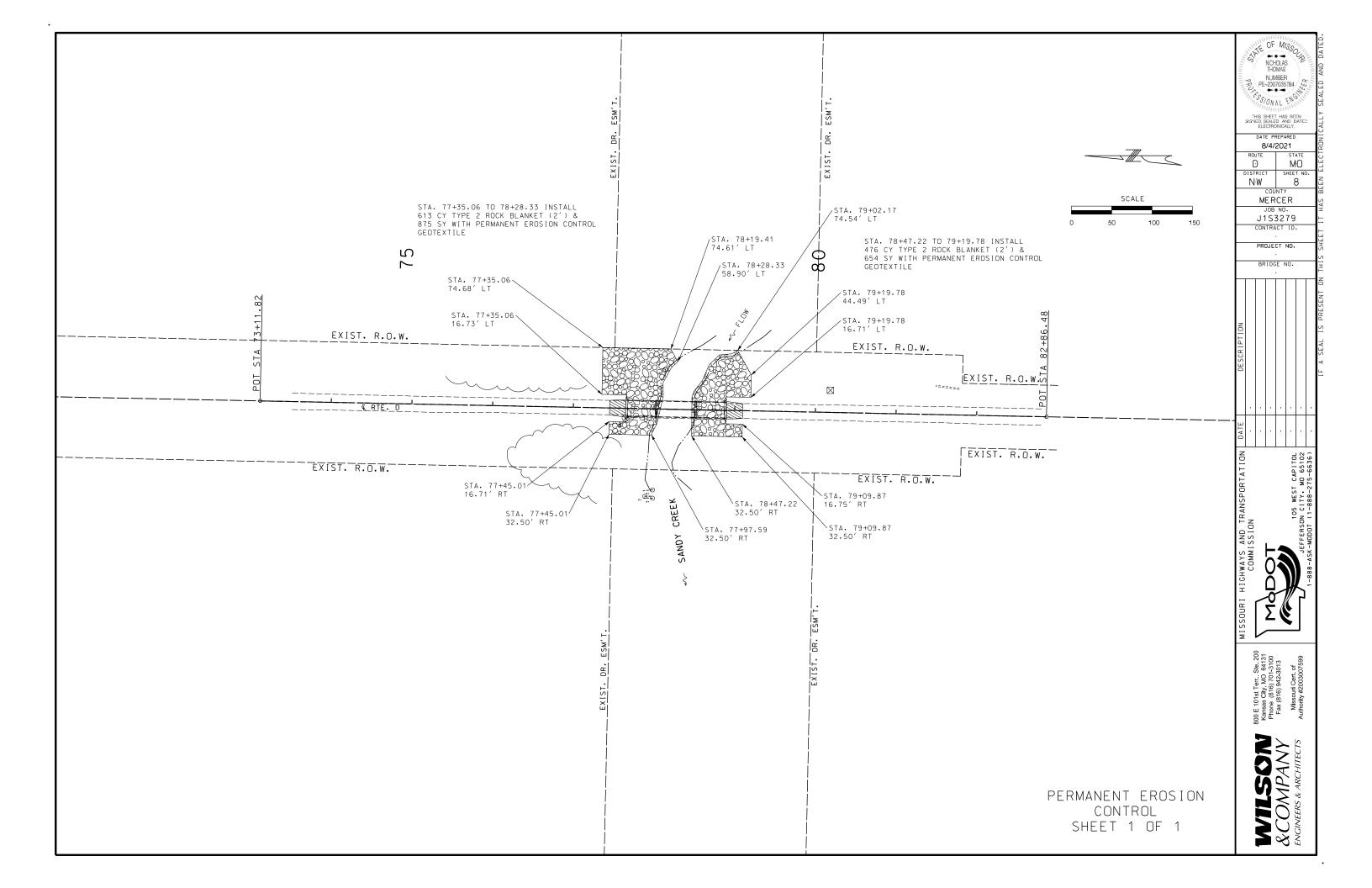
MO SHEET NO

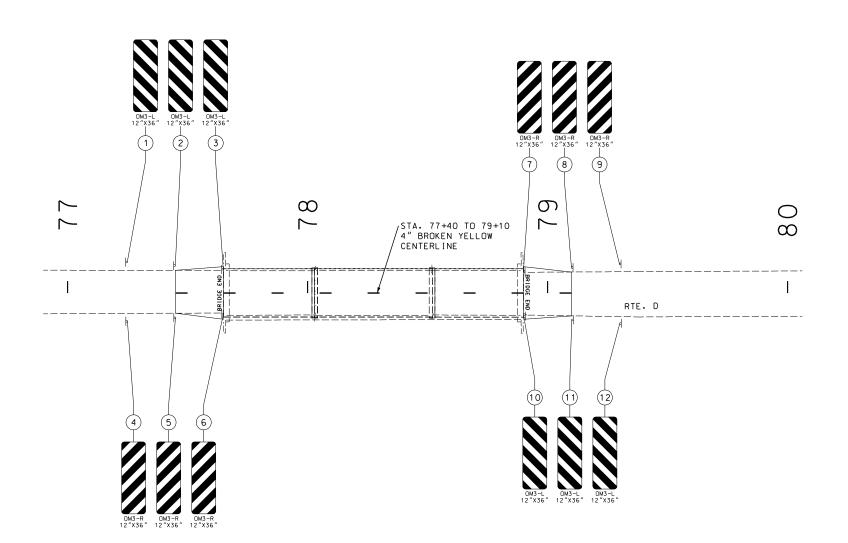
6

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N-W







PERFORATED

SQUARE STEEL

TUBE POST

2 IN

ANCHOR

12 GA ITEM NO 9031271

LF

3.0

3.0

3.0

3.0

3.0

3.0

3.0

3.0

3.0

3.0 36.0

TOTAL

ITEM NO 9031270A

8.5

6.0

8.5

SIGN POST

DETAIL NO 1

STD 8.5

STD 6.0

STD 8.5

14.0' R STD 11.0 11.0

STD

STD

11.5' R STD 6.0 6.0

12.5' R STD 8.5 8.5

STD 11.0 11.0

STD 6.0 6.0

STD 8.5 8.5

STD 11.0 11.0 TOTALS 102.0

SHEET NO

SIGNS

STATION

77+25

77+45

77+65

77+25

77+45

77+65

78+90

79+10

79+30

78+90

79+10

79+30

LOCATION

14.0′ L

12.5′ L

11.5′ L

12.5' R

11.5′ L

12.5′ L

SIGN·SIZE

12"X36"

12"X36"

12"X36"

12"X36"

12"X36"

12"X36'

12"X36"

12"X36"

12"X36'

12"X36"

12"X36"

11 12"X36"

10

	STANDARD	SIGN AS	SEMBLIES	,		
			FLAT SHEET FLUORESCENT			
BER			SIGN DESCRIPTION SIZES & NUMBER OF EACH			
SIGN NUMBER	SIGN·SIZE	STATION	OM3-L 12"%36"	OM3-R 12"X36"		
1	12"X36"	77+25	1			
2	12"X36"	77+45	1			
3	12"X36"	77+65	1			
4	12"X36"	77+25		1		
5	12"X36"	77+45		1		
6	12"X36"	77+65		1		
7	12"X36"	78+90		1		
8	12"X36"	79+10		1		
9	12"X36"	79+30		1		
10	12"X36"	78+90	1			
11	12"X36"	79+10	1			
12	12"X36"	79+30	1			

TOTALS

SIGN SUMMARY							
STANDARD SIGN	SIGN DETAIL SHEET NO	NO EACH	SIZE, TYPE & SQ FT				
			SIZE	FLAT SHEET* FLUORESCENT ITEM NO 9035069A			
OM3-L	STD	6	12"×36"	18			
OM3-R	STD	6	12"×36"	18			
			TOTAL	36			
				*YELLO			

PE-200/LL. 8/4/2021 Ð ΜO DISTRICT SHEET NO N·W 9 MERCER JOB NO. J1S3279 CONTRACT ID. PROJECT NO. BRIDGE NO. 800 E 101st Terr., Ste. 200 Kansas City, MO 64131 Phone (816) 701-3100 Fax (816) 942-3013

SIGNING AND PAVEMENT MARKING SHEET 1 OF 1

OF M/S

TED S. KOESTER NUMBER

PE-2013000591

S/ONAL S

7/22/2021

MERCER

J1S3279

CONTRACT ID PROJECT NO.

N05612

MOA

WEST TY.

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SHEET NO

1

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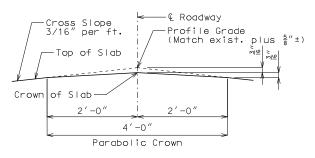
BR

	Table Showing S2 Bar Lengths					
Int. Ber	nt No. 2	Int. Bent No. 3				
Span 1 Span 2 5'-0" 5'-0"		Span 2 Span				
		5′-0″	5′-0″			

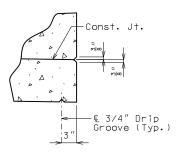
	Lap Length Splices **
Bar Size	Splice Length
4	2′-7″
5	3′-3″
6	3'-10"
7	4'-11"

** Unless otherwise shown.

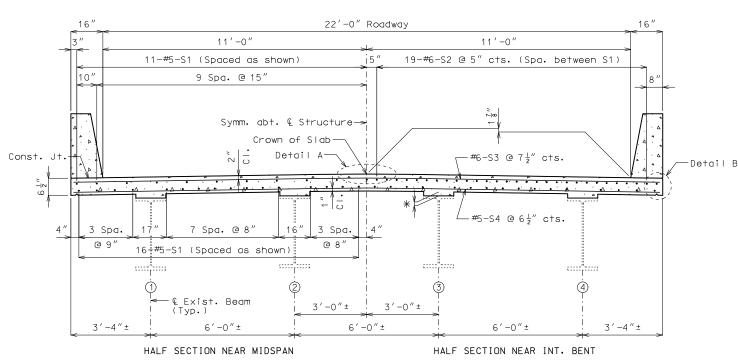
U.I.P., REDECK AND MAKE COMPOSITE EXISTING (37', 49', 37') SIMPLE WIDE FLANGE BEAM SPANS



DETAIL A



DETAIL B



TYPICAL SECTION THRU SLAB

* Increase exist. haunch $3/8\,^{\prime\prime}{}^{\pm}$ at interior beams to match grade shown in Detail A

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 = 4.000Class B-2 Concrete (Bents & Superstructure, f'c = 4,000except Barrier) Reinforcing Steel (Grade 60) fy = 60,000

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 smooth bars and 30 diameters for deformed bars, unless otherwise noted.

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

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

Contractor shall verify all dimensions in field before ordering new material.

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).

Traffic Handlina:

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

Estimated Quantities Total I tem Removal of Existing Bridge Deck sq. foo-2796 Lab on Steel sq. yard 343 ype H Barrier linear foo-251 Protective Coating - Concrete Bents and Piers (Epoxy) lump sun Shear Connectors each 888 lab Drain each 20

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	teel
	I†em				Total
Class B-2 Concrete	:			cu. yard	77.0
Reinforcing Steel	(Epoxy Coated)			pound	23,730

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

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

Bridge deck surface may be finished with a vibratory screed.

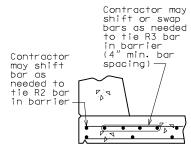
For Optional Stay-In-Place Form Details, see Sheet No. 2.

REPAIRS TO BRIDGE: ROUTE D OVER SANDY CREEK

ABOUT 1.5 MILES SOUTH OF ROUTE 136 BEGINNING STATION 77+65.00 ± (MATCH EXISTING)

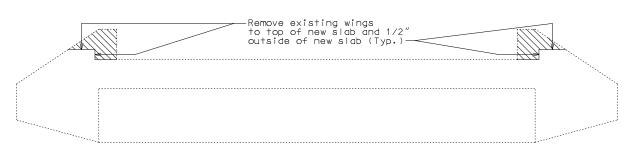
Contro	ermanent Eros I Geotextile ay item)	sion		-Existing substructure beam
ROCK	BLANKET	ON	SPILL	SLOPES

2'-0" Type 2 Rock Blanket



OPTIONAL SHIFTING TOP BARS AT BARRIER

ROUTE D FROM ROUTE 136 TO ROUTE A



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 shall be cut off one inch below concrete removal surface, except at wing repair, and the resulting holes shall be filled with a qualified special mortar.

A smooth, level surface shall be provided at removal lines except at wing repair.

General Notes:

Structural Steel Protective Coating:

Sides and bottom of the top flanges of exterior beams shall be coated with one 6-mil thickness coat of gray epoxy-mastic primer (non-aluminum) applied over an SSPC-SP-3 surface preparation in accordance with Sec 1081. The cost of surface preparation and gray epoxy-mastic primer (non-aluminum) will be considered completely covered by the contract unit price for considered completely covered by the contract unit price for Removal of Existing Bridge Deck.

Stay-In-Place Forms:

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

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

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

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

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

Pouring and Finishing Slab:

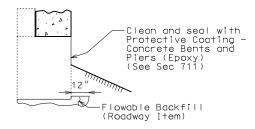
The contractor shall provide bracing necessary for lateral and torsional stability of the beams during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not weld on or drill holes in the beams. The cost for furnishing, installing,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

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

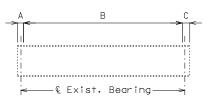
Alternate pour sequences may be submitted to the engineer for approval. Keyed construction joints shall be provided between pours.

Haunching:

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

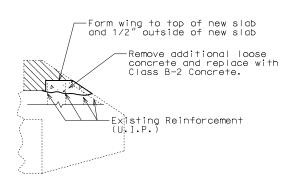


TYPICAL SECTION THRU END BENTS 1 & 4 SHOWING PROTECTIVE COATING AND FLOWABLE BACKFILL



ELEVATION SHOWING SHEAR CONNECTOR SPACING

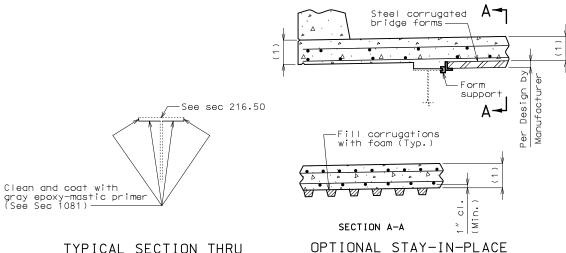
	TABLE SHOWING SHEAR CONNECTOR UNIT SPACING							
Span	S.C. per unit	Α	В	С				
1	2	11"±	36 Units @ 12" cts.	11"±				
2	2	8″±	39 Units @ 15" cts.	8 " ±				
3	2	11"±	36 Units @ 12" cts.	11"±				
	Total shear connectors required							



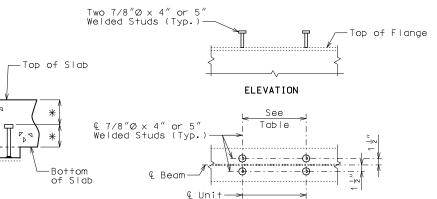
DETAIL OF WING REPAIR AT END BENT NO. 1

Wing Repair shall be completed before adjacent slab concrete is

Cost of wing repair will be considered completely covered by the contract unit price for Slab on Steel.







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

-¢ Exist. Beam

* 2" Minimum

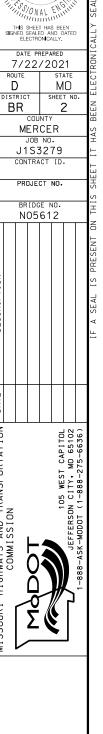
** Min. Haunch = 0'
Max. Haunch = 3'

PLAN OF SHEAR CONN, (2 PER UNIT) DETAILS OF SHEAR CONNECTORS

FORM DETAILS

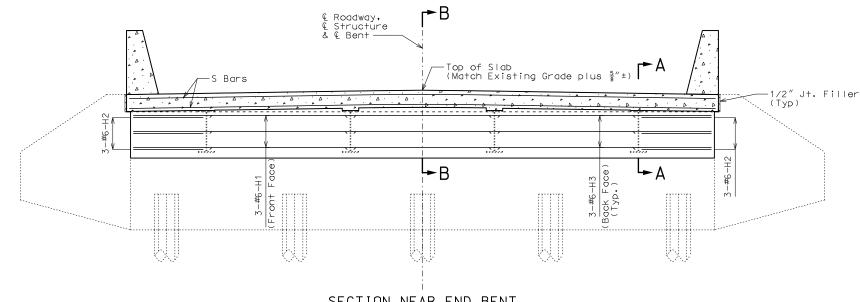
The cost of supplying and installing shear connectors will be considered completely covered by the contract unit price for Shear Connectors.

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



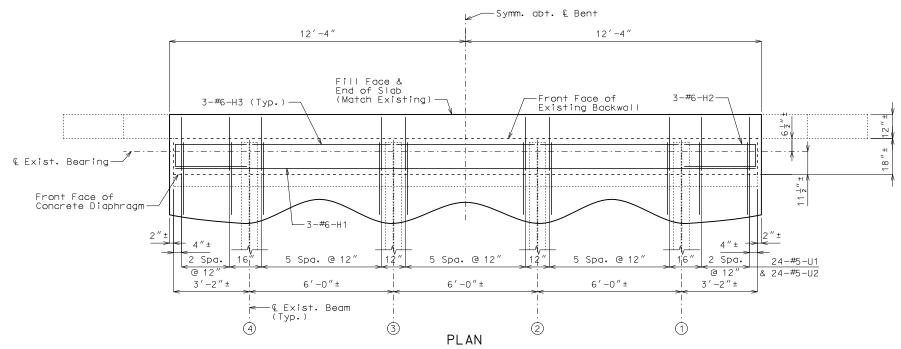
TED S. KOESTER

NUMBER PE-2013000591

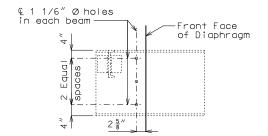


SECTION NEAR END BENT

Existing end diaphragms and new U Bars not shown for clarity.

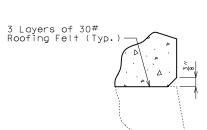


(End Bent No. 1 shown, End Bent No. 4 Similar) Note: S bars not shown for clarity.

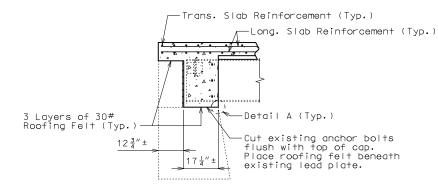


DETAIL OF WEB HOLES AT END BENTS NO. 1 & 4

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



DETAIL A



TED S. KOESTER

NUMBER PE-2013000591 INSONAL EN

7/22/2021

MERCER

J1S3279 CONTRACT ID

PROJECT NO.

N05612

MO 65102

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SHEET NO

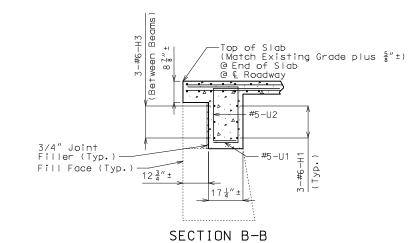
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D

DISTRICT

BR

SECTION A-A (Normal to & Roadway)



Notes:

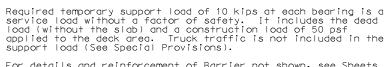
Cost of cutting anchor bolts and placing roofing felt will be considered completely covered by the contract unit price for Slab on Steel.

(Normal to € Roadway)

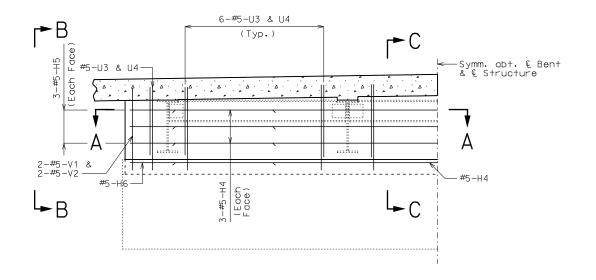
The exposed and accessible surfaces of the existing structural steel and bearings that will be encased in concrete shall be cleaned with a minimum of SSPC-SP-3 surface preparation and coated with a minimum of one coat of gray epoxy-mastic primer (non-aluminum) in accordance with Sec 1081 to produce a dry film thickness of not less than 3 mils before concrete is poured. The surface preparation and coating for 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 Removal of Existing Bridge Deck.

All concrete and reinforcement shown here is included in the Table of Estimated Quantities for Slab on Steel and will be considered completely covered by the contract unit price for

For details and reinforcement of Barrier not shown, see Sheets

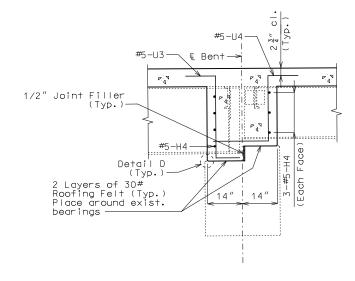


Detailed May 2021



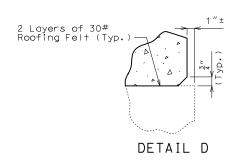
PART SECTION NEAR INTERMEDIATE BENT (Int. Bent No. 2 shown, Int. Bent No. 3 similar)

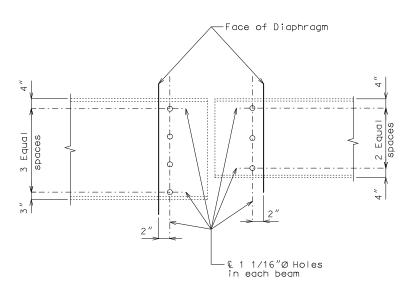
#5-V1 #5-V2 #5-V1 #5-V2 #5-V1 #5-V2 #5-V4 #5-V2 #5-V4 #5-V2



ELEVATION B-B

SECTION C-C



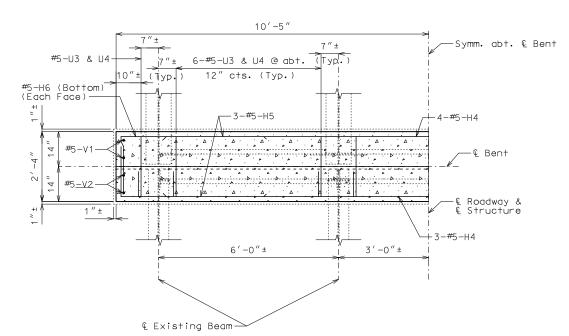


DETAILS OF WEB HOLES AT INTERMEDIATE BENTS

Notes:

The exposed and accessible surfaces of the existing structural steel and bearings that will be encased in concrete shall be cleaned with a minimum of SSPC-SP-3 surface preparation and coated with a minimum 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 Removal of Existing Bridge Deck.

All concrete and reinforcement in the intermediate bent diaphragms, complete in place, will be considered completely covered by the contract unit price for Slab on Steel and is included in the table of Estimated Quantities for Slab on Steel.



SECTION A-A

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

Detailed May 2021 Checked July 2021



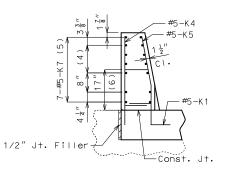
Note: This drawing is not to scale. Follow dimensions.

Detailed May 2021

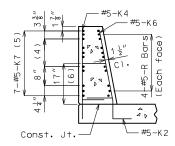
SLAB DRAINS

Sheet No. 5 of 8

PLAN OF FRP DRAIN OPTION



ELEVATION A-A



SECTION B-B

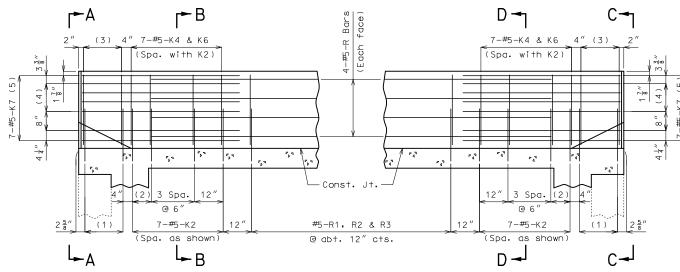
-Const. Joint

1" Chamfer *

DETAILS OF GUARD RAIL ATTACHMENT

ELEVATION E-E

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



PART ELEVATION

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

-€ 1″Ø Holes

└─Const. Joint

ELEVATION

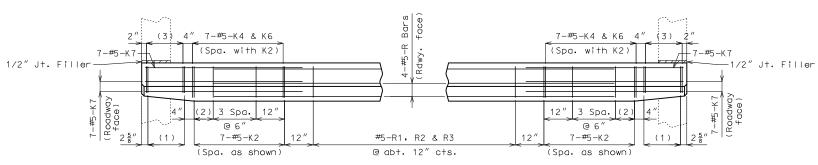
PLAN

€ 1″Ø Holes

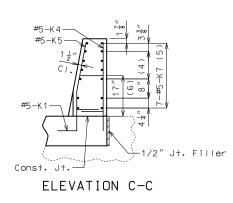
-Roadway Face of Barrier

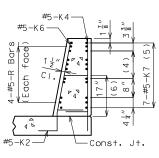
22"

- (3) 5-#5-K4 and 5-#5-K5, spaced with K1 (2) 2 Spaces @ 4"
 - (4) 3 Spaces @ 3¹³"
- (5) Spaced as shown, each face
- (6) To top of bar



PART PLAN





SECTION D-D

The top two bars shall be kept with position close to those shown in Sections A-A thru D-D #5-K Bar

K4-K6

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

Reinforcing Steel:

Minimum clearance to reinforcing steel shall be 1 1/2". Use a minimum lap of 3'-1'' between K7 bars and R bars.

TYPE H BARRIER AT END BENTS

(Left barrier shown, right barrier similar)

Detailed May 2021 Checked July 2021

5-1"Ø Hols 3-13/16"

1/2" Jt. Filler—

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

Sheet No. 7 of 8

PERMISSIBLE ALTERNATE SHAPES

10″

K4-K5

(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.



TED S. KOESTER NUMBER

PE-2013000591

7/22/2021

MERCER

J1S3279

CONTRACT ID

PROJECT NO.

N05612

MΩ

SHEET NO

7

D

DISTRICT

BR

ISSONAL E

