MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

PLANS FOR PROPOSED STATE HIGHWAY

BUTLER COUNTY

DESIGN DESIGNATION

WEST OF RTE BB

A.A.D.T. - 2025 = 1104
A.A.D.T. - 2035 = 1160
D.H.V. = 10%
T = 9%
V = 40/55 M.P.H.
D = 40%/49%

EAST OF RTE BB

A.A.D.T. - 2025 = 1316
A.A.D.T. - 2035 = 1383
D.H.V. = 12%
T = 9%
V = 55 M.P.H.
D = 50%

FUNCTIONAL CLASSIFICATION-MAJOR COLLECTOR

NO NEW RIGHT OF WAY

CONVENTIONAL SYMBOLS
(USED IN PLANS)

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

NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES

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

LENGTH OF PROJECT

BEGINNING OF PROJECT	LM 0.227
END OF PROJECT	LM 5.356
APPARENT LENGTH	5.129 MILES 27081.12 FEET

EQUATIONS AND EXCEPTIONS:

RAILROAD EXCEPTION LM 2.448 TO LM 2.450	-10.00 FEET
BR A8490 EXCEPTION LM 2.734 TO LM 2.765	-163.50 FEET
BR T0170/A9426 AND PAVEMENT EXCEPTION LM 4.245 TO LM 4.379	-707.50 FEET
TOTAL CORRECTIONS	-881.00 FEET
NET LENGTH OF PROJECT	26200.12 FEET
STATE LENGTH	4.962 MILES
FOR INFORMATION ONLY ESTIMATED DISTURBED ACRES	0.0 ACRES

STATE OF MISSOURI
TIMOTHY CHRISTOPHER PICKETT
NUMBER PE-2017000351
PROFESSIONAL ENGINEER
08/23/2024 9:38:49 AM
TIMOTHY CHRISTOPHER PICKETT - CIVIL
MO-PE-2017000351

DATE PREPARED	8/21/2024
ROUTE	158
STATE	MO
DISTRICT	SE
SHEET NO.	1
COUNTY	BUTLER
JOB NO.	J9S3672
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION

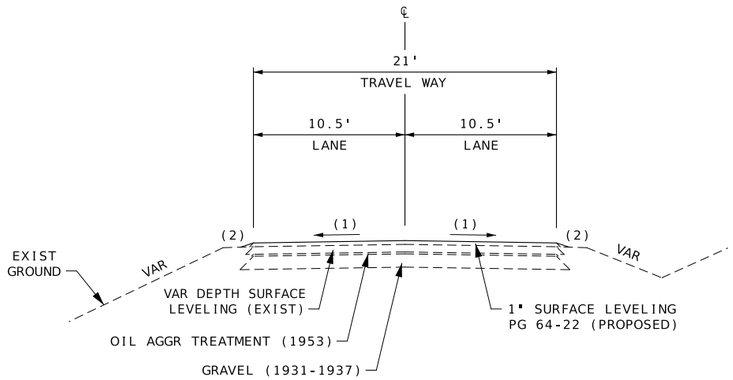
DATE

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

REV.

(1) MATCH EXIST

(2) SAFETY EDGE & PERM AGGR EDGE TREATMENT

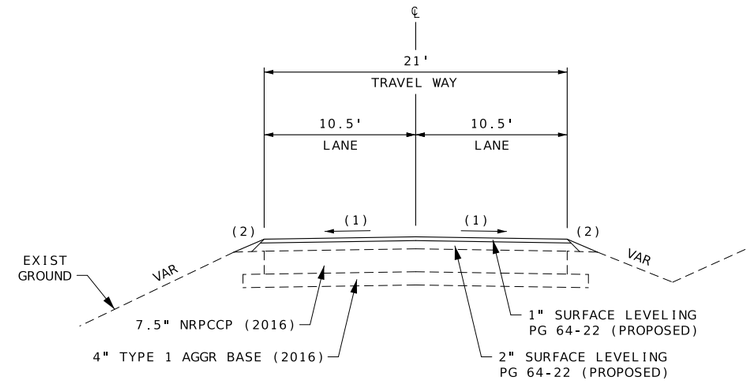


SECTION ON TANGENT

TYPICAL SECTION RTE 158

LOG MI 0.227 TO LOG MI 2.068
LOG MI 2.100 TO LOG MI 2.350
LOG MI 2.570 TO LOG MI 2.670
LOG MI 2.784 TO LOG MI 4.245
LOG MI 4.379 TO LOG MI 5.356

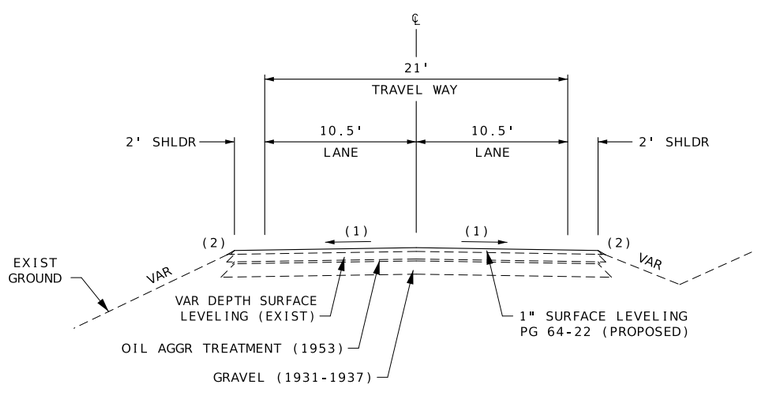
BRIDGE T0170/A9426 AND PAVEMENT EXCEPTION
(BR T0170 TO BE REPLACED WITH BR A9426 ON JOB NO JSE0115)
LOG MI 4.245 TO LOG MI 4.379



SECTION ON TANGENT

TYPICAL SECTION RTE 158

LOG MI 2.068 TO LOG MI 2.100

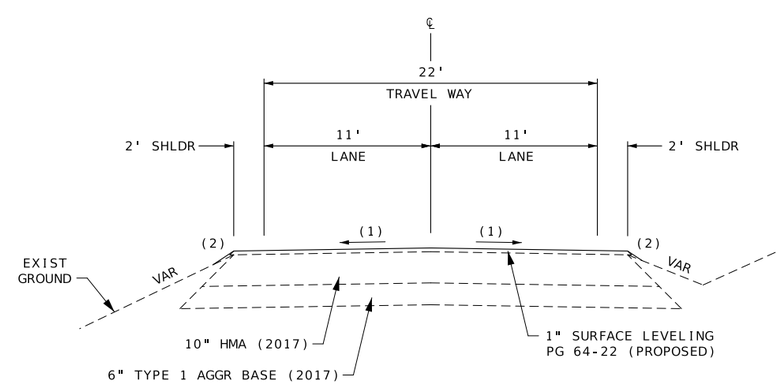


SECTION ON TANGENT

TYPICAL SECTION RTE 158

LOG MI 2.350 TO LOG MI 2.448
LOG MI 2.450 TO LOG MI 2.570

RAILROAD EXCEPTION
LOG MI 2.448 TO LOG MI 2.450



SECTION ON TANGENT

TYPICAL SECTION RTE 158

LOG MI 2.670 TO LOG MI 2.734
LOG MI 2.765 TO LOG MI 2.784

BRIDGE A8490 EXCEPTION
LOG MI 2.734 TO LOG MI 2.765

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.

STATE OF MISSOURI
TIMOTHY CHRISTOPHER PICKETT
NUMBER PE-2017000351
PROFESSIONAL ENGINEER
10/28/2024 6:34:34 AM
TIMOTHY CHRISTOPHER PICKETT - CIVIL
MO-PE-2017000351

DATE PREPARED	
10/21/2024	
ROUTE 158	STATE MO
DISTRICT SE	SHEET NO. 2
COUNTY BUTLER	
JOB NO. J9S3672	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

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

TYPICAL SECTION
SHEET 1 OF 1

REMOVAL OF IMPROVEMENTS

LOG MI	LOC	DESCRIPTION	REMARKS
2.734	LT	APPROX 70' GUARDRAIL	BR A8490
2.734	RT	APPROX 30' GUARDRAIL	BR A8490
2.765	LT	APPROX 95' GUARDRAIL	BR A8490
2.765	RT	APPROX 70' GUARDRAIL	BR A8490
LUMP SUM ONE			
LOCATIONS AND QUANTITIES ARE APPROXIMATE. FOLLOW SEC 202.30.			

GRAVEL A OR CRUSHED STONE B

LOG MI	LOG MI	LOC	GRAVEL A OR CRUSHED STONE B 1.7 TON/CY (TONS)	REMARKS
ADD QUANTITY			38.6	UNPAVED DRIVEWAYS
ADD QUANTITY			9.7	ENTRANCES AS DIRECTED BY ENGINEER
		TOTAL	49	

LINEAR GRADING

LOG MI	LOC	LENGTH (FT)	WIDTH (FT)	LIN GRADING CL 2 (STA)	REMARKS
1.823	LT	40	VAR	0.4	CO RD 323 N
2.830	LT	40	VAR	0.4	CO RD 321
			TOTAL	0.8	
SEE SPECIAL SHEET FOR DETAILS.					

COLDMILLING

LOG MI	LOG MI	LOC	LENGTH (FT)	WIDTH (FT)	THICK (IN)	MODIFIED COLDMILLING (SY)	REMARKS
0.227	0.236	CL	50	21	VAR	116.7	BEGIN PROJECT
2.040	2.068	CL	150	21	VAR	350.0	DEPTH TRANSITION-CONC PAVT
2.100	2.128	CL	150	21	VAR	350.0	DEPTH TRANSITION-CONC PAVT
2.439	2.448	CL	50	25	VAR	138.9	DEPTH TRANSITION-RXR
2.450	2.459	CL	50	25	VAR	138.9	DEPTH TRANSITION-RXR
2.725	2.734	CL	50	26	VAR	144.4	DEPTH TRANSITION-BR A8490
2.765	2.774	CL	50	26	VAR	144.4	DEPTH TRANSITION-BR A8490
4.236	4.245	CL	50	21	VAR	116.7	DEPTH TRANSITION-BR T0170/A9426
4.379	4.388	CL	50	21	VAR	116.7	DEPTH TRANSITION-BR T0170/A9426
5.347	5.356	CL	50	21	VAR	116.7	END PROJECT
2.715		RT				79.4	RTE BB
ADD QUANTITY						608.9	PAVED COUNTY RD/STREET
ADD QUANTITY						116.7	PAVED DRIVEWAY
					TOTAL	2539	
SEE SPECIAL SHEETS FOR DETAILS.							

GUARDRAIL

LOG MI	LOC	MGS GUARDRAIL (LF)	MGS BR APPR TRANSITION SECTION (EA)	MASH TYPE A CW END TERMINAL (EA)	* MASH TYPE C CW END TERMINAL (EA)	MOD SHAPING SLOPES CL III (100 FT)	REMARKS
2.734	LT				1		BR A8490
2.765	LT	100	1	1		1.0	BR A8490
2.765	RT	25	1	1		0.8	BR A8490
	TOTAL	125	2	2	1	2	
* ALL COSTS ASSOCIATED WITH INSTALLATION SHALL BE CONSIDERED COMPLETELY COVERED BY THE PAY							
ITEM - MASH TYPE C CRASHWORTHY END TERMINAL.							
SEE STANDARD PLANS 606.50 FOR GUARDRAIL INSTALLATIONS.							

PERMANENT AGGREGATE EDGE TREATMENT

LOG MI	LOG MI	LOC	LENGTH (FT)	WIDTH (FT)	THICK (IN)	PERM AGGR EDGE TREATMENT 1.7 TON/CY (TON)	REMARKS
0.227	2.040	CL	9572.64	2	3	301.36	
2.040	2.128	CL	464.64	2	5	24.38	
2.128	2.448	CL	1689.6	2	3	53.19	
2.450	2.734	CL	1499.52	2	3	47.21	
2.765	4.245	CL	7972.80	2	3	246.01	
4.379	5.356	CL	5406.72	2	3	162.40	
					TOTAL	834.6	
DIMENSIONS MAY BE ADJUSTED AS APPROVED BY THE ENGINEER.							

SURFACE LEVELING

LOG MI	LOG MI	LOC	LENGTH (FT)	AVG WIDTH (FT)	THICK (IN)	SURFACE LEVELING PG 64-22 2.034 TON/CY (CY)	(TON)	TACK 0.08 GAL/SY (GAL)	REMARKS
0.227	0.236	CL	50.00	21.09	1	3.25	6.61	9.4	BEGIN PROJECT
0.236	2.040	CL	9525.12	21.09	1	620.01	1261.10	1785.6	
2.040	2.128	CL	464.64	21.09	1	30.24	61.51	21.8	
2.040	2.068	CL	150.00	21.09	2	9.76	19.85	28.1	DEPTH TRANSITION
2.068	2.100	CL	168.96	21.09	2	22.00	44.75	31.7	EXIST CONC PAVT
2.100	2.128	CL	150.00	21.09	2	9.76	19.85	28.1	DEPTH TRANSITION
2.128	2.350	CL	1172.16	21.09	1	76.30	155.19	219.7	
2.350	2.439	CL	469.92	25.09	1	36.39	74.02	104.8	
2.439	2.448	CL	50.00	25.09	1	3.87	7.87	11.2	DEPTH TRANSITION-RXR
2.450	2.459	CL	50.00	25.09	1	3.87	7.87	11.2	DEPTH TRANSITION-RXR
2.459	2.570	CL	586.08	25.09	1	45.39	92.32	130.7	
2.570	2.670	CL	528.00	21.09	1	34.37	69.91	99.0	
2.670	2.725	CL	290.40	26.09	1	23.38	47.55	67.3	
2.725	2.734	CL	50.00	26.09	1	4.03	8.20	11.6	DEPTH TRANSITION-BR A8490
2.765	2.774	CL	50.00	26.09	1	4.03	8.20	11.6	DEPTH TRANSITION-BR A8490
2.774	2.784	CL	52.80	26.09	1	4.25	8.64	12.2	
2.784	4.236	CL	7666.56	21.09	1	499.04	1015.05	1437.2	
4.236	4.245	CL	50.00	21.09	1	3.25	6.61	9.4	DEPTH TRANSITION-BR T0170/A9426
4.379	4.388	CL	50.00	21.09	1	3.25	6.61	9.4	DEPTH TRANSITION-BR T0170/A9426
4.388	5.347	CL	5063.52	21.09	1	329.60	670.41	949.2	
5.347	5.356	CL	50.00	21.09	1	3.25	6.61	9.4	END PROJECT
1.823		LT				26.91	54.73	19.4	CO RD 323 N
2.715		RT				40.29	81.95	23.2	RTE BB
2.830		LT				23.55	47.90	17.0	CO RD 321
ADD QUANTITY							34.40	60.9	PAVED COUNTY RD/STREET
ADD QUANTITY							38.70	22.8	UNPAVED COUNTY RD/STREET
ADD QUANTITY							6.60	11.7	PAVED DRIVEWAY
ADD QUANTITY							500.60		IRREGULARITIES
ADD QUANTITY							71.97		SAFETY EDGE
					TOTAL		4435.6	5154	
SEE SPECIAL SHEETS FOR DETAILS.									
ASSUME TACK EST @ 0.02 GAL/SY FOR 2ND LIFTS.									

PAVEMENT MARKING

LOG MI	LOG MI	WATERBORNE PAINT TYPE P BEADS 4" INT YELLOW (LF)	4" SOLID YELLOW (LF)	4" SOLID WHITE (LF)	PREFORMED THERMOPLASTIC 24" WHITE STOP (LF)	RXR MARKER (EA)
0.227	4.245	3693	17963	42431	22	2
4.379	5.356	1070	1384	10265		
	TOTAL	24110		52696	22	2
SEE JSP FOR CONTRACTOR'S RESPONSIBILITY TO CREATE A PAVEMENT MARKING						
LOG PRIOR TO ANY CONSTRUCTION OPERATIONS THAT MAY AFFECT EXISTING						
PAVEMENT MARKING.						
SEE SPECIAL SHEETS FOR RAILROAD CROSSING MARKING PLACEMENT.						

MOBILIZATION

LUMP SUM ONE

STATE OF MISSOURI
TIMOTHY CHRISTOPHER PICKETT
NUMBER PE-2017000351
PROFESSIONAL ENGINEER
08/23/2024 9:39:43 AM
TIMOTHY CHRISTOPHER PICKETT - CIVIL
MO-PE-2017000351

DATE PREPARED 8/21/2024

ROUTE	STATE
158	MO
DISTRICT	SHEET NO.
SE	3

COUNTY: BUTLER
JOB NO.: J9S3672
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION
DATE

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

SUMMARY OF QUANTITIES
SHEET 1 OF 2

EFFECTIVE: 07-01-2024

SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL AREA SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NUM.	DESCRIPTION
WARNING SIGNS								
WO1-1L	48X48	16.00						TURN (SYMBOL LEFT)
WO1-1R	48X48	16.00						TURN (SYMBOL RIGHT)
WO1-2L	48X48	16.00						CURVE (SYMBOL LEFT)
WO1-2R	48X48	16.00						CURVE (SYMBOL RIGHT)
WO1-3L	48X48	16.00						REVERSE TURN (SYMBOL LEFT)
WO1-3R	48X48	16.00						REVERSE TURN (SYMBOL RIGHT)
WO1-4L	48X48	16.00						REVERSE CURVE (SYMBOL LEFT)
WO1-4R	48X48	16.00						REVERSE CURVE (SYMBOL RIGHT)
WO1-4bL	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL LEFT)
WO1-4bR	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL RIGHT)
WO1-4cL	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL LEFT)
WO1-4cR	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL RIGHT)
WO1-6	60X30	12.50						HORIZONTAL ARROW (SYMBOL)
WO1-6a	72X36	18.00						HORIZ. ARROW (SYMBOL ON PERMANENT BARRICADE)
WO1-7	60X30	12.50						DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)
WO1-7a	72X36	18.00						DOUBLE HEAD HORIZ. ARROW (SYMBOL ON PERM. BARR.)
WO1-8	18X24	3.00						CHEVRON (SYMBOL)
WO1-8a	30X36	7.50						CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)
WO3-1	48X48	16.00						STOP AHEAD (SYMBOL)
WO3-2	48X48	16.00						YIELD AHEAD (SYMBOL)
WO3-3	48X48	16.00						SIGNAL AHEAD (SYMBOL)
WO3-4	48X48	16.00	10	160				BE PREPARED TO STOP
WO3-5	48X48	16.00						SPEED LIMIT AHEAD
WO4-1L	48X48	16.00						MERGE (SYMBOL FROM LEFT)
WO4-1R	48X48	16.00						MERGE (SYMBOL FROM RIGHT)
WO4-1aL	48X48	16.00						MERGE (LEFT)
WO4-1aR	48X48	16.00						MERGE (RIGHT)
WO5-1	48X48	16.00						ROAD/BRIDGE/RAMP NARROWS
WO5-3	48X48	16.00						ONE LANE BRIDGE
WO5-5	48X48	16.00						NARROW LANES
WO6-1	48X48	16.00						DIVIDED HIGHWAY (SYMBOL)
WO6-2	48X48	16.00						DIVIDED HIGHWAY END (SYMBOL)
WO6-3	48X48	16.00						TWO WAY TRAFFIC (SYMBOL)
WO7-3a	30X24	5.00						NEXT XX MILES (PLAQUE)
WO8-1	48X48	16.00						BUMP
WO8-2	48X48	16.00						DIP
WO8-3	48X48	16.00						PAVEMENT ENDS
WO8-4	48X48	16.00						SOFT SHOULDER
WO8-5	48X48	16.00						SLIPPERY WHEN WET (SYMBOL)
WO8-6	48X48	16.00						TRUCK CROSSING
WO8-6c	48X48	16.00						TRUCK ENTRANCE
WO8-7	36X36	9.00						LOOSE GRAVEL
WO8-7a	36X36	9.00						FRESH OIL / LOOSE GRAVEL
WO8-9	48X48	16.00						LOW SHOULDER
WO8-11	48X48	16.00	10	160				UNEVEN LANES
WO8-12	48X48	16.00	6	96				NO CENTER LINE
WO8-15	48X48	16.00						GROOVED PAVEMENT
WO8-15P	30X24	5.00						MOTORCYCLE (PLAQUE)
WO8-17L	48X48	16.00						SHOULDER DROP-OFF (SYMBOL LEFT)
WO8-17R	48X48	16.00						SHOULDER DROP-OFF (SYMBOL RIGHT)
WO8-17P	30X24	5.00						SHOULDER DROP-OFF (PLAQUE)
W10-1	42RND.	9.62						RAILROAD CROSSING
WO12-1	24X24	4.00						DOUBLE DOWN ARROW (SYMBOL)
WO12-2	48X48	16.00						LOW CLEARANCE (SYMBOL)
W012-2x	24X18	3.00						LOW CLEARANCE (PLAQUE)
WO12-2a	84X24	14.00						OVERHEAD LOW CLEARANCE (FEET AND INCHES)
WO12-4	120X60	50.00						LOW CLEARANCE XX FT XX IN XX MILES AHEAD
WO12-5	120X60	50.00						WIDTH RESTRICTION XX FT XX IN XX MILES AHEAD
WO13-1	30X30	6.25						ADVISORY SPEED (PLAQUE)
WO16-2	30X24	5.00						XXX FEET (PLAQUE)
WO16-3	30X24	5.00						X MILE (PLAQUE)
WO20-1	48X48	16.00	19	304				ROAD/BRIDGE/RAMP WORK AHEAD
WO20-2	48X48	16.00						DETOUR AHEAD
WO20-3	48X48	16.00						ROAD CLOSED AHEAD
WO20-4	48X48	16.00	6	96				ONE LANE ROAD AHEAD
WO20-5	48X48	16.00						RIGHT/CENTER/LEFT LANE CLOSED AHEAD
WO20-5a	48X48	16.00						2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD
WO20-6a	48X48	16.00						RIGHT/CENTER/LEFT LANE CLOSED
WO20-7a	48X48	16.00	16	256				FLAGGER (SYMBOL)
WO21-2	36X36	9.00						FRESH OIL
WO21-5	48X48	16.00						SHOULDER WORK / SHOULDER WORK AHEAD
WO22-1	48X48	16.00						BLASTING ZONE AHEAD
WO22-2	42X36	10.50						TURN OFF 2-WAY RADIO AND PHONE
WO22-3	42X36	10.50						END BLASTING ZONE
GO22-1	21X15	2.19	2	4.38				WET PAINT (ARROW PIVOTS)

SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NUM.	DESCRIPTION
GUIDE SIGNS								
E05-1	36X48	12.00						GORE EXIT
E05-2	48X36	12.00						EXIT OPEN
E05-2a	48X36	12.00						EXIT CLOSED
GO20-1	60X24	10.00	2	20				ROAD WORK NEXT XX MILES
GO20-2	48X24	8.00	2	16				END ROAD WORK
GO20-4	36X18	4.50	1	4.5				PILOT CAR FOLLOW ME
GO20-4a	42X30	8.75	2	17.5				PILOT CAR IN USE WAIT & FOLLOW
GO20-4a	18X12	1.50	8	12				PILOT CAR IN USE WAIT & FOLLOW
GO20-5aP	36X24	6.00						WORK ZONE (PLAQUE)
MO4-8a	24X18	3.00						END DETOUR
MO4-9L	48X36	12.00						DETOUR (LEFT)
MO4-9R	48X36	12.00						DETOUR (RIGHT)
MO4-9P	48X12	4.00						STREET NAME (PLAQUE)
MO4-10L	48X18	6.00						DETOUR ARROW (LEFT)
MO4-10R	48X18	6.00						DETOUR ARROW (RIGHT)
REGULATORY SIGNS								
R1-1	48X48	13.25						STOP
R1-2	48TRI.	6.93						YIELD
R1-2a	36X36	9.00						TO ONCOMING TRAFFIC (PLAQUE)
R1-3P	30X12	2.50						ALL WAY (PLAQUE)
R2-1	36X48	12.00						SPEED LIMIT XX
R3-1	48X48	16.00						NO RIGHT TURN (SYMBOL)
R3-2	48X48	16.00						NO LEFT TURN (SYMBOL)
R3-3	36X36	9.00						NO TURNS
R3-4	48X48	16.00						NO U-TURN (SYMBOL)
R3-7L	30X30	6.25						LEFT LANE MUST TURN LEFT
R3-7R	30X30	6.25						RIGHT LANE MUST TURN RIGHT
R4-1	36X48	12.00						DO NOT PASS
R4-2	36X48	12.00						PASS WITH CARE
R4-7a	36X48	12.00						KEEP RIGHT (HORIZONTAL ARROW)
R4-8a	36X48	12.00						KEEP LEFT (HORIZONTAL ARROW)
R5-1	30X30	6.25						DO NOT ENTER
R5-1a	36X24	6.00						WRONG WAY
R6-1L	54X18	6.75						ONE WAY ARROW (LEFT)
R6-1R	54X18	6.75						ONE WAY ARROW (RIGHT)
R6-2L	24X30	5.00						ONE WAY (LEFT)
R6-2R	24X30	5.00						ONE WAY (RIGHT)
R9-9	24X12	2.00						SIDEWALK CLOSED
R9-11L	24X18	3.00						SIDEWALK CLOSED AHEAD, (ARROW LEFT) CROSS HERE
R9-11R	24X18	3.00						SIDEWALK CLOSED AHEAD, (ARROW RIGHT) CROSS HERE
R10-6	24X36	6.00						STOP HERE ON RED (45^ ARROW)
R11-2	48X30	10.00						ROAD CLOSED
R11-3a	60X30	12.50						ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY
R11-4	60X30	12.50						ROAD CLOSED TO THRU TRAFFIC
CONST-3A	60X48	20.00						FINE SIGN
CONST-3X	56X12	4.67						SPEEDING/PASSING (PLATE)
MISCELLANEOUS SIGNS								
CONST-5	48X36	12.00						POINT OF PRESENCE
CONST-5	96X48	32.00						POINT OF PRESENCE
CONST-8	48X36	12.00	2	24				WORK ZONE NO PHONE ZONE

	TOTAL
616-10.05 CONSTRUCTION SIGNS	1171
616-10.10 RELOCATED SIGNS	*

NOTE:
SEE STANDARD PLANS 616.20 FOR ADDITIONAL TRAFFIC CONTROL PLANS.
NO DIRECT PAY FOR RELOCATION OF CONSTRUCTION SIGNS.

ITEM NUMBER	TOTAL QTY	DESCRIPTION
6122008		IMPACT ATTENUATOR 40 MPH (SAND BARRELS)
6122009		IMPACT ATTENUATOR 45 MPH (SAND BARRELS)
6122010		IMPACT ATTENUATOR 50 MPH (SAND BARRELS)
6122012		IMPACT ATTENUATOR 55 MPH (SAND BARRELS)
6122014		IMPACT ATTENUATOR 60 MPH (SAND BARRELS)
6122017		IMPACT ATTENUATOR 65 MPH (SAND BARRELS)
6122019		IMPACT ATTENUATOR 70 MPH (SAND BARRELS)
6122020		REPLACEMENT SAND BARREL
6122030		IMPACT ATTENUATOR (RELOCATION)
6123001		TRUCK MOUNTED ATTENUATOR (TMA)
6161008		ADVANCED WARNING RAIL SYSTEM
6161012		BUOYS (BOATS KEEP OUT)
6161013		BUOYS (NO WAKE)
6161014		SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)
6161025	150	CHANNELIZER (TRIM LINE)
6161030		TYPE III MOVEABLE BARRICADE
6161033		DIRECTION INDICATOR BARRICADE
6161040		FLASHING ARROW PANEL
6161047		TYPE III OBJECT MARKER
6161055		SEQUENTIAL FLASHING WARNING LIGHT
6161070		TUBULAR MARKER
6161095		RADAR SPEED ADVISORY SYSTEM
6161096		CHANGEABLE MESSAGE SIGN, COMMISSION FURNISHED/RETAINED
6161098A	2	CHANGEABLE MESSAGE SIGN W/O COMM. INTERFACE - CONTRACTOR FURNISHED/RETAINED
6161099		CHANGEABLE MESSAGE SIGN WITH COMM. INTERFACE - CONTRACTOR FURNISHED/RETAINED
6162000A		WORK ZONE TRAFFIC SIGNAL SYSTEM
6162002		TEMPORARY LONG-TERM RUMBLE STRIPS
6173600D		TEMPORARY TRAFFIC BARRIER CONTRACTOR FURNISHED/RETAINED
6173602B		TEMPORARY TRAFFIC BARRIER CONTRACTOR FURNISHED/COMMISSION RETAINED
6174000A		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION
6175010A		RELOCATING TEMPORARY TRAFFIC BARRIER
6176000B		TEMPORARY TRAFFIC BARRIER COMMISSION FURNISHED/RETAINED
6177000B		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION COMMISSION FURNISHED/RETAINED
6208064A		TEMPORARY RAISED PAVEMENT MARKER
9029400		TEMPORARY TRAFFIC SIGNALS
9029401		TEMPORARY TRAFFIC SIGNALS AND LIGHTING

STATE OF MISSOURI
TIMOTHY CHRISTOPHER PICKETT
NUMBER PE-2017000351
PROFESSIONAL ENGINEER
08/23/2024 9:40:03 AM
TIMOTHY CHRISTOPHER PICKETT - CIVIL
MO-PE-2017000351

DATE PREPARED: 7/24/2024
ROUTE: 158 | STATE: MO
DISTRICT: SE | SHEET NO.: 3
COUNTY: BUTLER
JOB NO.: J9S3672
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

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

SUMMARY OF QUANTITIES
SHEET 2 OF 2

MODIFIED COLDMILLING (DEPTH TRANSITION)

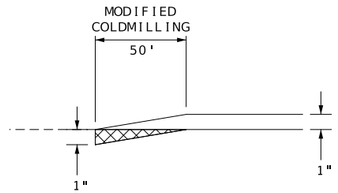
GRADING & PAVEMENT

GRAVEL A OR CRUSHED STONE B

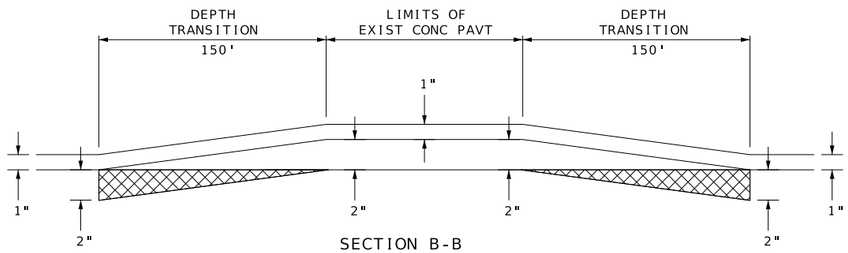
NOTE:

LOG MILE LOCATIONS ARE APPROXIMATE. ADJUST AS DIRECTED BY THE ENGINEER TO FIT FIELD CONDITIONS.

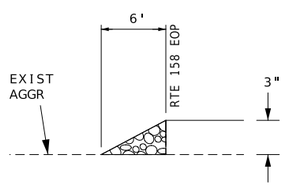
THE WIDTH OF AGGREGATE APRONS MAY BE ADJUSTED BY THE ENGINEER AS NECESSARY TO OBTAIN SUITABLE TRANSITIONS.



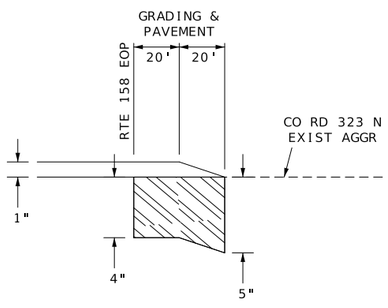
SECTION A-A



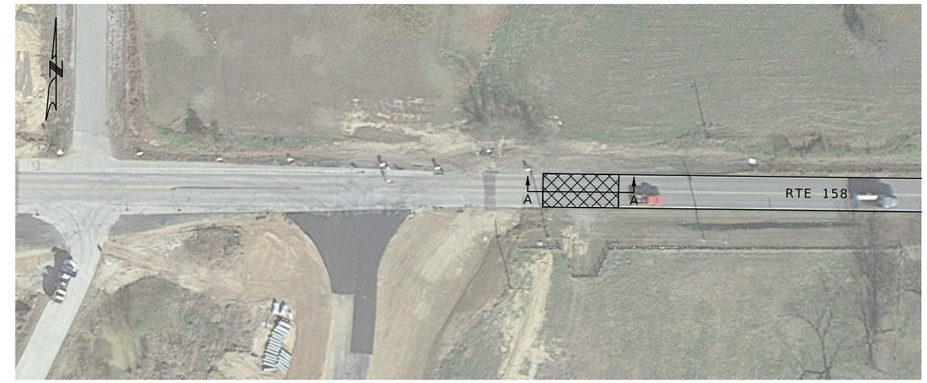
SECTION B-B



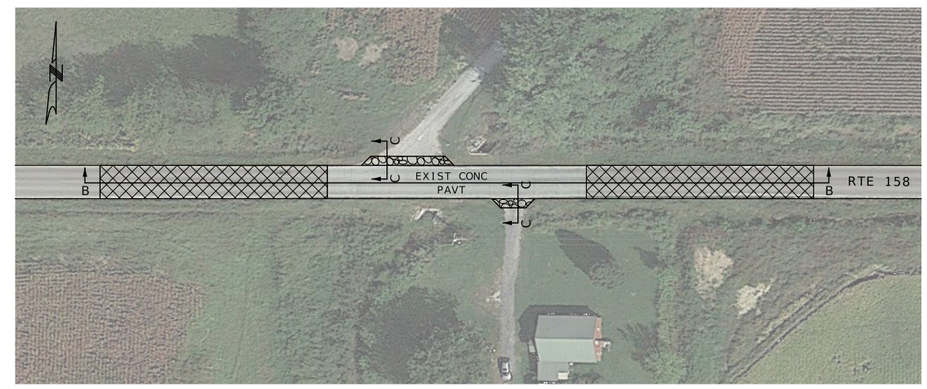
SECTION C-C



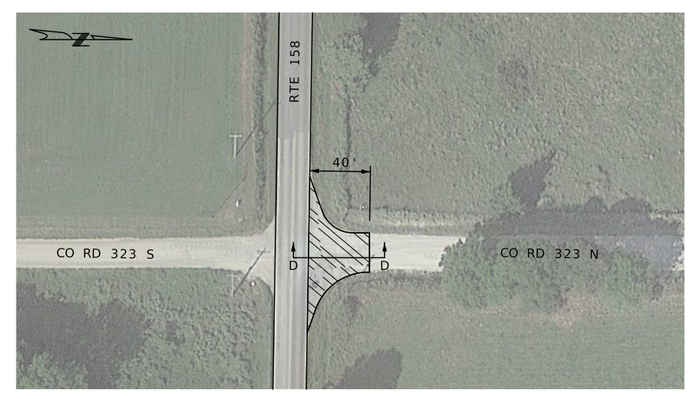
SECTION D-D



BEGIN PROJECT
LOG MI 0.227



EXISTING CONCRETE PAVEMENT
LOG MI 2.068 TO LOG MI 2.100



CO RD 323 NORTH
LOG MI 1.823

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.

STATE OF MISSOURI
TIMOTHY CHRISTOPHER PICKETT
NUMBER PE-2017000351
PROFESSIONAL ENGINEER
08/23/2024 9:40:30 AM
TIMOTHY CHRISTOPHER PICKETT - CIVIL
MO-PE-2017000351

DATE PREPARED	
7/24/2024	
ROUTE 158	STATE MO
DISTRICT SE	SHEET NO. 4
COUNTY BUTLER	
JOB NO. J9S3672	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

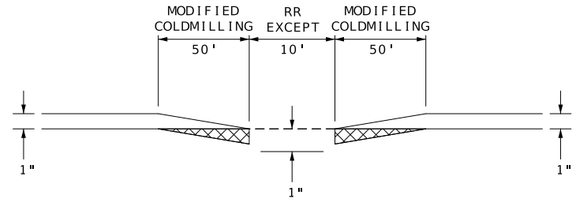
DATE	DESCRIPTION

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

PAVEMENT DETAILS
SHEET 1 OF 4

MODIFIED COLDMILLING (DEPTH TRANSITION)

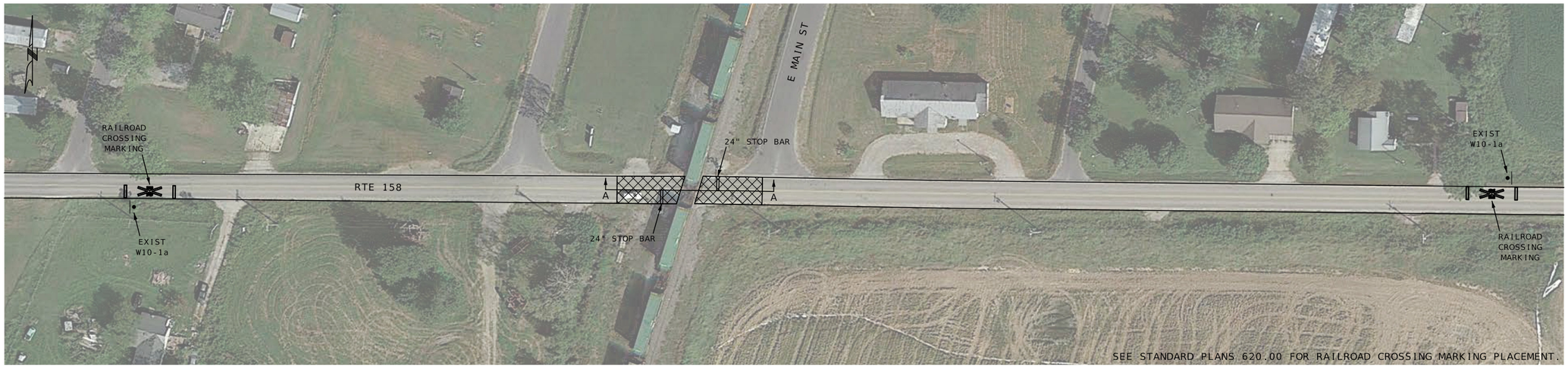
GRADING & PAVEMENT



SECTION A-A

NOTE:

LOG MILE LOCATIONS ARE APPROXIMATE. ADJUST AS DIRECTED BY THE ENGINEER TO FIT FIELD CONDITIONS.



RAILROAD EXCEPTION

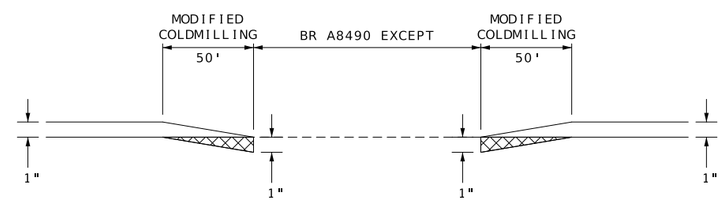
LOG MI 2.448 TO LOG MI 2.450

BR A8490 EXCEPTION

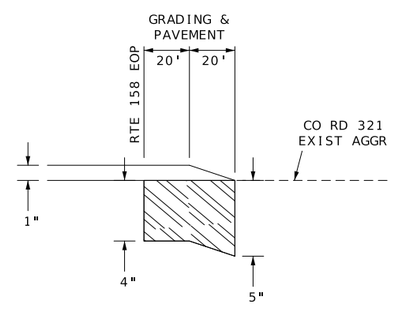
LOG MI 2.734 TO LOG MI 2.765

CO RD 321

LOG MI 2.830



SECTION B-B



SECTION C-C

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.

STATE OF MISSOURI
TIMOTHY CHRISTOPHER PICKETT NUMBER PE-2017000351
PROFESSIONAL ENGINEER
08/23/2024 9:40:54 AM
TIMOTHY CHRISTOPHER PICKETT - CIVIL
MO-PE-2017000351

DATE PREPARED	7/24/2024
ROUTE	158
STATE	MO
DISTRICT	SE
SHEET NO.	5
COUNTY	BUTLER
JOB NO.	J9S3672
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

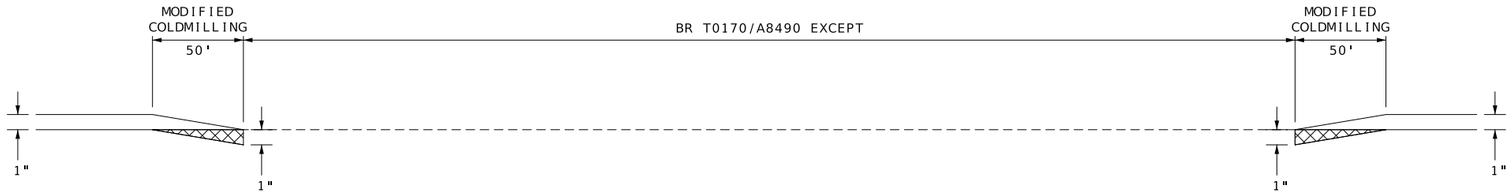
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

PAVEMENT DETAILS
SHEET 2 OF 4

MODIFIED COLDMILLING
(DEPTH TRANSITION)

NOTE:

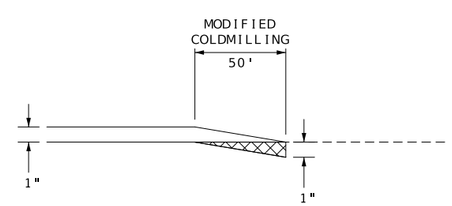
LOG MILE LOCATIONS ARE APPROXIMATE.
ADJUST AS DIRECTED BY THE ENGINEER
TO FIT FIELD CONDITIONS.



SECTION A-A

BR T0170/A9426 & PAVEMENT EXCEPTION
LOG MI 4.245 TO LOG MI 4.379

END PROJECT
LOG MI 5.356



SECTION B-B

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.

STATE OF MISSOURI
TIMOTHY CHRISTOPHER PICKETT
NUMBER PE-2017000351
PROFESSIONAL ENGINEER
08/23/2024 9:41:18 AM
TIMOTHY CHRISTOPHER PICKETT - CIVIL
MO-PE-2017000351

DATE PREPARED	8/21/2024
ROUTE	158
STATE	MO
DISTRICT	SE
SHEET NO.	6
COUNTY	BUTLER
JOB NO.	J9S3672
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

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

PAVEMENT DETAILS
SHEET 3 OF 4

MODIFIED COLDMILLING (DEPTH TRANSITION)

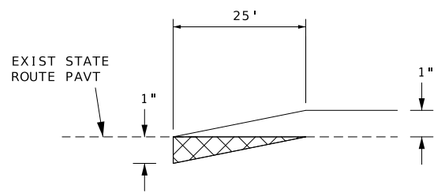
GRADING & PAVEMENT

GRAVEL A OR CRUSHED STONE B

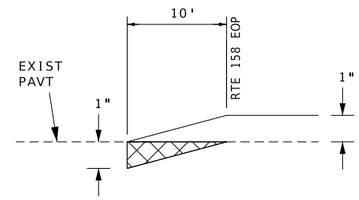
NOTE:

ALL GRADING NECESSARY FOR THE PROPER CONSTRUCTION OF ASPH AND AGGREGATE APRONS SHALL BE CONSIDERED INCIDENTAL WORK AND AT NO DIRECT PAY.

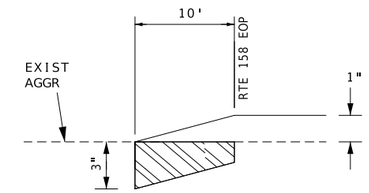
THE WIDTH OF ALL ASPH AND AGGREGATE APRONS MAY BE ADJUSTED BY THE ENGINEER AS NECESSARY TO OBTAIN SUITABLE TRANSITIONS.



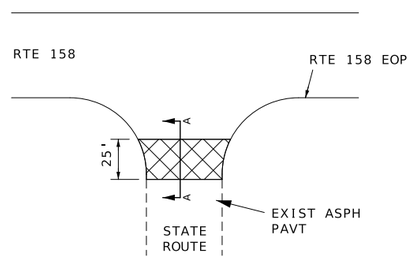
SECTION A-A



SECTION B-B

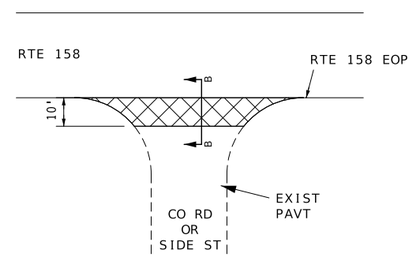


SECTION C-C



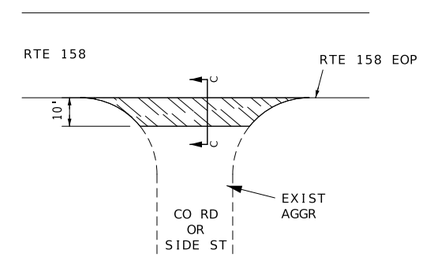
PLAN VIEW

STATE ROUTES



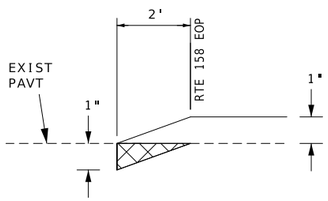
PLAN VIEW

COUNTY ROADS AND SIDE STREETS (PAVED)

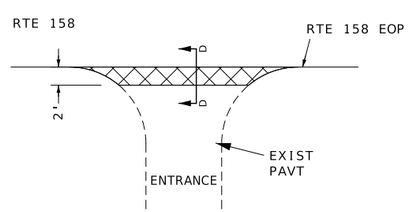


PLAN VIEW

COUNTY ROADS AND SIDE STREETS (UNPAVED)

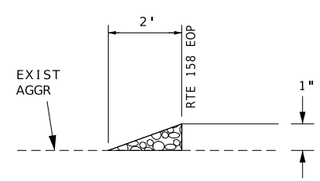


SECTION D-D

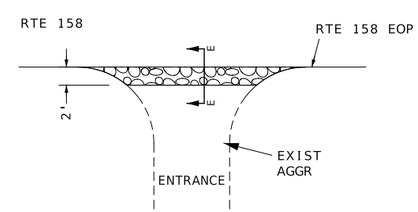


PLAN VIEW

PRIVATE AND COMMERCIAL ENTRANCES (PAVED)



SECTION E-E



PLAN VIEW

PRIVATE AND COMMERCIAL ENTRANCES (UNPAVED)

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.

STATE OF MISSOURI
TIMOTHY CHRISTOPHER PICKETT
NUMBER PE-2017000351
PROFESSIONAL ENGINEER
08/23/2024 9:41:36 AM
TIMOTHY CHRISTOPHER PICKETT - CIVIL
MO-PE-2017000351

DATE PREPARED	7/24/2024
ROUTE	158
STATE	MO
DISTRICT	SE
SHEET NO.	7
COUNTY	BUTLER
JOB NO.	J9S3672
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

PAVEMENT DETAILS
SHEET 4 OF 4

W020-1

(2)

W020-4

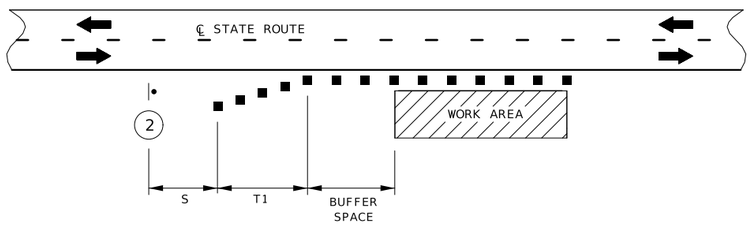
(7)

W020-7a

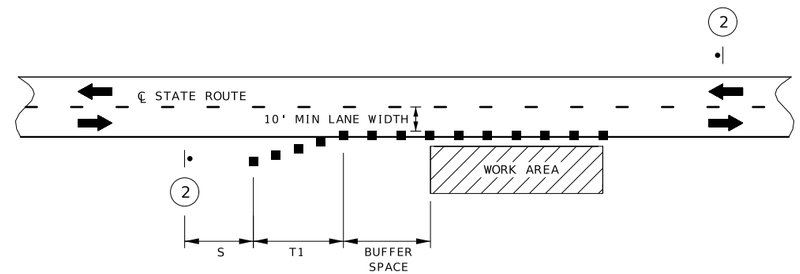
(8)

TRAFFIC CONTROL LEGEND

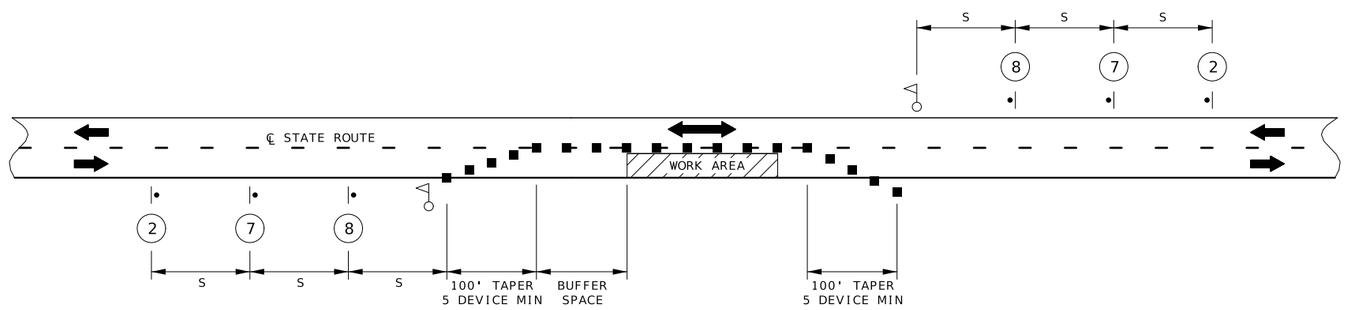
- SIGN (SINGLE SIDED)
- CHANNELIZER
- FLAGGER



SHOULDER WORK



SHOULDER WORK WITH MINOR ENCROACHMENT



LANE CLOSURE WITH FLAGGER CONTROL

NOTES:

DAYLIGHT FLAGGING OPERATIONS ONLY.

DISTANCE MAY BE ADJUSTED ACCORDING TO FIELD CONDITIONS.

NO PAYMENT WILL BE MADE FOR RELOCATION OF CONSTRUCTION SIGNS.

ANY EXISTING SIGNING THAT CONFLICTS WITH THE TRAFFIC CONTROL SIGNING SHALL BE COMPLETELY COVERED OR REMOVED.

AUTOMATED FLAGGER ASSISTANCE DEVICES AND PORTABLE SIGNAL FLAGGING DEVICES MAY BE USED AS AN ALTERNATIVE FLAGGING OPERATION.

FOR ADDITIONAL TRAFFIC CONTROL PLANS FOR THIS PROJECT, USE STANDARD PLANS 616.20 (SHEETS 1 THROUGH 5).

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.

PERMANENT POSTED SPEED (MPH)	SIGN SPACING (1) (FT)	
	NON-DIVIDED HIGHWAYS (S)	DIVIDED HIGHWAYS (S)
0 - 35	200 FT	200 FT
40 - 45	350 FT	500 FT
50 - 55	500 FT	1000 FT
60 - 70	1000 FT	SA - 1000 FT SB - 1500 FT SC - 2640 FT

(1) SPACING BETWEEN SIGNS, BETWEEN LAST SIGN AND FLAGGER, BEGINNING OF TAPER OR SIGNED CONDITION. SPACINGS MAY BE ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS.

TAPER LENGTH AND SPACING							
PERMANENT POSTED SPEED (MPH)	TAPER LENGTH T1 SHOULDER (1)	TAPER LENGTH L FOR LATERAL SHIFTS (2)			BUFFER SPACE LENGTH	CHANNELIZER SPACING (3)	
		10 FT	11 FT	12 FT		TAPERS	BUFFER SPACE WORK AREA
0 - 35	70 FT	205 FT	225 FT	245 FT	280 FT	35 FT (4)	40 FT (4)
40 - 45	150 FT	450 FT	495 FT	540 FT	400 FT	40 FT (4)	80 FT (4)
50 - 55	185 FT	550 FT	605 FT	660 FT	560 FT	50 FT (5)	80 FT (5)
60 - 70	235 FT	700 FT	770 FT	840 FT	840 FT	60 FT (5)	120 FT (5)

(1) SHOULDER TAPER LENGTH BASED ON 10' (STANDARD SHOULDER WIDTH) OFFSET.

(2) TAPER LENGTHS MAY BE ADJUSTED TO ACCOMMODATE CROSSROADS, CURVES, RAMPS, INTERSECTIONS, OR OTHER GEOMETIC FEATURES.

(3) SPACING MAY BE REDUCED TO DISCOURAGE TRAFFIC ENCROACHMENT.

(4) SPACING REDUCED TO ONE-HALF AT INTERSECTIONS.

(5) SPACING MAY BE REDUCED TO ONE-HALF AT INTERSECTIONS.

STATE OF MISSOURI
TIMOTHY CHRISTOPHER PICKETT
NUMBER PE-2017000351
PROFESSIONAL ENGINEER

08/23/2024 9:41:54 AM
TIMOTHY CHRISTOPHER PICKETT - CIVIL
MO-PE-2017000351

DATE PREPARED	
7/24/2024	
ROUTE 158	STATE MO
DISTRICT SE	SHEET NO. 8
COUNTY BUTLER	
JOB NO. J9S3672	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

TRAFFIC CONTROL
SHEET 1 OF 1

SIGNS

SIGN NO.	SIGN SIZE	LOG MILE	HORZ CLEAR IF NOT STD	LOCATION	SIGN DTL. SHT. NO.	PERFORATED SQUARE STEEL TUBE – 2 IN. POST: POST NO.1	2 IN. POST: POST NO.2	2 IN. POST: TOTAL ITEM NO. 9031270A	2 IN. POST ANCHORS: DRIVEN 12-GA. ITEM NO. 9031271A	2 IN. POST ANCHORS: DRIVEN 7-GA. ITEM NO. 9031273A	2 IN. POST ANCHORS: CONCRETE 7-GA. ITEM NO. 9031274	2.5 IN. POST: POST NO.1	2.5 IN. POST: POST NO.2	2.5 IN. POST: TOTAL ITEM NO. 9031280	2.5 IN. POST ANCHORS: 2.25" INSERT (6 FT) ITEM NO. 9031272A	2.5 IN. POST ANCHORS: DRIVEN 7-GA. ITEM NO. 9031281A	2.5 IN. POST ANCHORS: CONCRETE 7-GA. ITEM NO. 9031285	BREAK AWAY ASSEMBLY ITEM NO. 9031241
						LF	LF	LF	EA	EA	EA	LF	LF	LF	EA	EA	EA	EA
1	12X36	0.734	STD	RT		9.75		9.75	1									
2	12X36	0.734	STD	LT		9.75		9.75	1									
3	12X36	0.913	STD	LT		9.75		9.75	1									
4	12X36	1.117	STD	RT		9.75		9.75	1									
5	12X36	1.361	STD	RT		9.75		9.75	1									
6	12X36	1.365	STD	LT		9.75		9.75	1									
7	12X36	2.071	STD	RT		9.75		9.75	1									
8	12X36	2.08	STD	LT		9.75		9.75	1									
9	12X36	2.089	STD	RT		9.75		9.75	1									
10	12X36	2.099	STD	LT		9.75		9.75	1									
11	48X24	2.717	STD	RT		9.50	9.50	19.00	2									
12	12X36	2.979	STD	RT		9.75		9.75	1									
13	12X36	3.994	STD	RT		9.75		9.75	1									
14	12X36	3.994	STD	RT		9.75		9.75	1									
15	36X36	4.098	STD	RT		12.50		12.50	1									
16	ASSEMBLY	5.128	STD	RT		11.25		11.25	1									
17	12X36	5.232	STD	RT		9.75		9.75	1									
				SUBTOTAL				179.25	18									
				TOTAL				180	18									

STANDARD SIGN ASSEMBLIES

SIGN NUMBER	LOG MILE	LOCATION	TYPE: SH	TYPE: SH	TYPE: SHF	TYPE: SHF	TYPE: SHF	TYPE: SHF
			SIGN DESCRIPTION, SIZES & NUMBER OF EACH					
			 M1-5 30X24	 M2-1 21X15	 W1-7 48X24	 W8-34 36X36	 OM-3L 12X36	 OM-3R 12X36
1	0.734	RT						1
2	0.734	LT						1
3	0.913	LT						1
4	1.117	RT						1
5	1.361	RT						1
6	1.365	LT						1
7	2.071	RT						1
8	2.08	LT					1	
9	2.089	RT					1	
10	2.099	LT						1
11	2.717	RT			1			
12	2.979	RT						1
13	3.994	RT						1
14	3.994	RT					1	
15	4.098	RT				1		
16	5.128	RT	1	1				
17	5.232	RT					1	
	TOTAL		1	1	1	1	4	10

SIGN SUMMARY

STANDARD SIGN OR SPECIAL SIGN NUMBER	SIGN DETAIL SHEET NO.	NO. EACH	SIZE, TYPE & SQUARE FEET: SIZE	FLAT SHEET SH ITEM NO. 9035004A	FLAT SHEET FLORESCENT SHF* ITEM NO. 9035069A	STRUCTURAL ST ITEM NO. 9035011A	STRUCTURAL FLORESCENT STF* ITEM NO. 9035071A
M1-5	STD	1	30X24	5.00			
M2-1	STD	1	21X15	2.19			
W1-7	STD	1	48X24		8.00		
W8-34	STD	1	36X36		9.00		
OM-3L	STD	4	12X36		12.00		
OM-3R	STD	12	12X36		30.00		
			TOTAL	8.00	59.00		

* ORANGE, YELLOW & YELLOW GREEN

STATE OF MISSOURI
TIMOTHY CHRISTOPHER PICKETT
NUMBER PE-2017000351
PROFESSIONAL ENGINEER
08/23/2024 9:42:19 AM
TIMOTHY CHRISTOPHER PICKETT - CIVIL
MO-PE-2017000351

DATE PREPARED 8/21/2024

ROUTE	STATE
158	MO
DISTRICT	SHEET NO.
SE	9

COUNTY: BUTLER
JOB NO.: J9S3672
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION	DATE

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

SIGNING SHEET 1 OF 1

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
PLANS FOR PROPOSED
STATE HIGHWAY

BUTLER COUNTY

DESIGN DESIGNATION

RTE HH TO RTE 158
A.A.D.T. - 2025 = 672
A.A.D.T. - 2035 = 687
D.H.V. = 12%
T = 6%
V = 55 M.P.H.
D = 46%/54%

RTE 158 TO CRAVENS RD
A.A.D.T. - 2025 = 4315
A.A.D.T. - 2035 = 4536
D.H.V. = 11%
T = 5%
V = 45/55 M.P.H.
D = 50%

CRAVENS RD TO RTE 53
A.A.D.T. - 2025 = 4765
A.A.D.T. - 2035 = 5008
D.H.V. = 10%
T = 9%
V = 45 M.P.H.
D = 50%

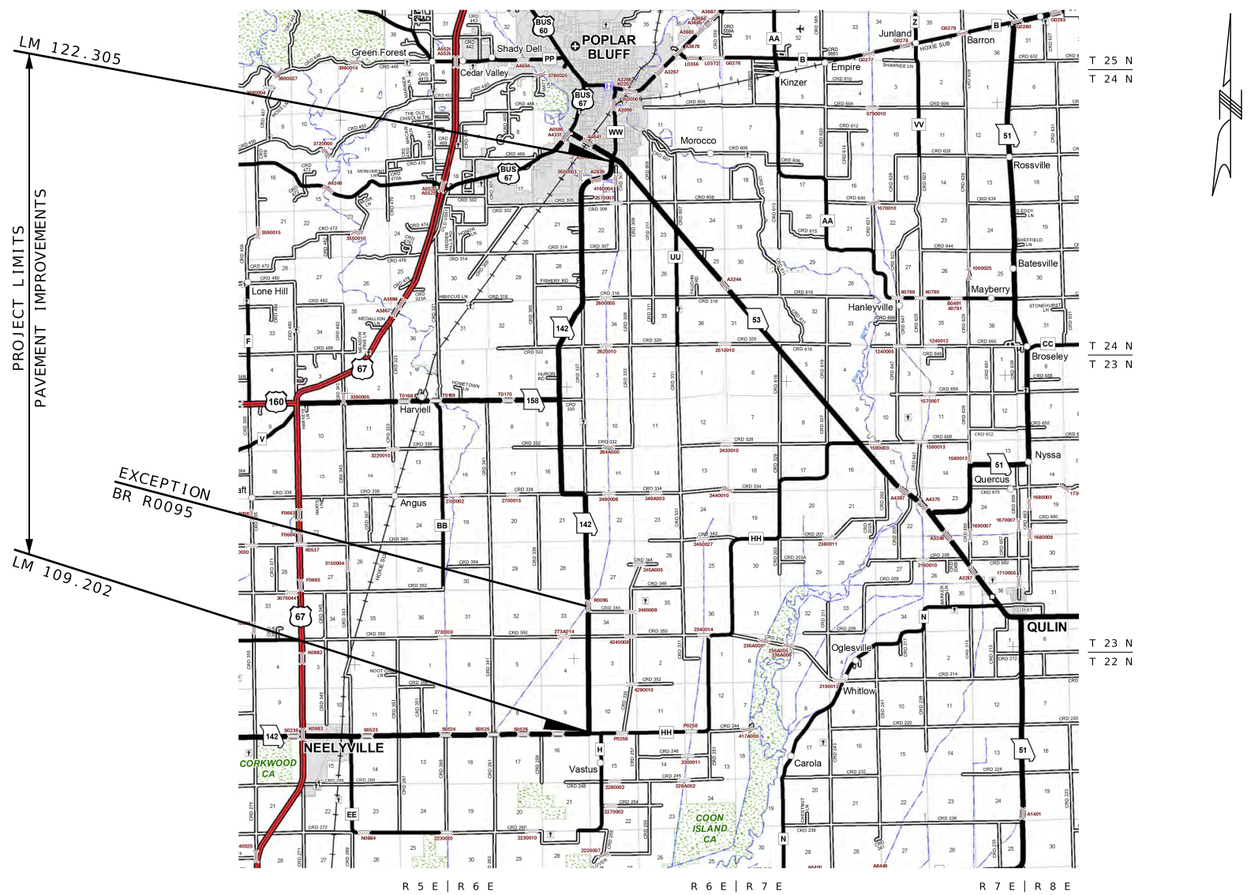
FUNCTIONAL CLASSIFICATION - MINOR ARTERIAL

NO NEW RIGHT OF WAY

CONVENTIONAL SYMBOLS
(USED IN PLANS)

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

NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES



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

LENGTH OF PROJECT

BEGINNING OF PROJECT	LM 109.202
END OF PROJECT	LM 122.305
APPARENT LENGTH	13.103 MILES 69183.84 FEET
EQUATIONS AND EXCEPTIONS:	
EXCEPTION - BR R0095 LM 111.911 TO LM 111.938	-145.00 FEET
TOTAL CORRECTIONS	-145.00 FEET
NET LENGTH OF PROJECT	69038.84 FEET
STATE LENGTH	13.076 MILES
FOR INFORMATION ONLY ESTIMATED DISTURBED ACRES	0 ACRES

STATE OF MISSOURI
TIMOTHY CHRISTOPHER PICKETT
NUMBER PE-2017000351
PROFESSIONAL ENGINEER
08/23/2024 9:46:55 AM
TIMOTHY CHRISTOPHER PICKETT - CIVIL
MO-PE-2017000351

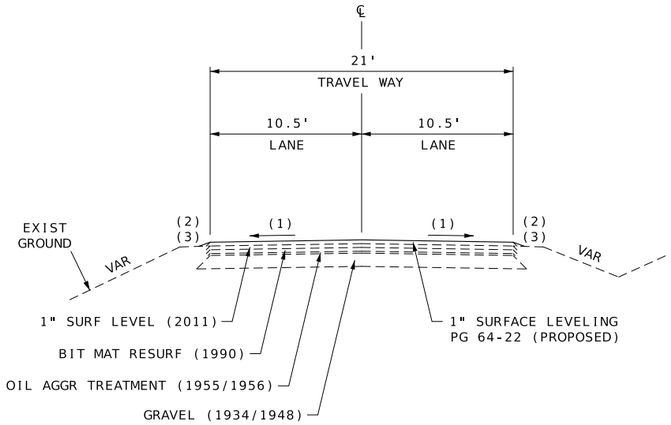
DATE PREPARED	8/21/2024
ROUTE	142
STATE	MO
DISTRICT	SE
SHEET NO.	1
COUNTY	BUTLER
JOB NO.	J9S3673
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

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

REV.

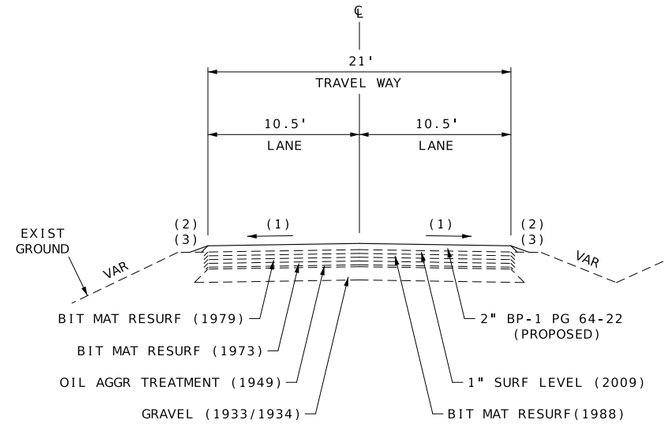
(1) MATCH EXIST
(2) SAFETY EDGE
(3) PERMANENT AGGREGATE EDGE TREATMENT



SECTION ON TANGENT
TYPICAL SECTION RTE 142

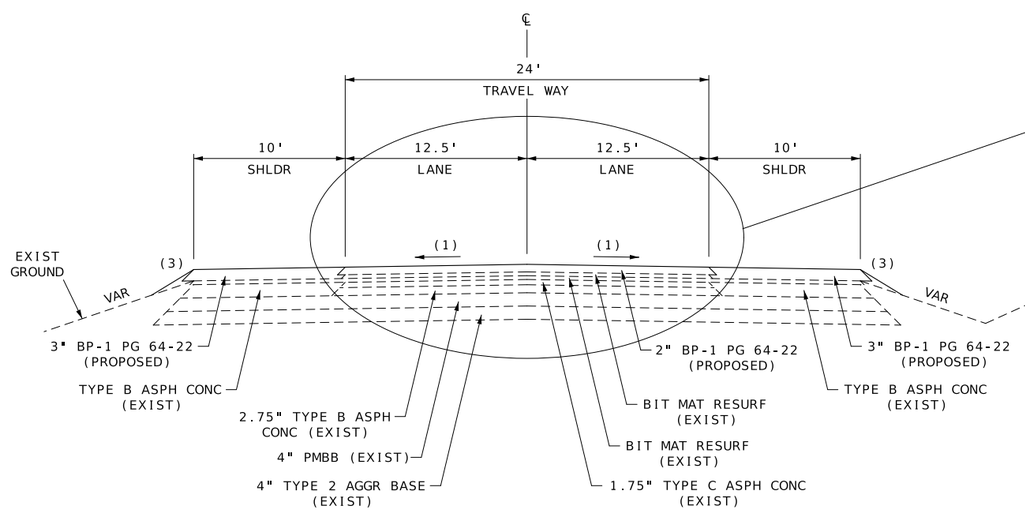
LOG MI 109.202 TO LOG MI 116.702

EXCEPTION - BR R0095
LOG MI 111.911 TO LOG MI 111.938



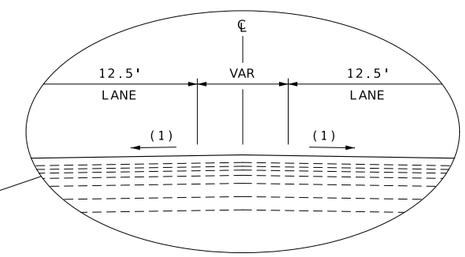
SECTION ON TANGENT
TYPICAL SECTION RTE 142

LOG MI 116.702 TO LOG MI 120.938



SECTION ON TANGENT
TYPICAL SECTION RTE 142

LOG MI 120.938 TO LOG MI 122.305



LOG MI 122.261 TO LOG MI 122.305

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.

STATE OF MISSOURI
TIMOTHY CHRISTOPHER PICKETT NUMBER PE-2017000351
PROFESSIONAL ENGINEER
10/28/2024 6:36:33 AM
TIMOTHY CHRISTOPHER PICKETT - CIVIL
MO-PE-2017000351

DATE PREPARED	
10/21/2024	
ROUTE 142	STATE MO
DISTRICT SE	SHEET NO. 2
COUNTY BUTLER	
JOB NO. J9S3673	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

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

TYPICAL SECTION
SHEET 1 OF 1

REMOVAL OF IMPROVEMENTS

LOG MI	LOC	DESCRIPTION	REMARKS
121.637	LT	APPROX 120' GUARDRAIL	BR A28392
121.637	RT	APPROX 120' GUARDRAIL	BR A28392
121.660	LT	APPROX 120' GUARDRAIL	BR A28392
121.660	RT	APPROX 120' GUARDRAIL	BR A28392
	LT	APPROX 12 SY CONCRETE	CONC ISLAND - CRAVENS RD
	LT	APPROX 56 SY CONCRETE	CONC ISLAND - ROWE PKWY
	LT	APPROX 49 SY CONCRETE	CONC ISLAND - ROWE PKWY
LUMP SUM ONE			

LOCATIONS AND QUANTITIES ARE APPROXIMATE. FOLLOW SEC 202.30.

PERMANENT AGGREGATE EDGE TREATMENT

LOG MI	LOG MI	LOC	LENGTH (FT)	WIDTH (FT)	THICK (IN)	PERM AGGR EDGE TREATMENT 1.7 TON/CY (TON)	REMARKS
109.212	111.911	CL	14250.72	2	3	448.63	
111.938	122.261	CL	54505.44	2	4	2287.88	
					TOTAL	2736.6	

DIMENSIONS MAY BE ADJUSTED AS APPROVED BY THE ENGINEER.

GRAVEL A OR CRUSHED STONE B

LOG MI	LOG MI	LOC	GRAVEL A OR CRUSHED STONE B 1.7 TON/CY (TONS)	REMARKS
ADD QUANTITY			244.6	UNPAVED DRIVEWAYS
ADD QUANTITY			25.0	ENTRANCES AS DIRECTED BY ENGINEER
		TOTAL	270	

SURFACE LEVELING

LOG MI	LOG MI	LOC	LENGTH (FT)	AVG WIDTH (FT)	THICK (IN)	SURFACE LEVELING PG 64-22 2.034 TON/CY (CY)	(TON)	TACK 0.08 GAL/SY (GAL)	REMARKS
109.202	109.212	CL	52.80	VAR	1	10.48	21.32	30.2	MILL/FILL
109.212	109.216	CL	25.00	VAR	1	1.76	3.58	5.1	DEPTH TRANSITION
109.216	111.902	CL	14182.08	21.09	1	923.15	1877.69	664.7	
111.902	111.911	CL	50.00	21.09	1	1.76	3.58	5.1	DEPTH TRANSITION - BR R0095
111.938	111.947	CL	50.00	21.09	1	1.76	3.58	5.1	DEPTH TRANSITION - BR R0095
111.947	116.716	CL	25180.32	21.09	1	1639.05	3333.83	1180.1	
116.702		LT			1	11.27	22.92	32.4	RTE 158
ADD QUANTITY							4.30	7.6	PAVED COUNTY RD/STREET
ADD QUANTITY							90.31	53.3	UNPAVED COUNTY RD/STREET
ADD QUANTITY							3.30	5.8	PAVED DRIVEWAY
ADD QUANTITY							751.40		IRREGULARITIES
ADD QUANTITY							104.87		SAFETY EDGE
					TOTAL		6220.7	1990	

SEE SPECIAL SHEETS FOR DETAILS.

BP-1

LOG MI	LOG MI	LOC	LENGTH (FT)	AVG WIDTH (FT)	THICK (IN)	BP-1 PG 64-22 2.050 TON/CY (CY)	(TON)	TACK 0.08 GAL/SY (GAL)	REMARKS
116.716	116.725	CL	50.00	21.09	2	6.51	13.35	2.3	DEPTH TRANSITION
116.725	120.938	CL	22244.64	21.09	2	2895.92	5936.64	1042.5	
120.938	120.969	CL	163.68	VAR	2	42.86	87.86	15.4	
120.969	122.242	CL	6721.44	45.20	2	1875.36	3844.49	675.1	
120.969	122.242	LT	6721.44	10.21	1	211.81	434.21		ADD SHLDR THICKNESS
120.969	122.242	RT	6721.44	10.21	1	211.81	434.21		ADD SHLDR THICKNESS
122.242	122.261	CL	100.00	45.20	2	27.90	57.20	10.0	DEPTH TRANSITION
122.242	122.261	LT	100.00	10.21	1	3.15	6.46		ADD SHLDR THICKNESS
122.242	122.261	RT	100.00	10.21	1	3.15	6.46		ADD SHLDR THICKNESS
122.261	122.305	CL	232.32	VAR	2	64.20	131.61	23.1	MILL/FILL
120.949		LT			2	36.47	74.76	52.5	CRAVENS RD
121.323		LT			2	70.35	144.22	101.3	ROWE PKWY
ADD QUANTITY							25.80	22.8	PAVED COUNTY RD/STREET
ADD QUANTITY							129.01	76.1	UNPAVED COUNTY RD/STREET
ADD QUANTITY							17.16	30.3	PAVED DRIVEWAY
ADD QUANTITY							558.90		IRREGULARITIES
ADD QUANTITY							219.05		SAFETY EDGE
					TOTAL		12121.4	2052	

SEE SPECIAL SHEETS FOR DETAILS.

3" CONCRETE MEDIAN STRIP & ISLAND TUBULAR MARKERS

LOG MI	LOC	3" CONCRETE MEDIAN STRIP (SY)	*ISLAND TUBULAR MARKERS (EA)	REMARKS
120.949	LT	13.08	3	SW QUAD-CRAVENS RD
120.949	LT	23.72	3	NW QUAD-CRAVENS RD
121.323	LT	55.62	3	SW QUAD-ROWE PKWY
121.323	LT	49.28	3	NW QUAD-ROWE PKWY
	TOTAL	141.7	12	

SEE SPECIAL SHEETS FOR DETAILS.

*ISLAND TUBULAR MARKER PLACEMENT IS LOCATED AT THE RADIUS POINT OF ISLAND.

GUARDRAIL

LOG MI	LOC	MGS GUARDRAIL (LF)	BR APPR TRANSITION SECTION (EA)	MASH TYPE A CW END TERMINAL (EA)	MOD SHAPING SLOPES CL III (100 FT)	REMARKS
121.637	LT		1	1	0.8	BR A28392
121.637	RT	12.5	1	1	0.8	BR A28392
121.660	LT	12.5	1	1	0.8	BR A28392
121.660	RT		1	1	0.8	BR A28392
	TOTAL	25	4	4	4	

SEE STANDARD PLANS 606.50 FOR GUARDRAIL INSTALLATIONS.

MOBILIZATION

LUMP SUM ONE

PAVEMENT MARKING

LOG MI	LOG MI	WATERBORNE PAINT TYPE P BEADS 4" INT YELLOW (LF)	4" SOLID YELLOW (LF)	4" SOLID WHITE (LF)	8" SOLID WHITE (LF)
109.202	122.305	15263.2	25513.0	136794.2	1573.4
	TOTAL	40777		136795	1574

SEE JSP FOR CONTRACTOR'S RESPONSIBILITY TO CREATE A PAVEMENT MARKING LOG PRIOR TO ANY CONSTRUCTION OPERATIONS THAT MAY AFFECT EXISTING PAVEMENT MARKING.

COLDMILLING

LOG MI	LOG MI	LOC	LENGTH (FT)	WIDTH (FT)	THICK (IN)	COLDMILLING 3" OR LESS (SY)	MODIFIED COLDMILLING (SY)	REMARKS
109.202	109.212	CL	52.80	VAR	1	377.3		MILL/FILL
109.212	109.216	CL	25.00	VAR	VAR		63.2	DEPTH TRANSITION
111.902	111.911	CL	50.00	21	VAR		116.7	DEPTH TRANSITION - BR R0095
111.938	111.947	CL	50.00	21	VAR		116.7	DEPTH TRANSITION - BR R0095
116.716	116.725	CL	50.00	21	VAR		116.7	DEPTH TRANSITION
122.242	122.261	CL	100.00	45	VAR		500.0	DEPTH TRANSITION
122.261	122.305	CL	232.32	VAR	2	1155.6		MILL/FILL
116.702		LT			VAR		72.9	RTE 158
120.949		LT			VAR		82.2	CRAVEN RD
121.323		LT			VAR		178.1	ROWE PKWY
ADD QUANTITY							304.4	PAVED COUNTY RD/STREET
ADD QUANTITY							361.7	PAVED DRIVEWAY
					TOTAL	1533	1913	

SEE SPECIAL SHEETS FOR DETAILS.

STATE OF MISSOURI
TIMOTHY CHRISTOPHER PICKETT
NUMBER PE-2017000351
PROFESSIONAL ENGINEER
10/28/2024 6:37:17 AM
TIMOTHY CHRISTOPHER PICKETT - CIVIL
MO-PE-2017000351

DATE PREPARED 10/21/2024

ROUTE	STATE
142	MO
DISTRICT	SHEET NO.
SE	3

COUNTY BUTLER

JOB NO. J9S3673

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

SUMMARY OF QUANTITIES
SHEET 1 OF 2

EFFECTIVE: 07-01-2024

SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL AREA SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NUM.	DESCRIPTION
WARNING SIGNS								
WO1-1L	48X48	16.00						TURN (SYMBOL LEFT)
WO1-1R	48X48	16.00						TURN (SYMBOL RIGHT)
WO1-2L	48X48	16.00						CURVE (SYMBOL LEFT)
WO1-2R	48X48	16.00						CURVE (SYMBOL RIGHT)
WO1-3L	48X48	16.00						REVERSE TURN (SYMBOL LEFT)
WO1-3R	48X48	16.00						REVERSE TURN (SYMBOL RIGHT)
WO1-4L	48X48	16.00						REVERSE CURVE (SYMBOL LEFT)
WO1-4R	48X48	16.00						REVERSE CURVE (SYMBOL RIGHT)
WO1-4bL	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL LEFT)
WO1-4bR	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL RIGHT)
WO1-4cL	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL LEFT)
WO1-4cR	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL RIGHT)
WO1-6	60X30	12.50						HORIZONTAL ARROW (SYMBOL)
WO1-6a	72X36	18.00						HORIZ. ARROW (SYMBOL ON PERMANENT BARRICADE)
WO1-7	60X30	12.50						DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)
WO1-7a	72X36	18.00						DOUBLE HEAD HORIZ. ARROW (SYMBOL ON PERM. BARR.)
WO1-8	18X24	3.00						CHEVRON (SYMBOL)
WO1-8a	30X36	7.50						CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)
WO3-1	48X48	16.00						STOP AHEAD (SYMBOL)
WO3-2	48X48	16.00						YIELD AHEAD (SYMBOL)
WO3-3	48X48	16.00						SIGNAL AHEAD (SYMBOL)
WO3-4	48X48	16.00	10	160				BE PREPARED TO STOP
WO3-5	48X48	16.00						SPEED LIMIT AHEAD
WO4-1L	48X48	16.00						MERGE (SYMBOL FROM LEFT)
WO4-1R	48X48	16.00						MERGE (SYMBOL FROM RIGHT)
WO4-1aL	48X48	16.00						MERGE (LEFT)
WO4-1aR	48X48	16.00						MERGE (RIGHT)
WO5-1	48X48	16.00						ROAD/BRIDGE/RAMP NARROWS
WO5-3	48X48	16.00						ONE LANE BRIDGE
WO5-5	48X48	16.00						NARROW LANES
WO6-1	48X48	16.00						DIVIDED HIGHWAY (SYMBOL)
WO6-2	48X48	16.00						DIVIDED HIGHWAY END (SYMBOL)
WO6-3	48X48	16.00						TWO WAY TRAFFIC (SYMBOL)
WO7-3a	30X24	5.00						NEXT XX MILES (PLAQUE)
WO8-1	48X48	16.00						BUMP
WO8-2	48X48	16.00						DIP
WO8-3	48X48	16.00						PAVEMENT ENDS
WO8-4	48X48	16.00						SOFT SHOULDER
WO8-5	48X48	16.00						SLIPPERY WHEN WET (SYMBOL)
WO8-6	48X48	16.00						TRUCK CROSSING
WO8-6c	48X48	16.00						TRUCK ENTRANCE
WO8-7	36X36	9.00						LOOSE GRAVEL
WO8-7a	36X36	9.00						FRESH OIL / LOOSE GRAVEL
WO8-9	48X48	16.00						LOW SHOULDER
WO8-11	48X48	16.00	28	448				UNEVEN LANES
WO8-12	48X48	16.00	14	224				NO CENTER LINE
WO8-15	48X48	16.00						GROOVED PAVEMENT
WO8-15P	30X24	5.00						MOTORCYCLE (PLAQUE)
WO8-17L	48X48	16.00						SHOULDER DROP-OFF (SYMBOL LEFT)
WO8-17R	48X48	16.00						SHOULDER DROP-OFF (SYMBOL RIGHT)
WO8-17P	30X24	5.00						SHOULDER DROP-OFF (PLAQUE)
W10-1	42RND.	9.62						RAILROAD CROSSING
WO12-1	24X24	4.00						DOUBLE DOWN ARROW (SYMBOL)
WO12-2	48X48	16.00						LOW CLEARANCE (SYMBOL)
W012-2x	24X18	3.00						LOW CLEARANCE (PLAQUE)
WO12-2a	84X24	14.00						OVERHEAD LOW CLEARANCE (FEET AND INCHES)
WO12-4	120X60	50.00						LOW CLEARANCE XX FT XX IN XX MILES AHEAD
WO12-5	120X60	50.00						WIDTH RESTRICTION XX FT XX IN XX MILES AHEAD
WO13-1	30X30	6.25						ADVISORY SPEED (PLAQUE)
WO16-2	30X24	5.00						XXX FEET (PLAQUE)
WO16-3	30X24	5.00						X MILE (PLAQUE)
WO20-1	48X48	16.00	20	320				ROAD/BRIDGE/RAMP WORK AHEAD
WO20-2	48X48	16.00						DETOUR AHEAD
WO20-3	48X48	16.00						ROAD CLOSED AHEAD
WO20-4	48X48	16.00	8	128				ONE LANE ROAD AHEAD
WO20-5	48X48	16.00						RIGHT/CENTER/LEFT LANE CLOSED AHEAD
WO20-5a	48X48	16.00						2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD
WO20-6a	48X48	16.00						RIGHT/CENTER/LEFT LANE CLOSED
WO20-7a	48X48	16.00	18	288				FLAGGER (SYMBOL)
WO21-2	36X36	9.00						FRESH OIL
WO21-5	48X48	16.00						SHOULDER WORK / SHOULDER WORK AHEAD
WO22-1	48X48	16.00						BLASTING ZONE AHEAD
WO22-2	42X36	10.50						TURN OFF 2-WAY RADIO AND PHONE
WO22-3	42X36	10.50						END BLASTING ZONE
GO22-1	21X15	2.19	2	4.38				WET PAINT (ARROW PIVOTS)

SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NUM.	DESCRIPTION
GUIDE SIGNS								
E05-1	36X48	12.00						GORE EXIT
E05-2	48X36	12.00						EXIT OPEN
E05-2a	48X36	12.00						EXIT CLOSED
GO20-1	60X24	10.00	2	20				ROAD WORK NEXT XX MILES
GO20-2	48X24	8.00	2	16				END ROAD WORK
GO20-4	36X18	4.50	1	4.5				PILOT CAR FOLLOW ME
GO20-4a	42X30	8.75	2	17.5				PILOT CAR IN USE WAIT & FOLLOW
GO20-4a	18X12	1.50	8	12				PILOT CAR IN USE WAIT & FOLLOW
GO20-5aP	36X24	6.00						WORK ZONE (PLAQUE)
MO4-8a	24X18	3.00						END DETOUR
MO4-9L	48X36	12.00						DETOUR (LEFT)
MO4-9R	48X36	12.00						DETOUR (RIGHT)
MO4-9P	48X12	4.00						STREET NAME (PLAQUE)
MO4-10L	48X18	6.00						DETOUR ARROW (LEFT)
MO4-10R	48X18	6.00						DETOUR ARROW (RIGHT)
REGULATORY SIGNS								
R1-1	48X48	13.25						STOP
R1-2	48TRI.	6.93						YIELD
R1-2a	36X36	9.00						TO ONCOMING TRAFFIC (PLAQUE)
R1-3P	30X12	2.50						ALL WAY (PLAQUE)
R2-1	36X48	12.00						SPEED LIMIT XX
R3-1	48X48	16.00						NO RIGHT TURN (SYMBOL)
R3-2	48X48	16.00						NO LEFT TURN (SYMBOL)
R3-3	36X36	9.00						NO TURNS
R3-4	48X48	16.00						NO U-TURN (SYMBOL)
R3-7L	30X30	6.25						LEFT LANE MUST TURN LEFT
R3-7R	30X30	6.25						RIGHT LANE MUST TURN RIGHT
R4-1	36X48	12.00						DO NOT PASS
R4-2	36X48	12.00						PASS WITH CARE
R4-7a	36X48	12.00						KEEP RIGHT (HORIZONTAL ARROW)
R4-8a	36X48	12.00						KEEP LEFT (HORIZONTAL ARROW)
R5-1	30X30	6.25						DO NOT ENTER
R5-1a	36X24	6.00						WRONG WAY
R6-1L	54X18	6.75						ONE WAY ARROW (LEFT)
R6-1R	54X18	6.75						ONE WAY ARROW (RIGHT)
R6-2L	24X30	5.00						ONE WAY (LEFT)
R6-2R	24X30	5.00						ONE WAY (RIGHT)
R9-9	24X12	2.00						SIDEWALK CLOSED
R9-11L	24X18	3.00						SIDEWALK CLOSED AHEAD, (ARROW LEFT) CROSS HERE
R9-11R	24X18	3.00						SIDEWALK CLOSED AHEAD, (ARROW RIGHT) CROSS HERE
R10-6	24X36	6.00						STOP HERE ON RED (45^ ARROW)
R11-2	48X30	10.00						ROAD CLOSED
R11-3a	60X30	12.50						ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY
R11-4	60X30	12.50						ROAD CLOSED TO THRU TRAFFIC
CONST-3A	60X48	20.00						FINE SIGN
CONST-3X	56X12	4.67						SPEEDING/PASSING (PLATE)
MISCELLANEOUS SIGNS								
CONST-5	48X36	12.00						POINT OF PRESENCE
CONST-5	96X48	32.00						POINT OF PRESENCE
CONST-8	48X36	12.00	2	24				WORK ZONE NO PHONE ZONE

616-10.05 CONSTRUCTION SIGNS	TOTAL
	1667

616-10.10 RELOCATED SIGNS	TOTAL
	*

ITEM NUMBER	TOTAL QTY	DESCRIPTION
6122008		IMPACT ATTENUATOR 40 MPH (SAND BARRELS)
6122009	2	IMPACT ATTENUATOR 45 MPH (SAND BARRELS)
6122010		IMPACT ATTENUATOR 50 MPH (SAND BARRELS)
6122012		IMPACT ATTENUATOR 55 MPH (SAND BARRELS)
6122014		IMPACT ATTENUATOR 60 MPH (SAND BARRELS)
6122017		IMPACT ATTENUATOR 65 MPH (SAND BARRELS)
6122019		IMPACT ATTENUATOR 70 MPH (SAND BARRELS)
6122020	4	REPLACEMENT SAND BARREL
6122030	2	IMPACT ATTENUATOR (RELOCATION)
6123001		TRUCK MOUNTED ATTENUATOR (TMA)
6161008		ADVANCED WARNING RAIL SYSTEM
6161012		BUOYS (BOATS KEEP OUT)
6161013		BUOYS (NO WAKE)
6161014		SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)
6161025	160	CHANNELIZER (TRIM LINE)
6161030		TYPE III MOVEABLE BARRICADE
6161033		DIRECTION INDICATOR BARRICADE
6161040		FLASHING ARROW PANEL
6161047		TYPE III OBJECT MARKER
6161055		SEQUENTIAL FLASHING WARNING LIGHT
6161070		TUBULAR MARKER
6161095		RADAR SPEED ADVISORY SYSTEM
6161096		CHANGEABLE MESSAGE SIGN, COMMISSION FURNISHED/RETAINED
6161098A	2	CHANGEABLE MESSAGE SIGN W/O COMM. INTERFACE - CONTRACTOR FURNISHED/RETAINED
6161099		CHANGEABLE MESSAGE SIGN WITH COMM. INTERFACE - CONTRACTOR FURNISHED/RETAINED
6162000A		WORK ZONE TRAFFIC SIGNAL SYSTEM
6162002		TEMPORARY LONG-TERM RUMBLE STRIPS
6173600D		TEMPORARY TRAFFIC BARRIER CONTRACTOR FURNISHED/RETAINED
6173602B		TEMPORARY TRAFFIC BARRIER CONTRACTOR FURNISHED/COMMISSION RETAINED
6174000A		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION
6175010A		RELOCATING TEMPORARY TRAFFIC BARRIER
6176000B		TEMPORARY TRAFFIC BARRIER COMMISSION FURNISHED/RETAINED
6177000B		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION COMMISSION FURNISHED/RETAINED
6208064A		TEMPORARY RAISED PAVEMENT MARKER
9029400		TEMPORARY TRAFFIC SIGNALS
9029401		TEMPORARY TRAFFIC SIGNALS AND LIGHTING

NOTE:
SEE STANDARD PLANS 616.20 FOR ADDITIONAL TRAFFIC CONTROL PLANS.
NO DIRECT PAY FOR RELOCATION OF CONSTRUCTION SIGNS.

STATE OF MISSOURI
TIMOTHY CHRISTOPHER PICKETT
NUMBER PE-2017000351
PROFESSIONAL ENGINEER
08/23/2024 9:47:51 AM
TIMOTHY CHRISTOPHER PICKETT - CIVIL
MO-PE-2017000351

DATE PREPARED: 7/24/2024
ROUTE: 142
STATE: MO
DISTRICT: SE
SHEET NO.: 3
COUNTY: BUTLER
JOB NO.: J9S3673
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION
DATE

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

SUMMARY OF QUANTITIES
SHEET 2 OF 2

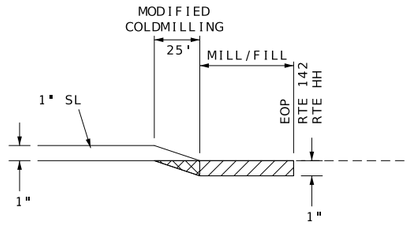
MODIFIED COLDMILLING (DEPTH TRANSITION)

MILL/FILL

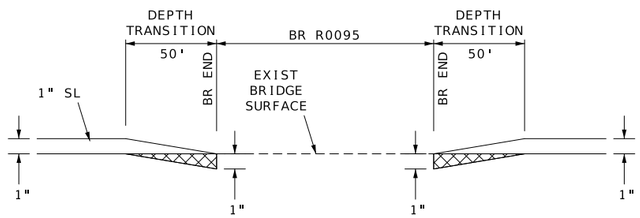
NOTE:

LOG MILE LOCATIONS ARE APPROXIMATE. ADJUST AS DIRECTED BY THE ENGINEER TO FIT FIELD CONDITIONS.

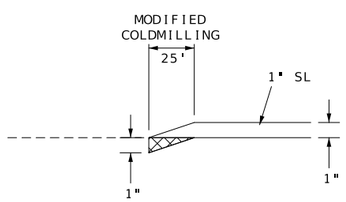
SEE SPECIAL SHEET 3 FOR PAVEMENT DETAILS AT ENTRANCES AND COUNTY ROADS.



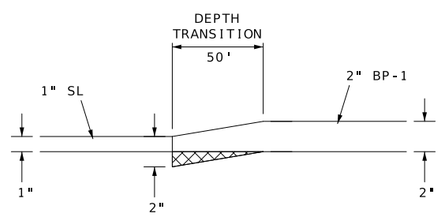
SECTION A-A



SECTION B-B

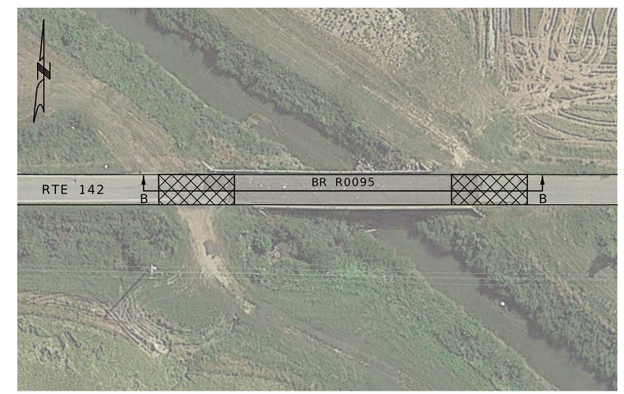


SECTION C-C



SECTION D-D

BEGIN PROJECT
LOG MI 109.202



BR R0095
LOG MI 111.911

RTE 158
LOG MI 116.702

DEPTH
TRANSITION
LOG MI 116.716

STATE OF MISSOURI
TIMOTHY CHRISTOPHER PICKETT
NUMBER PE-2017000351
PROFESSIONAL ENGINEER
08/23/2024 9:48:12 AM
TIMOTHY CHRISTOPHER PICKETT - CIVIL
MO-PE-2017000351

DATE PREPARED	
7/24/2024	
ROUTE 142	STATE MO
DISTRICT SE	SHEET NO. 4
COUNTY BUTLER	
JOB NO. J9S3673	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

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

PAVEMENT DETAILS
SHEET 1 OF 4

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.

MODIFIED COLDMILLING (DEPTH TRANSITION)

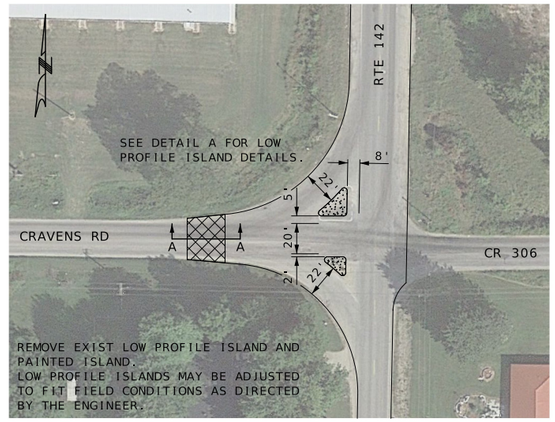
MILL/FILL

LOW PROFILE ISLAND

NOTE:

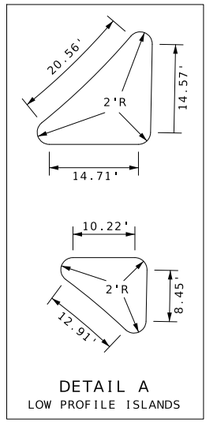
LOG MILE LOCATIONS ARE APPROXIMATE. ADJUST AS DIRECTED BY THE ENGINEER TO FIT FIELD CONDITIONS.

SEE SPECIAL SHEET 3 FOR PAVEMENT DETAILS AT ENTRANCES AND COUNTY ROADS.



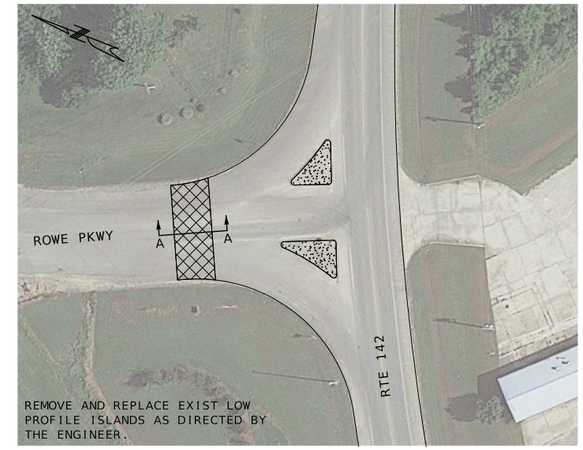
CRAVENS RD

LOG MI 120.949



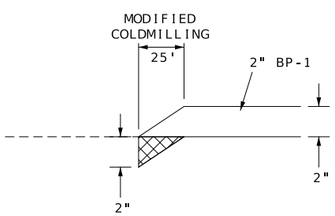
DETAIL A

LOW PROFILE ISLANDS

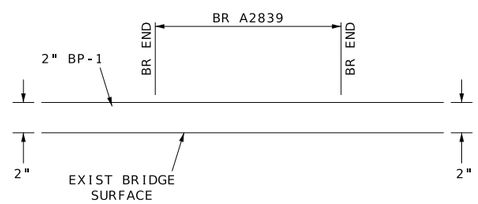


ROWE PKWY

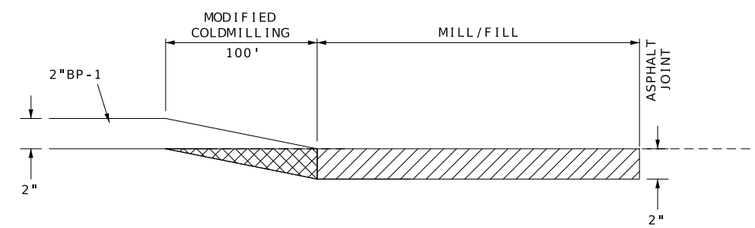
LOG MI 121.323



SECTION A-A



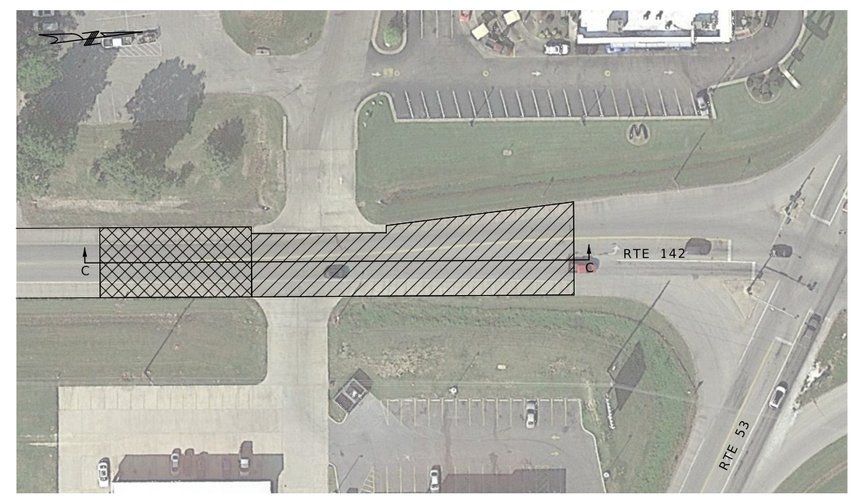
SECTION B-B



SECTION C-C

BR A28392

LOG MI 121.637



END PROJECT

LOG MI 122.305

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.

STATE OF MISSOURI
TIMOTHY CHRISTOPHER PICKETT
NUMBER PE-2017000351
PROFESSIONAL ENGINEER
08/23/2024 9:48:46 AM
TIMOTHY CHRISTOPHER PICKETT - CIVIL
MO-PE-2017000351

DATE PREPARED	8/21/2024
ROUTE	142
STATE	MO
DISTRICT	SE
SHEET NO.	5
COUNTY	BUTLER
JOB NO.	J9S3673
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

PAVEMENT DETAILS
SHEET 2 OF 4

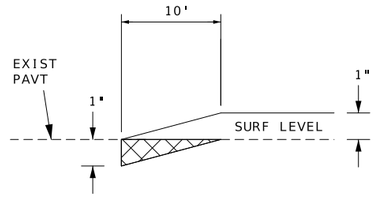
MODIFIED COLDMILLING
(DEPTH TRANSITION)

GRADING & PAVEMENT

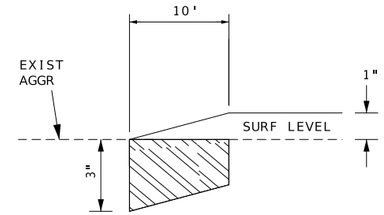
NOTE:

ALL GRADING NECESSARY FOR THE PROPER CONSTRUCTION OF ASPHALT AND AGGREGATE APRONS SHALL BE CONSIDERED INCIDENTAL WORK AND AT NO DIRECT PAY.

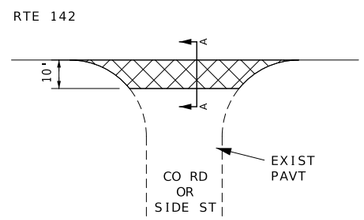
THE WIDTH OF ALL ASPHALT AND AGGREGATE APRONS MAY BE ADJUSTED BY THE ENGINEER AS NECESSARY TO OBTAIN SUITABLE TRANSITIONS.



SECTION A-A

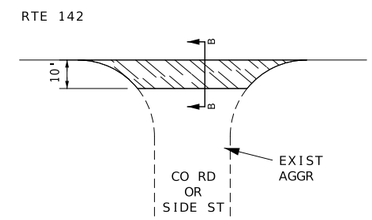


SECTION B-B



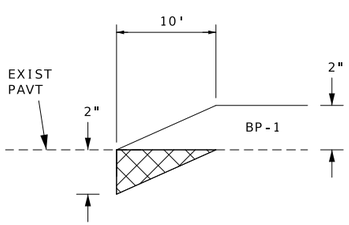
PLAN VIEW

COUNTY ROADS AND
SIDE STREETS
(PAVED)

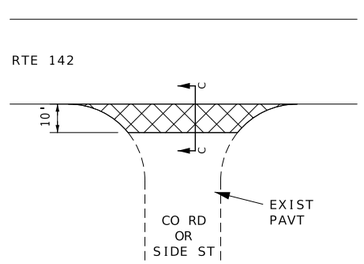


PLAN VIEW

COUNTY ROADS AND
SIDE STREETS
(UNPAVED)

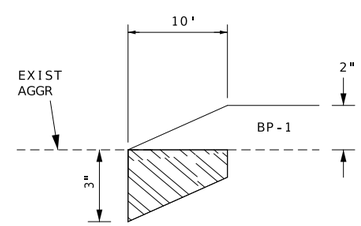


SECTION C-C

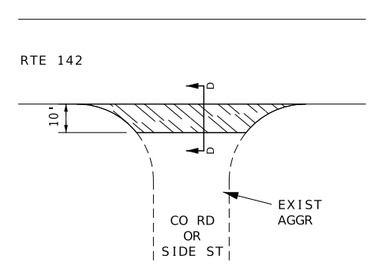


PLAN VIEW

COUNTY ROADS AND
SIDE STREETS
(PAVED)



SECTION D-D



PLAN VIEW

COUNTY ROADS AND
SIDE STREETS
(UNPAVED)

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.

STATE OF MISSOURI
TIMOTHY CHRISTOPHER PICKETT NUMBER PE-2017000351
PROFESSIONAL ENGINEER
08/23/2024 9:49:01 AM
TIMOTHY CHRISTOPHER PICKETT - CIVIL
MO-PE-2017000351

DATE PREPARED	7/24/2024
ROUTE	142
STATE	MO
DISTRICT	SE
SHEET NO.	6
COUNTY	BUTLER
JOB NO.	J9S3673
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

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

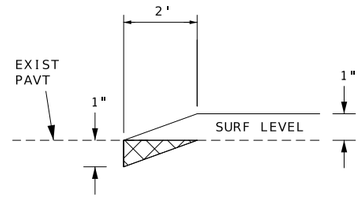
PAVEMENT DETAILS
SHEET 3 OF 4

MODIFIED COLDMILLING
(DEPTH TRANSITION)

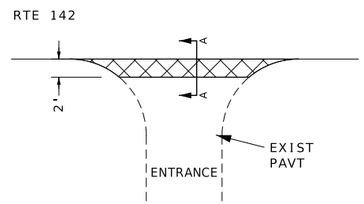
GRAVEL A OR
CRUSHED STONE B

NOTE:

LOG MILE LOCATIONS ARE APPROXIMATE.
ADJUST AS DIRECTED BY THE ENGINEER
TO FIT FIELD CONDITIONS.

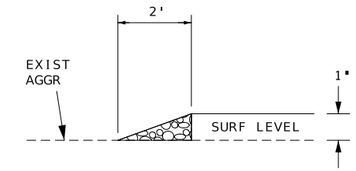


SECTION A-A

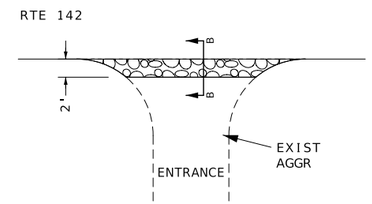


PLAN VIEW

PRIVATE AND
COMMERCIAL ENTRANCES
(PAVED)

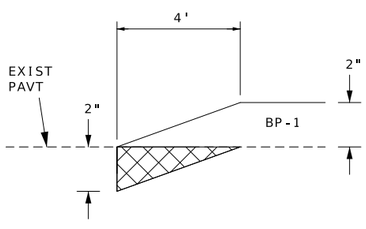


SECTION B-B

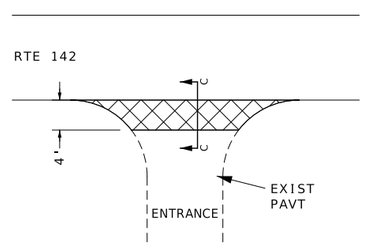


PLAN VIEW

PRIVATE AND
COMMERCIAL ENTRANCES
(UNPAVED)

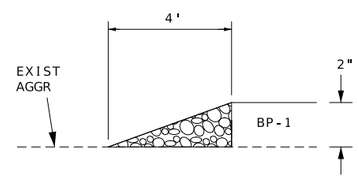


SECTION C-C

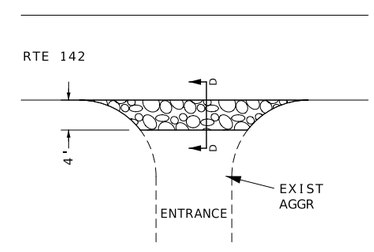


PLAN VIEW

PRIVATE AND
COMMERCIAL ENTRANCES
(PAVED)



SECTION D-D



PLAN VIEW

PRIVATE AND
COMMERCIAL ENTRANCES
(UNPAVED)

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.

STATE OF MISSOURI
TIMOTHY CHRISTOPHER PICKETT NUMBER PE-2017000351
PROFESSIONAL ENGINEER
08/23/2024 9:49:31 AM
TIMOTHY CHRISTOPHER PICKETT - CIVIL
MO-PE-2017000351

DATE PREPARED	
7/24/2024	
ROUTE 142	STATE MO
DISTRICT SE	SHEET NO. 7
COUNTY BUTLER	
JOB NO. J9S3673	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

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

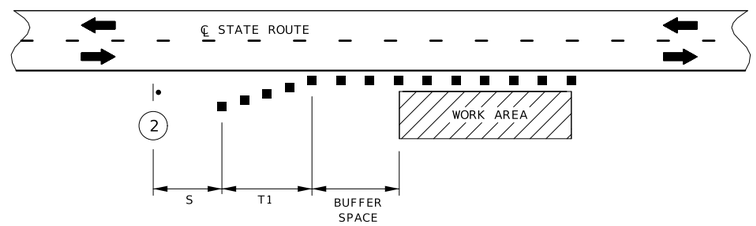
PAVEMENT DETAILS
SHEET 4 OF 4

W020-1

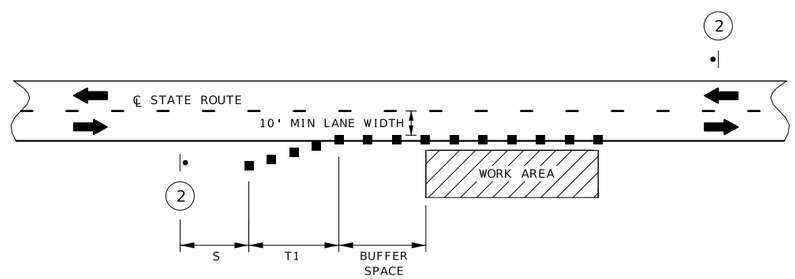
2

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZER



SHOULDER WORK



SHOULDER WORK WITH MINOR ENCROACHMENT

NOTES:

DAYLIGHT FLAGGING OPERATIONS ONLY.

DISTANCE MAY BE ADJUSTED ACCORDING TO FIELD CONDITIONS.

NO PAYMENT WILL BE MADE FOR RELOCATION OF CONSTRUCTION SIGNS.

ANY EXISTING SIGNING THAT CONFLICTS WITH THE TRAFFIC CONTROL SIGNING SHALL BE COMPLETELY COVERED OR REMOVED.

FOR ADDITIONAL TRAFFIC CONTROL PLANS FOR THIS PROJECT, USE STANDARD PLANS 616.20 (SHEETS 1 THROUGH 5).

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.

PERMANENT POSTED SPEED (MPH)	SIGN SPACING (1) (FT)	
	NON-DIVIDED HIGHWAYS (S)	DIVIDED HIGHWAYS (S)
0 - 35	200 FT	200 FT
40 - 45	350 FT	500 FT
50 - 55	500 FT	1000 FT
60 - 70	1000 FT	SA - 1000 FT SB - 1500 FT SC - 2640 FT

(1) SPACING BETWEEN SIGNS, BETWEEN LAST SIGN AND FLAGGER, BEGINNING OF TAPER OR SIGNED CONDITION. SPACINGS MAY BE ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS.

TAPER LENGTH AND SPACING							
PERMANENT POSTED SPEED (MPH)	TAPER LENGTH T1 SHOULDER (1)	TAPER LENGTH L FOR LATERAL SHIFTS (2)			BUFFER SPACE LENGTH	CHANNELIZER SPACING (3)	
		10 FT	11 FT	12 FT		TAPERS	BUFFER SPACE WORK AREA
0 - 35	70 FT	205 FT	225 FT	245 FT	280 FT	35 FT (4)	40 FT (4)
40 - 45	150 FT	450 FT	495 FT	540 FT	400 FT	40 FT (4)	80 FT (4)
50 - 55	185 FT	550 FT	605 FT	660 FT	560 FT	50 FT (5)	80 FT (5)
60 - 70	235 FT	700 FT	770 FT	840 FT	840 FT	60 FT (5)	120 FT (5)

(1) SHOULDER TAPER LENGTH BASED ON 10' (STANDARD SHOULDER WIDTH) OFFSET.

(2) TAPER LENGTHS MAY BE ADJUSTED TO ACCOMMODATE CROSSROADS, CURVES, RAMPS, INTERSECTIONS, OR OTHER GEOMETIC FEATURES.

(3) SPACING MAY BE REDUCED TO DISCOURAGE TRAFFIC ENCROACHMENT.

(4) SPACING REDUCED TO ONE-HALF AT INTERSECTIONS.

(5) SPACING MAY BE REDUCED TO ONE-HALF AT INTERSECTIONS.

STATE OF MISSOURI
TIMOTHY CHRISTOPHER PICKETT
NUMBER PE-2017000351
PROFESSIONAL ENGINEER

08/23/2024 9:49:47 AM
TIMOTHY CHRISTOPHER PICKETT - CIVIL
MO-PE-2017000351

DATE PREPARED	
7/24/2024	
ROUTE 142	STATE MO
DISTRICT SE	SHEET NO. 8
COUNTY BUTLER	
JOB NO. J9S3673	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

TRAFFIC CONTROL
SHEET 1 OF 2

W020-1

2

W020-4

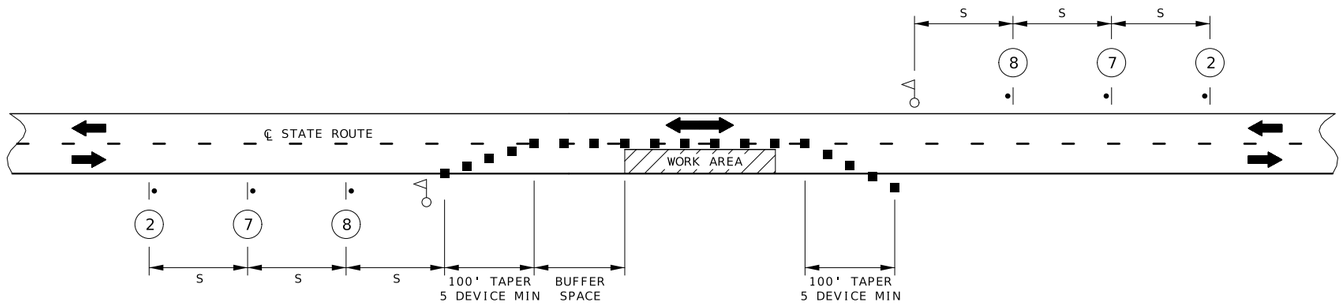
7

W020-7a

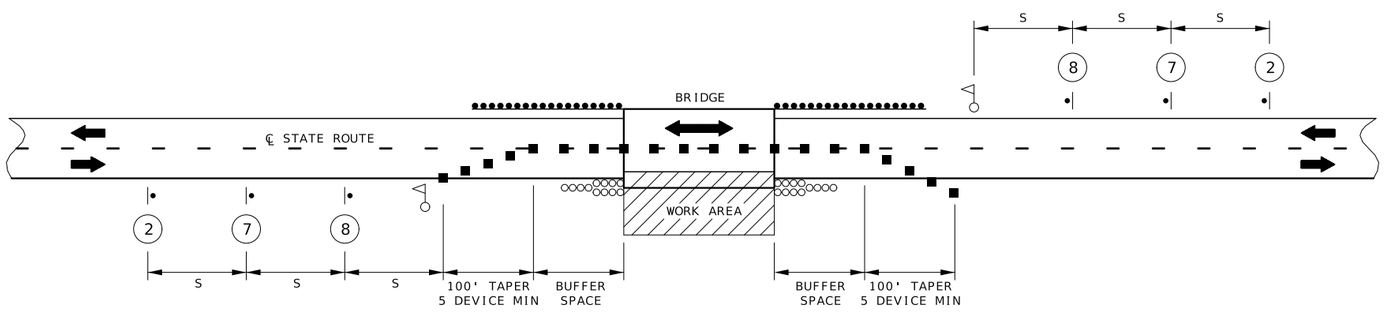
8

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZER
- IMPACT ATTENUATOR
- FLAGGER



LANE CLOSURE WITH FLAGGER CONTROL



LANE CLOSURE WITH FLAGGER CONTROL
(BRIDGE - CURB BLOCKOUT)

PERMANENT POSTED SPEED (MPH)	SIGN SPACING (1) (FT)	
	NON-DIVIDED HIGHWAYS (S)	DIVIDED HIGHWAYS (S)
0 - 35	200 FT	200 FT
40 - 45	350 FT	500 FT
50 - 55	500 FT	1000 FT
60 - 70	1000 FT	SA - 1000 FT SB - 1500 FT SC - 2640 FT

(1) SPACING BETWEEN SIGNS, BETWEEN LAST SIGN AND FLAGGER, BEGINNING OF TAPER OR SIGNED CONDITION. SPACINGS MAY BE ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS.

TAPER LENGTH AND SPACING							
PERMANENT POSTED SPEED (MPH)	TAPER LENGTH T1 SHOULDER (1)	TAPER LENGTH L FOR LATERAL SHIFTS (2)			BUFFER SPACE LENGTH	CHANNELIZER SPACING (3)	
		10 FT	11 FT	12 FT		TAPERS	BUFFER SPACE WORK AREA
0 - 35	70 FT	205 FT	225 FT	245 FT	280 FT	35 FT (4)	40 FT (4)
40 - 45	150 FT	450 FT	495 FT	540 FT	400 FT	40 FT (4)	80 FT (4)
50 - 55	185 FT	550 FT	605 FT	660 FT	560 FT	50 FT (5)	80 FT (5)
60 - 70	235 FT	700 FT	770 FT	840 FT	840 FT	60 FT (5)	120 FT (5)

(1) SHOULDER TAPER LENGTH BASED ON 10' (STANDARD SHOULDER WIDTH) OFFSET.

(2) TAPER LENGTHS MAY BE ADJUSTED TO ACCOMMODATE CROSSROADS, CURVES, RAMPS, INTERSECTIONS, OR OTHER GEOMETIC FEATURES.

(3) SPACING MAY BE REDUCED TO DISCOURAGE TRAFFIC ENCROACHMENT.

(4) SPACING REDUCED TO ONE-HALF AT INTERSECTIONS.

(5) SPACING MAY BE REDUCED TO ONE-HALF AT INTERSECTIONS.

NOTES:

DAYLIGHT FLAGGING OPERATIONS ONLY.

DISTANCE MAY BE ADJUSTED ACCORDING TO FIELD CONDITIONS.

NO PAYMENT WILL BE MADE FOR RELOCATION OF CONSTRUCTION SIGNS.

ANY EXISTING SIGNING THAT CONFLICTS WITH THE TRAFFIC CONTROL SIGNING SHALL BE COMPLETELY COVERED OR REMOVED.

AUTOMATED FLAGGER ASSISTANCE DEVICES AND PORTABLE SIGNAL FLAGGING DEVICES MAY BE USED AS AN ALTERNATIVE FLAGGING OPERATION.

FOR ADDITIONAL TRAFFIC CONTROL PLANS FOR THIS PROJECT, USE STANDARD PLANS 616.20 (SHEETS 1 THROUGH 5).

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.

STATE OF MISSOURI
TIMOTHY CHRISTOPHER PICKETT
NUMBER PE-2017000351
PROFESSIONAL ENGINEER
08/23/2024 9:50:26 AM
TIMOTHY CHRISTOPHER PICKETT - CIVIL
MO-PE-2017000351

DATE PREPARED	7/24/2024
ROUTE	142
STATE	MO
DISTRICT	SE
SHEET NO.	9
COUNTY	BUTLER
JOB NO.	J9S3673
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

TRAFFIC CONTROL
SHEET 2 OF 2

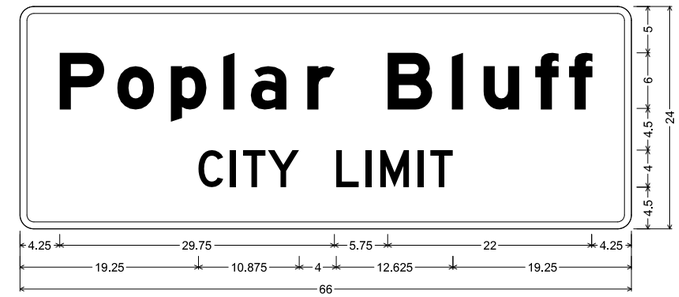
SIGNS

902 SIGNAL SIGNS TABULATED ON D37-1 SHEET

SIGN NO.	SIGN SIZE	LOG MILE	HORZ CLEAR IF NOT STD	LOCATION	SIGN DTL. SHT. NO.	STRUCTURAL STEEL BACKING BARS ITEM NO. 9031210 — 2" X 3/8" BARS @ 2.55 LBS PER FT: NO. EACH	LGTH IN.	TOTAL LF	TOTAL LBS	PERFORATED SQUARE STEEL TUBE — 2 IN. POST: POST NO.1 LF	POST NO.2 LF	TOTAL ITEM NO. 9031270A LF	ANCHORS: DRIVEN 12-GA. ITEM NO. 9031271A EA	DRIVEN 7-GA. ITEM NO. 9031273A EA	CONCRETE 7-GA. ITEM NO. 9031274 EA	2.5 IN. POST: POST NO.1 LF	POST NO.2 LF	TOTAL ITEM NO. 9031280 LF	2.25" INSERT (6 FT) ITEM NO. 9031272A EA	ANCHORS: DRIVEN 7-GA. ITEM NO. 9031281A EA	CONCRETE 7-GA. ITEM NO. 9031285 EA	BREAK AWAY ASSEMBLY ITEM NO. 9031241 EA
1	30X24	109.202		LT						10.00		10.00	1									
2	ASSEMBLY	109.356		LT						10.25		10.25	1									
3	ASSEMBLY	109.485		LT						11.25		11.25	1									
4	36X36	112.056		LT						12.50		12.50	1									
5	18X24	114.635		LT						8.75		8.75	1									
6	36x36	114.666		LT						11.00		11.00	1									
7	18x24	114.693		LT						8.75		8.75	1									
8	18x24	114.707		LT						8.75		8.75	1									
9	18x24	114.722		LT						8.75		8.75	1									
10	18x24	114.764		LT						8.75		8.75	1									
11	36X36	111.767		RT						11.00		11.00	1									
12	36X36	111.787		RT						12.50		12.50	1									
13	18x24	114.184		RT						8.75		8.75	1									
14	18X24	114.228		RT						8.75		8.75	1									
15	18X24	114.320		RT						8.75		8.75	1									
16	12X36	116.367		RT						9.75		9.75	1									
17	ASSEMBLY	116.692		RT		4	50	16.67	42.51							10.75		10.75		1		
18	18X24	118.740		RT						8.75		8.75	1									
19	18x24	118.762		RT						8.75		8.75	1									
20	18x24	118.787		RT						8.75		8.75	1									
21	18X24	118.818		RT						8.75		8.75	1									
22	18x24	118.872		RT						8.75		8.75	1									
23	18x24	118.895		RT						8.75		8.75	1									
24	36X36	118.964		RT						11.00		11.00	1									
25	36X48	120.881		RT												12.00		12.00		1		
26	ASSEMBLY	121.638		RT		2 1	50 72	8.33 6.00	21.24 15.30							10.00	11.00	21.00	2	2		2
27	48X48	122.021		LT						12.25		12.25	1									
				SUBTOTAL					79.1			234.0	24					43.8	2.0	4.0		2.0
				TOTAL					80			234	24					44	2	4		2

Poplar Bluff

CITY LIMIT



I4-1 SH-FLAT SHEET;
1.500" Radius, 0.750" Border, White on, Green;
"Poplar Bluff", E Mod; "CITY LIMIT", D;
Table of letter and object lefts

P 4.250	o 10.500	p 16.250	l 22.000	a 24.875	r 31.000	B 39.750	l 46.625	u 50.000	f 55.625	f 59.250
C 19.250	l 22.750	T 24.125	Y 26.750	L 34.125	I 37.375	M 38.875	I 42.875	T 44.250		

SIGN NO.	26
LOG MILE	121.638
ROADWAY	142

STANDARD SIGN ASSEMBLIES

SIGN NUMBER	LOG MILE	LOCATION	I4-1 66x24 (SH)	M1-5 30X24 (SH)	M1-5 30X24 (SH)	M1-5a 30X24 (SH)	M2-1 21X15 (SH)	M6-1 21X15 (SH)	M6-3 21X15 (SH)	OM3-R 12X36 (SHF)	R1-1 36X36 (SH)	R1-2 48X48 (SH)	R2-1 36X48 (SH)	W1-8D 18X24 (SHF)	W5-3 36X36 (SHF)
1	109.202	LT		1											
2	109.356	LT		1				1							
3	109.485	LT				1	1								
4	112.056	LT													1
5	114.635	LT												1	
6	114.666	LT									1				
7	114.693	LT												1	
8	114.707	LT												1	
9	114.722	LT												1	
10	114.764	LT												1	
11	111.767	RT									1				
12	111.787	RT													1
13	114.184	RT												1	
14	114.228	RT												1	
15	114.320	RT												1	
16	116.367	RT								1					
17	116.692	RT		1	1			1	1						
18	118.740	RT												1	
19	118.762	RT												1	
20	118.787	RT												1	
21	118.818	RT												1	
22	118.872	RT												1	
23	118.895	RT												1	
24	118.964	RT									1				
25	120.881	RT											1		
26	121.638	RT	1										1		
27	122.021	LT										1			
	TOTAL		1	3	1	1	1	2	1	1	3	1	2	14	2

SIGN SUMMARY

STANDARD SIGN OR SPECIAL SIGN NUMBER	SIGN DETAIL SHEET NO.	NO. EACH	SIZE	FLAT SHEET SH ITEM NO. 9035004A	FLAT SHEET FLORESCENT SHF* ITEM NO. 9035069A	STRUCTURAL ST ITEM NO. 9035011A	STRUCTURAL FLORESCENT STF* ITEM NO. 9035071A
I4-1	10	1	66X24	11.00			
M1-5 (142)	STD	3	30X24	15.00			
M1-5 (158)	STD	1	30X24	5.00			
M1-5a	STD	1	30X24	5.00			
M2-1	STD	1	21X15	2.19			
M6-1	STD	2	21X15	4.38			
M6-3	STD	1	21X15	2.19			
OM3-R	STD	1	12X36		3.00		
R1-1	STD	3	36X36	27.00			
R1-2	STD	1	48X48	16.00			
R2-1	STD	2	36X48	24.00			
W1-8D	STD	14	18X24		42.00		
W5-3	STD	2	36X36		18.00		
			TOTAL	112	63		

* ORANGE, YELLOW, AND YELLOW GREEN

STATE OF MISSOURI
TIMOTHY CHRISTOPHER PICKETT
NUMBER PE-2017000351
PROFESSIONAL ENGINEER
08/23/2024 9:50:45 AM
TIMOTHY CHRISTOPHER PICKETT - CIVIL
MO-PE-2017000351

DATE PREPARED	8/21/2024
ROUTE	142
STATE	MO
DISTRICT	SE
SHEET NO.	10
COUNTY	BUTLER
JOB NO.	J9S3673
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

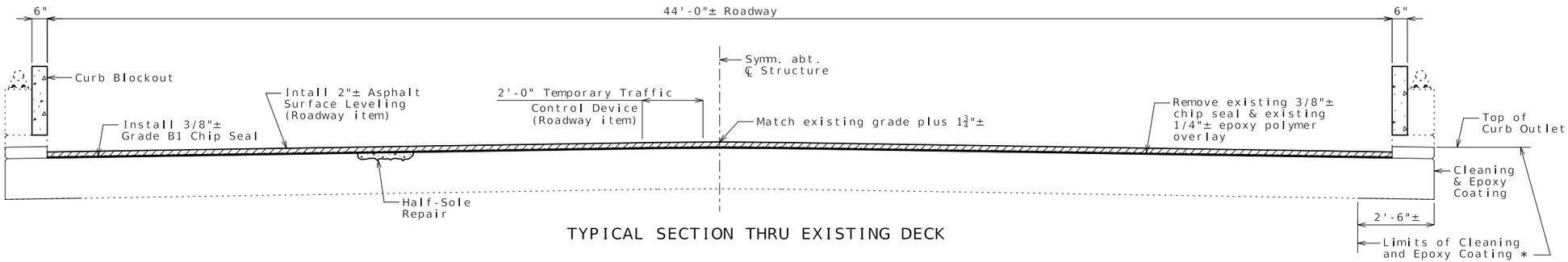
DATE	DESCRIPTION

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

SIGNING SHEET 1 OF 1

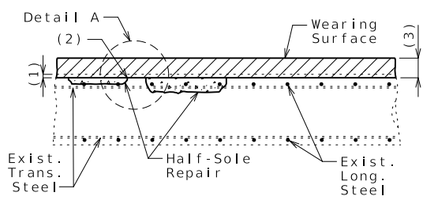
SEC/SUR 15 TWP 24N RGE 6E

U.I.P. AND REHABILITATE EXISTING (35'-46'-35') CONTINUOUS CONCRETE SOLID SLAB SPANS (SKEW: 40°00'00" R.A.)

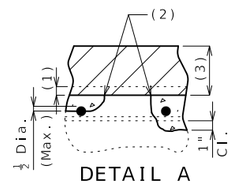


TYPICAL SECTION THRU EXISTING DECK

* Clean and epoxy coat inside of curb outlets and slab edge from top of outlets to 2'-6" along underside of slab for entire length.



HALF-SOLE REPAIR



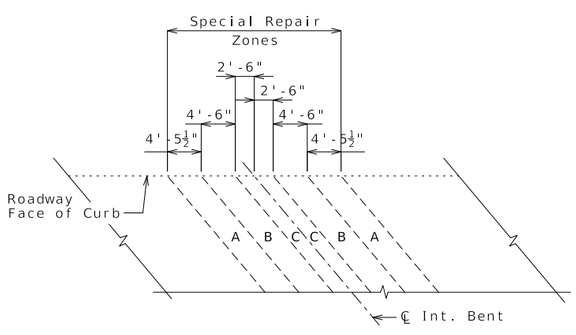
DETAIL A

Clearance around top bar and around bottom bar at the intersection of top bar shall be required when more than half the diameter of the top bar is exposed.

(1) Removal of existing 3/8"± chip seal plus 1/4"± of existing epoxy polymer overlay

(2) 1" vertical side shall be established outside the deteriorated area.

(3) 3/8" minimum Grade B1 Chip Seal plus 2"± Asphalt Surface Leveling



PART PLAN OF SLAB SHOWING SPECIAL REPAIR ZONES

Order of Repair:

1. Remove existing wearing surface.
2. Sound deck to identify areas in need of repair.
3. Complete half-sole repairs outside special repair zones.
4. Complete half-sole repairs inside special repair zones
5. Place new wearing surface.

Special Repair Zones:

Any deck repair in areas not designated as a special repair zone shall be completed prior to work in Zone A.

Deck repair required in the areas designated as special repair zones shall be completed in alphabetical sequence beginning with Zone A. Zones with the same letter designation may be repaired at the same time.

Removal and deck repair shall be completed in one special repair zone and concrete shall have attained a compressive strength of 3200 psi before work can be started in the next special repair zone.

If any single repair area does not exceed 4 square feet in size and the total repair area within a special repair zone does not exceed 12 square feet, the special repair zone may be repaired at the same time as an adjacent zone.

Estimated Quantities

Item		Total
Removal of Seal Coat or Polymer Wearing Surface	sq. foot	5248
Emulsified Asphalt, Seal Coat	gallon	233
Seal Coat Aggregate, Grade B1	sq. yard	583
Curb Blockout	linear foot	271
Half-Sole Repair	sq. foot	50
Cleaning and Epoxy Coating	sq. foot	1148

General Notes:

Design Specifications:

2002 AASHTO LFD (17th Ed.) Standard Specifications
Bridge Deck Rating = 6

Design Loading:

H20-44 (1969 Existing); HS20-44 (New Construction)

Design Unit Stresses:

Class B-1 Concrete (Curb Blockout) f'c = 4,000 psi
Class B-2 Concrete (Half-Sole) f'c = 4,000 psi
Reinforcing Steel (Grade 60) fy = 60,000 psi

Miscellaneous:

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

All concrete repairs shall be in accordance with Sec 704, unless otherwise noted.

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

In order to maintain grade and a minimum thickness of wearing surface as shown on plans it may be necessary to use additional quantities of wearing surface at various locations throughout the structure. The cost of furnishing and installing the wearing surface will be considered completely covered in the contract unit price, including all additional labor, materials or equipment for variations in thickness of wearing surface.

The contractor shall exercise care to ensure spillage over joint edges is prevented and that a neat line is obtained along any terminating edge of the wearing surface.

Traffic Handling:

Traffic to be maintained on structure during construction. See roadway plans for traffic control.

REPAIRS TO BRIDGE: ROUTE 142 OVER PIKE SLOUGH DRAINAGE DITCH

ROUTE 142 FROM ROUTE 53 TO ROUTE 158
ABOUT 0.7 MILE SOUTHWEST OF ROUTE 53
BEGINNING STATION 35+30.00± (Match Existing)

STATE OF MISSOURI
TYLER R. LINDSAY
NUMBER PE-2019000128
PROFESSIONAL ENGINEER
08/29/2024 10:44:25 AM
TYLER R. LINDSAY - CIVIL
MO-PE-2019000128

DATE PREPARED 8/28/2024

ROUTE	STATE
142	MO
DISTRICT	SHEET NO.
BR	1

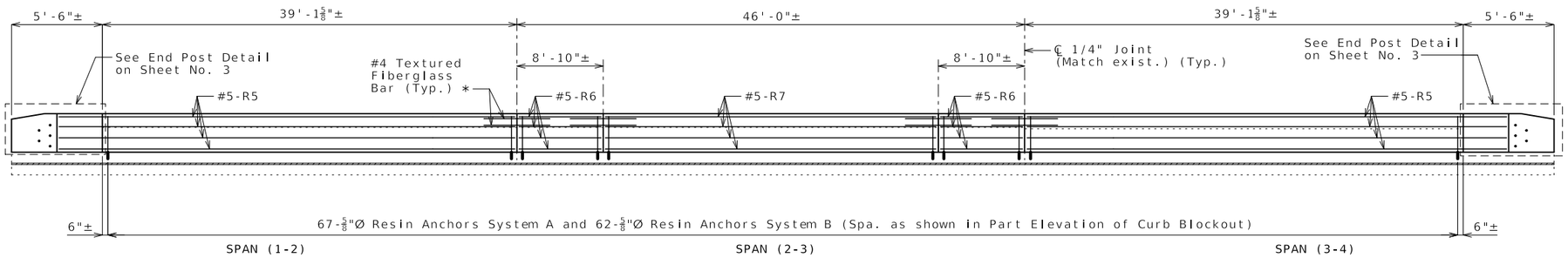
COUNTY BUTLER
JOB NO. J9S3673
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A28392

DESCRIPTION
DATE

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

Detailed May 2024
Checked Aug. 2024

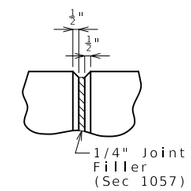
Note: This drawing is not to scale. Follow dimensions.



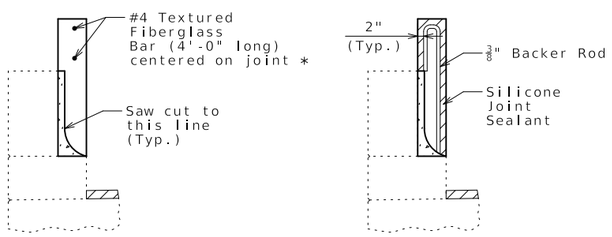
ELEVATION OF LEFT CURB BLOCKOUT

(Right curb blockout similar)

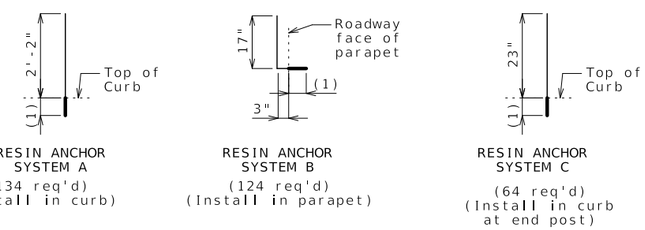
Longitudinal dimensions are along grade and are taken at top outside edge of parapet.



PART ELEVATION AT FORMED JOINT



SECTION THRU SAW CUT JOINT



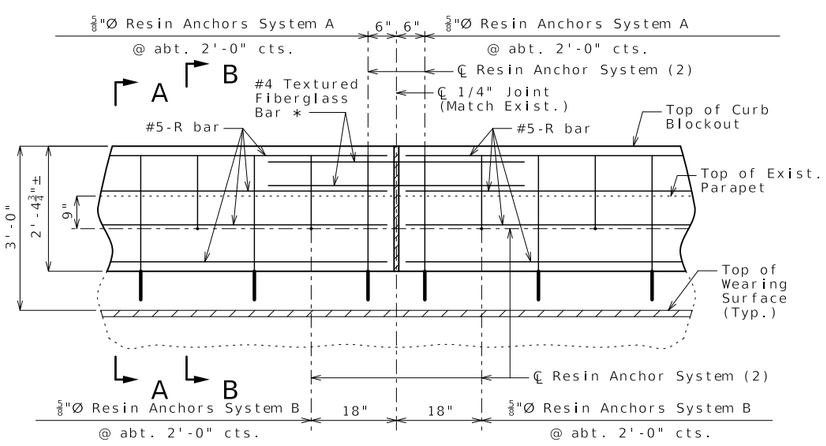
RESIN ANCHOR SYSTEM A
(134 req'd)
(Install in curb)

RESIN ANCHOR SYSTEM B
(124 req'd)
(Install in parapet)

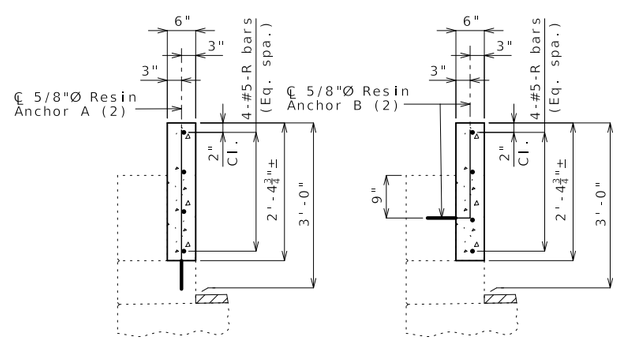
RESIN ANCHOR SYSTEM C
(64 req'd)
(Install in curb at end post)

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

DETAILS OF RESIN ANCHORS



PART ELEVATION OF CURB BLOCKOUT



SECTION A-A

SECTION B-B

Notes:

* Slip-formed option only.

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

Bridge rail not shown for clarity.

Concrete in curb blockout shall be Class B-1.

Measurement of curb blockout is to the nearest linear foot, measured at the top outside edge of parapet. (Match existing curb and parapet)

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

Payment for concrete, reinforcement, resin anchor systems and any other work incidental to the curb blockout, complete in place, will be considered completely covered by the contract unit price for Curb Blockout per linear foot.

Cost of any concrete curb or parapet repair will be considered completely covered by the contract unit price for Curb Blockout.

All curb blockout reinforcement shall be epoxy coated.

(2) Shift resin anchors where necessary to clear existing anchor bolts for bridge rail, miss curb outlets (if present) and clear existing reinforcement.

Use a minimum lap of 3'-1" for #5 horizontal curb blockout bars.

Concrete traffic barrier delineators shall be placed on top of the curb blockout similarly as shown on Missouri Standard Plans 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Curb Blockout.

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

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

An epoxy coated #5 Grade 60 reinforcing bar shall be substituted for the 5/8"Ø threaded rod.

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

Detailed May 2024
Checked Aug. 2024

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

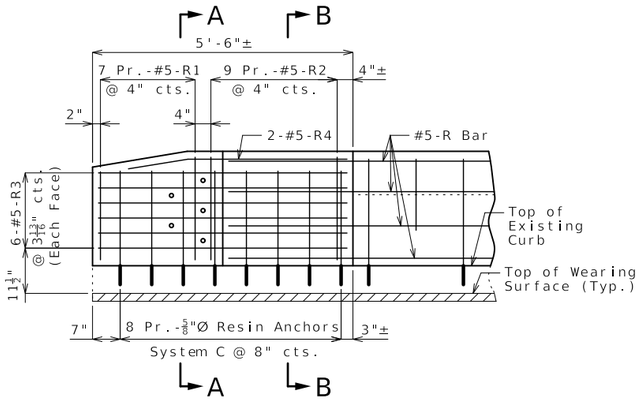
CURB BLOCKOUT

STATE OF MISSOURI
TYLER R. LINDSAY
NUMBER PE-2019000128
PROFESSIONAL ENGINEER
08/29/2024 10:44:50 AM
TYLER R. LINDSAY - CIVIL
MO-PE-2019000128

DATE PREPARED	
8/28/2024	
ROUTE 142	STATE MO
DISTRICT BR	SHEET NO. 2
COUNTY BUTLER	
JOB NO. J9S3673	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. A28392	

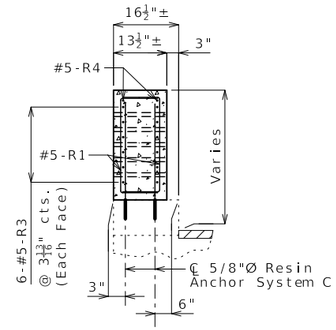
DATE	DESCRIPTION

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

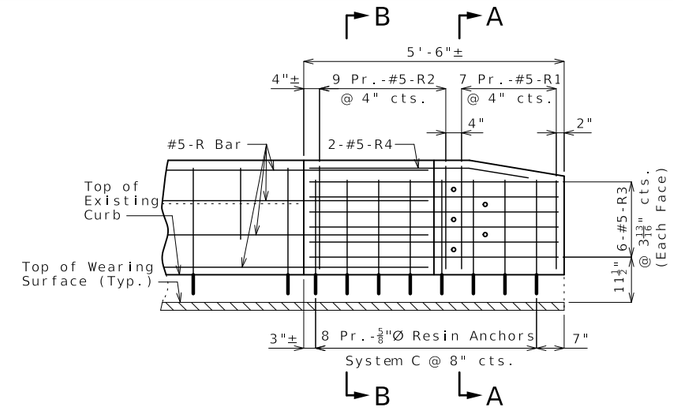


ELEVATION SHOWING REINFORCEMENT

(Right End Post at End Bent No. 4 similar)

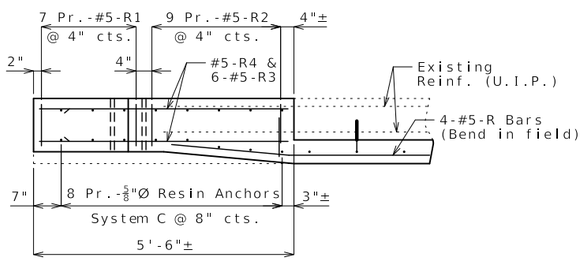


SECTION A-A



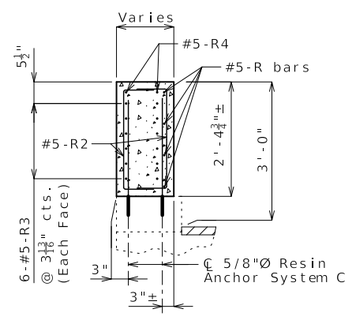
ELEVATION SHOWING REINFORCEMENT

(Right End Post at End Bent No. 1 similar)

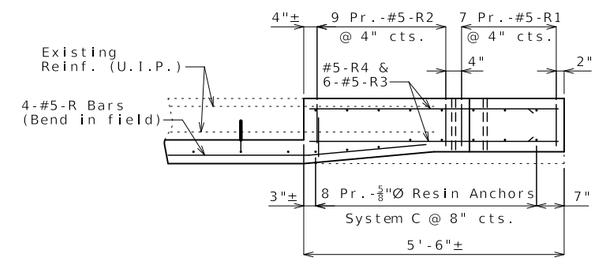


PLAN SHOWING REINFORCEMENT

LEFT END POST AT END BENT NO. 1

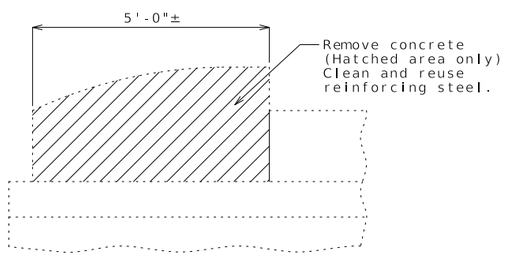


SECTION B-B



PLAN SHOWING REINFORCEMENT

LEFT END POST AT END BENT NO. 4



PART ELEVATION SHOWING END POST
CONCRETE REMOVAL

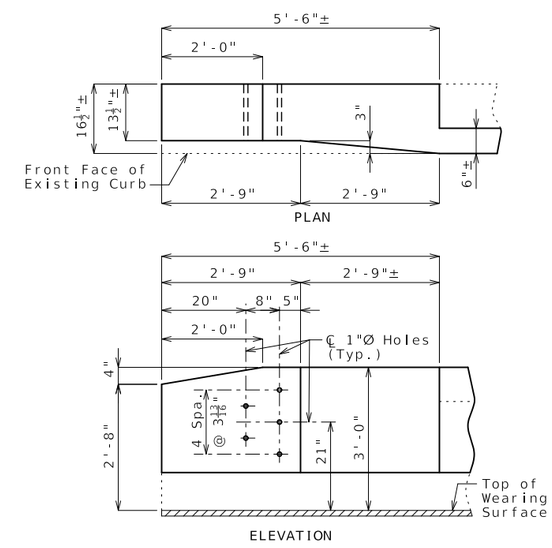
Cost of removing existing end posts will be considered completely covered by the contract unit price for Curb Blockout.

Notes:

Work this sheet with Sheet No. 2.

For details of resin anchors, see Sheet No. 2.

Resin anchors shall be shifted or bent in field to clear one-inch diameter holes by at least 1/2 inch.



DETAILS OF END POST AND
GUARD RAIL ATTACHMENT

CURB BLOCKOUT AT END BENTS

Detailed May 2024
Checked Aug. 2024

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

STATE OF MISSOURI
TYLER R. LINDSAY
NUMBER
PE-2019000128
PROFESSIONAL ENGINEER
08/29/2024 10:45:07 AM
TYLER R. LINDSAY - CIVIL
MO-PE-2019000128

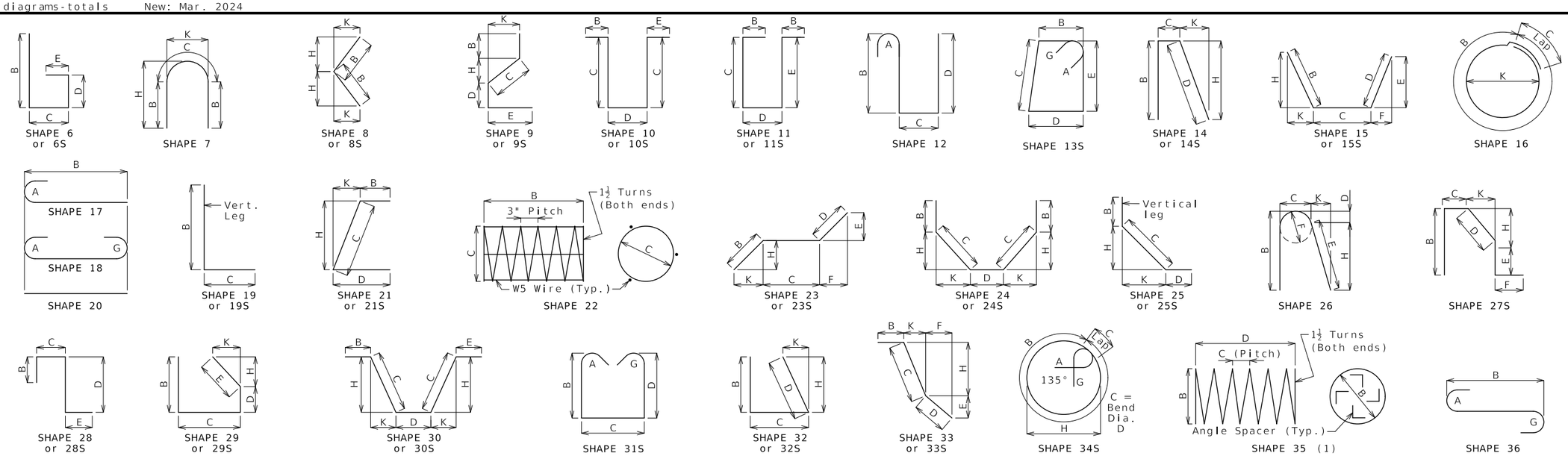
DATE PREPARED	8/28/2024
ROUTE	142
STATE	MO
DISTRICT	BR
SHEET NO.	3
COUNTY	BUTLER
JOB NO.	J9S3673
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	A28392

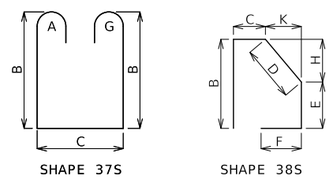
DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

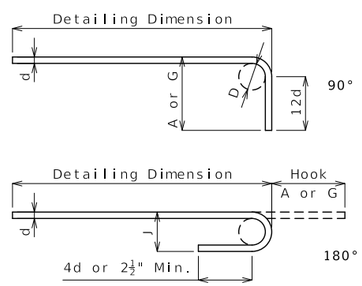




Finished Bend Diameters D and Hook Dimensions

Standard Pin Bend Shapes

Size	Case	D	A or G 90°	A or G 180°	J 180°
#4	1	3"	8"	6"	4"
#5	1	3¾"	10"	7"	5"
#6	1	4½"	12"	8¼"	6"
#7	2	5¼"	14"	9¾"	7"
	3	7"	15"	11½"	8¾"
#8	2	6"	16"	11"	8"
	3	8"	17"	13¼"	10"
#9	1	9½"	19½"	15½"	11¾"
#10	1	10¾"	22"	17½"	13¼"
#11	1	12"	24½"	19½"	14⅞"
#14	1	18¼"	31¼"	27½"	21⅝"
#18	1	24"	41½"	36¼"	28½"

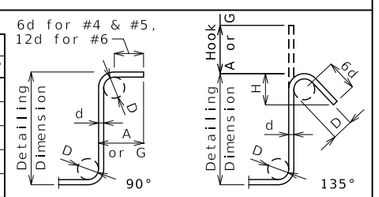


Stirrup Pin Bend Shapes (S)

Size	Case	D	A or G 90°	A or G 135°	A or G 180°	H 135°	J 180°
#4	2	2"	4½"	4½"	5"	2⅞"	3"
	3	3"	5"	5¼"	6"	3"	4"
#5	2	2½"	5¾"	5¾"	5¾"	3⅝"	3¾"
	3	3¾"	6¼"	6½"	7"	3⅞"	5"
#6	1	4½"	12"	7¾"	8¼"	4⅝"	6"

Applicable for all grades of steel.

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



BENDING DIAGRAMS

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

All bars shall be Grade 60.

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

SH = Required shape, see bending diagrams.

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

All dimensions are out to out.

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

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

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

Four angle or channel spacers are required for each column spiral. Spacers are to be placed on inside of spirals. Length and weight of column spirals do not include splices or spacers.

Reinforcing Steel Totals (Pounds)

	Size	Substructure Plain	Substructure Epoxy	Superstructure Slab	Superstructure Barrier	Superstructure Slip Form	Entire Bridge Plain	Entire Bridge Epoxy
By Size	W5	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0
	5	0	0	0	1,841	0	0	1,841
	6	0	0	0	0	0	0	0
	7	0	0	0	0	0	0	0
By Type		0	0	0	1,841	0	0	1,841

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

Bill of Reinforcing Steel

No. Req.	Size/ Mark	Location	Codes C	Codes SH	Codes V	B ft in.	C ft in.	D ft in.	E ft in.	F ft in.	H ft in.	K ft in.	Nom. Length ft in.	Actual Length ft in.	Weight lb
		CURB BLOCKOUT													
56	5 R1	CURB BLOCKOUT	E	10S	8		10.50	20.75					3 6	3 3	
		Incr. = 0.625"					10.50	2 0.75					3 10	3 7	200
72	5 R2	CURB BLOCKOUT	E	10S			10.50	2 0.75					3 10	3 7	269
48	5 R3	CURB BLOCKOUT	E	20		5 3.00							5 3	5 3	263
8	5 R4	CURB BLOCKOUT	E	15S		15.25	3 4.25				2.50	15.00	4 8	4 6	38
16	5 R5	CURB BLOCKOUT	E	20		41 7.00							41 7	41 7	694
16	5 R6	CURB BLOCKOUT	E	20		8 7.00							8 7	8 7	143
8	5 R7	CURB BLOCKOUT	E	20		28 1.00							28 1	28 1	234

BENDING DIAGRAMS AND REINFORCING STEEL TOTALS

Detailed May 2024
Checked Aug. 2024

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MO-PE-2019000128

DATE PREPARED 8/28/2024

ROUTE	STATE
142	MO
DISTRICT	SHEET NO.
BR	4

COUNTY BUTLER

JOB NO. J9S3673

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A28392

DATE	DESCRIPTION

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