DESIGN DESIGNATION

ADT (CONST) - 2027 = 7343
ADT (DESIGN) - 2037 = 7702
T = 8%
V = 45/35 M.P.H.

FUNCTIONAL CLASSIFICATION-MAJOR COLLECTOR

NO NEW R/W REQUIRED

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

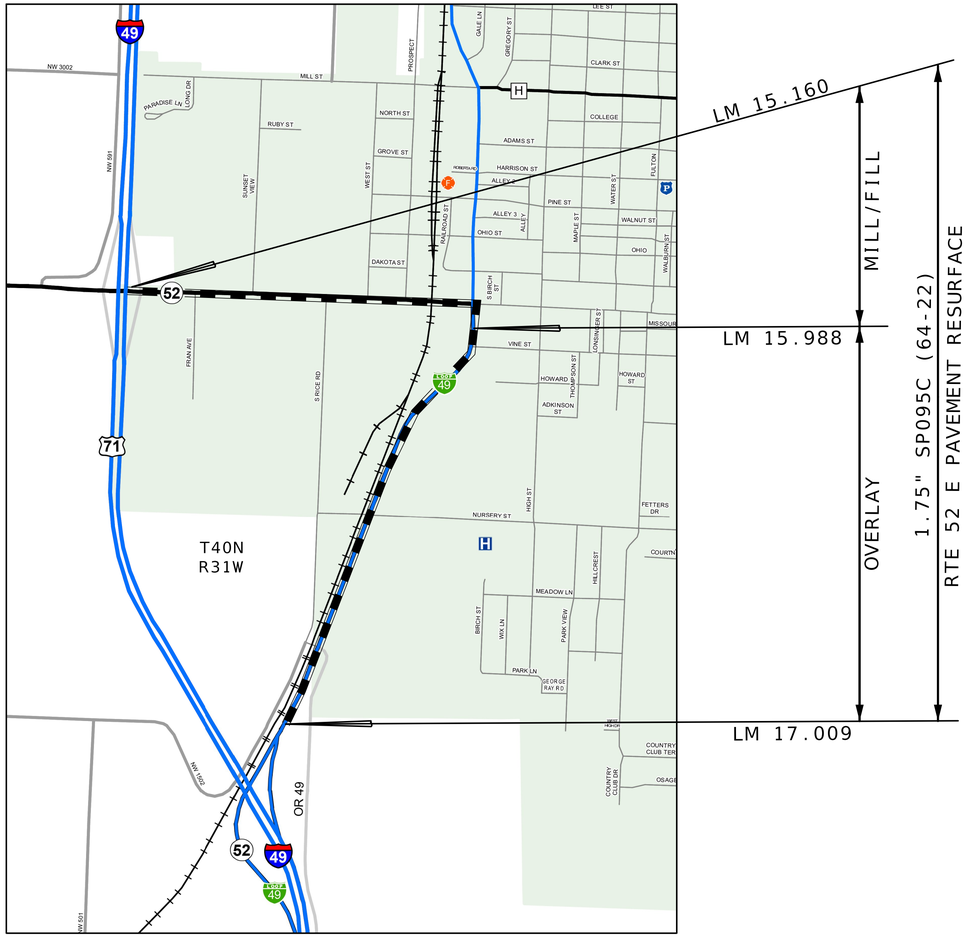
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

PLANS FOR PROPOSED STATE HIGHWAY

BATES COUNTY



KEY MAP
LOCATION OF BATES COUNTY



NOT TO SCALE

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

INDEX OF SHEETS

DESCRIPTION	SHEET NUMBER
TITLE SHEET	1
TYPICAL SECTIONS (TS) (5 SHEETS)	2
QUANTITIES (QU) (3 SHEETS)	3
TRAFFIC CONTROL SHEETS (TC)	4-16
SPECIAL SHEETS (SS)	17
SIGNAL SHEETS (SG)	18-23
PAVEMENT MARKING (PM)	24-25

LENGTH OF PROJECT

LOG MILES FROM 2025 ARAN

BEGINNING OF PROJECT	LM. 15.160
END OF PROJECT	LM. 17.009
APPARENT LENGTH	9762.72 FEET
NET LENGTH OF PROJECT	9762.72 FEET
STATE LENGTH	1.849 MILES
FOR INFORMATION ONLY ESTIMATED DISTURBED ACRES	0 ACRES

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 9/28/2026
ROUTE: 52 | STATE: MO
DISTRICT: SW | SHEET NO.: 1
COUNTY: BATES
JOB NO.: JSR0159
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION	DATE

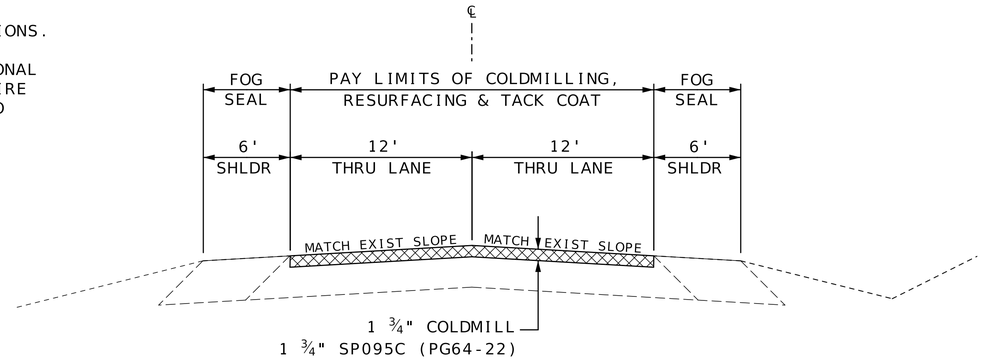
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

NOTES: LANE WIDTH NOTED IS TYPICAL LANE WIDTH.
ADJUST PAVING WIDTHS TO EXISTING FIELD CONDITIONS.

NO ADDITIONAL PAYMENT WILL BE MADE FOR ADDITIONAL COLDMILLING (UP TO 3") REQUIRED TO REMOVE ENTIRE TOP LIFT DUE TO DELAMINATION. THIS APPLIES TO ENTIRE PROJECT LIMITS.

SURFACE PLACEMENT - ONE PASS PER LANE

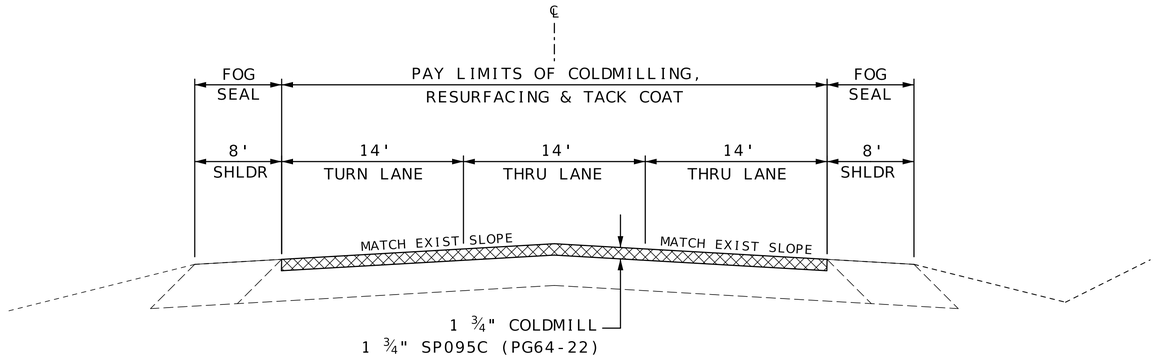
NO S.E. CORRECTION



ROUTE 52

LOG MILE 15.160 TO LOG MILE 15.186

ASPHALT FACTORS		
	COMBINED FACTOR	% AC
SP095C (PG64-22)	1.970 TONS/CY	5.5%
TACK COAT		
MILLING		0.10 GAL/SY
IRREGULARITIES: 75 TONS/MI		

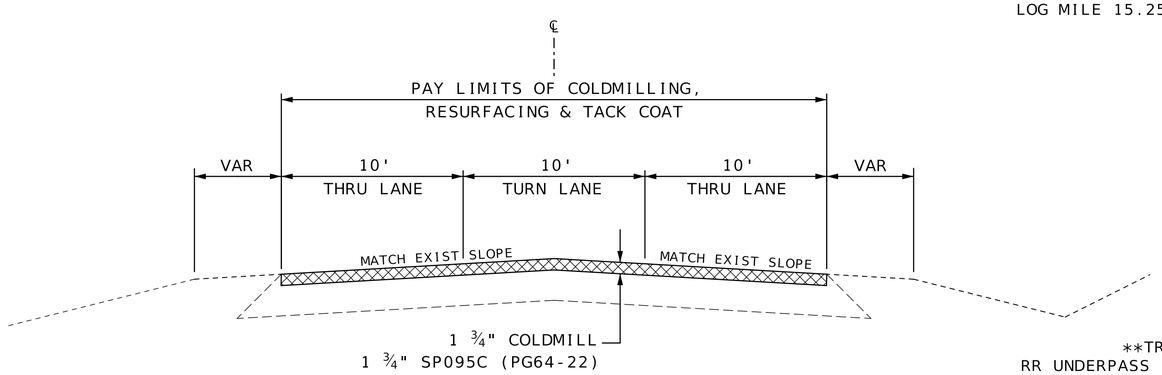


ROUTE 52

LOG MILE 15.186 TO LOG MILE 15.365*

*TRANSITION FROM 58' TO 65'
LOG MILE 15.206 TO LOG MILE 15.255

TRANSITION VARIES
FRAN AVE INTERSECTION (SEE SPECIAL SHEET)
LOG MILE 15.255 TO LOG MILE 15.365



ROUTE 52

LOG MILE 15.365 TO LOG MILE 15.988**

**TRANSITION VARIES
RR UNDERPASS (SEE SHEET SPECIAL SHEET)
LOG MILE 15.801 TO LOG MILE 15.911

I49 BUS INTERSECTION (SEE SPECIAL SHEET)
LOG MILE 15.911 TO LOG MILE 15.988

NOT TO SCALE

TYPICAL SECTIONS
SHEET 1 OF 5

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
52	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
BATES

JOB NO.
JSR0159

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

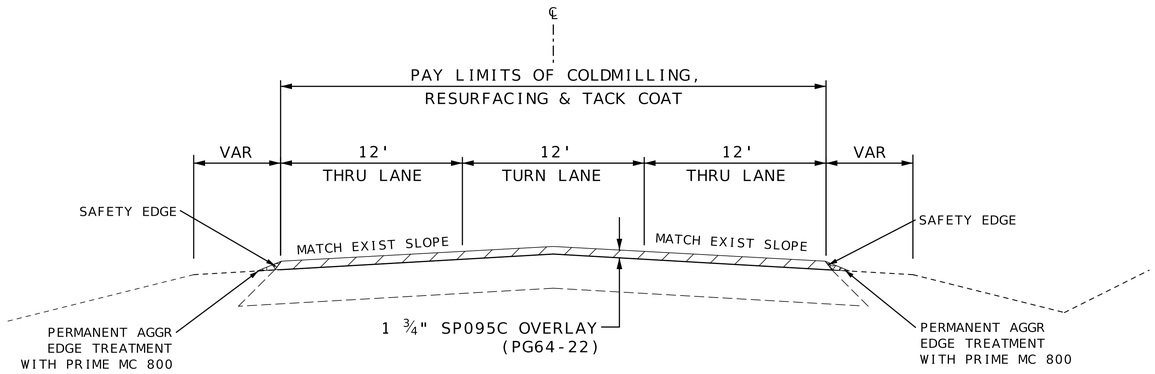
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

NOTES: LANE WIDTH NOTED IS TYPICAL LANE WIDTH.
ADJUST PAVING WIDTHS TO EXISTING FIELD CONDITIONS.

SURFACE PLACEMENT - ONE PASS PER LANE

NO S.E. CORRECTION

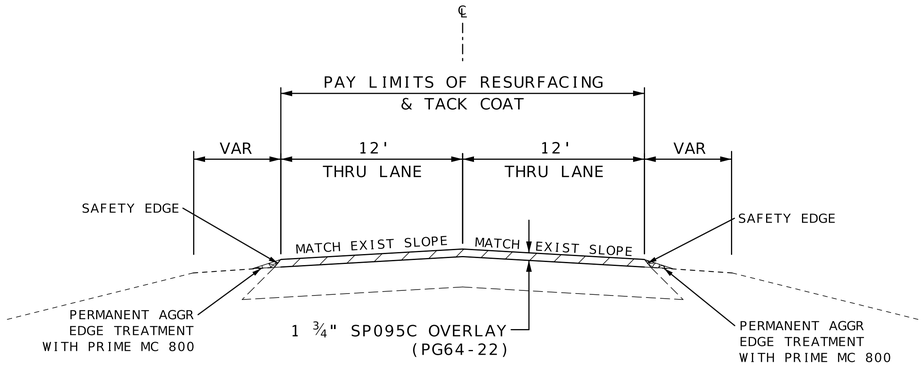
ASPHALT FACTORS		
	COMBINED FACTOR	% AC
SP095C (PG64-22)	1.970 TONS/CY	5.5%
TACK COAT		
OVERLAY		0.08 GAL/SY
PRIME LIQUID ASPHALT MC 800		
PERMANENT AGGREGATE EDGE TREATMENT		0.25 GAL/SY
IRREGULARITIES: 75 TONS/MI		



ROUTE 52

LOG MILE 15.988 TO LOG MILE 16.151*
LOG MILE 16.459 TO LOG MILE 16.625*

*TRANSITION FROM 36' TO 24'
LOG MILE 16.113 TO LOG MILE 16.151
LOG MILE 16.587 TO LOG MILE 16.625



ROUTE 52

LOG MILE 16.151 TO LOG MILE 16.459**
LOG MILE 16.625 TO LOG MILE 17.009

**TRANSITION FROM 24' TO 36'
LOG MILE 16.421 TO LOG MILE 16.459

NOT TO SCALE

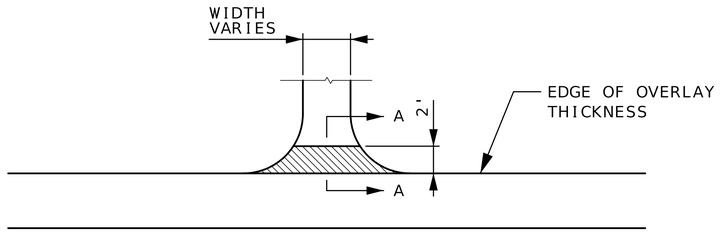
TYPICAL SECTIONS
SHEET 2 OF 5

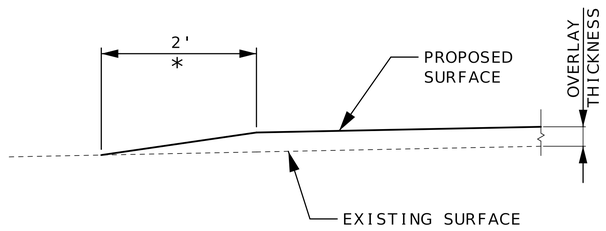
STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 9/28/2026
ROUTE: 52 | STATE: MO
DISTRICT: SW | SHEET NO.: 2
COUNTY: BATES
JOB NO.: JSR0159
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)



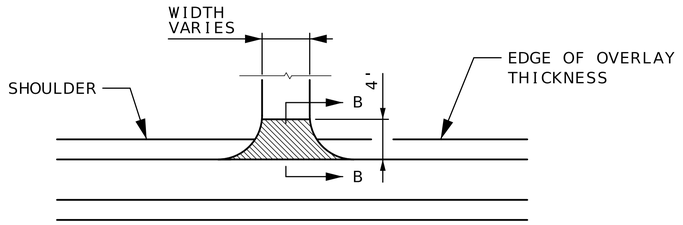


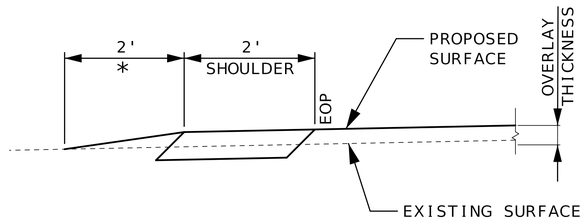
SECTION A-A

TYPICAL ENTRANCE - NO SHOULDER
(FIELD, PRIVATE OR COUNTY ROAD)
*TAPER AT 1:1 FOR FIELD ENTRANCE

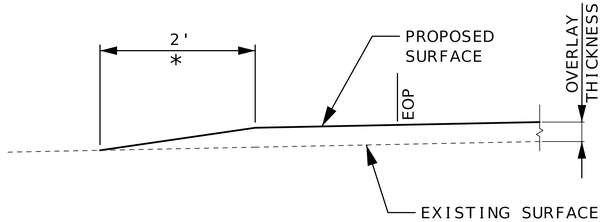
NOTE: 4 TONS GRAVEL A OR CRUSHED STONE
CALCULATED PER ENTRANCE.

6 TONS CALCULATED PER COUNTY ROAD.





AGGREGATE & EARTH ENTRANCES



ASPHALT & CONCRETE ENTRANCES

SECTION B-B

TYPICAL ENTRANCE - EXIST/NEW SHOULDER
(FIELD, PRIVATE OR COUNTY ROAD)
*TAPER AT 1:1 FOR FIELD ENTRANCE

NOTES: DO NOT BUILD 2' MODIFIED A3 SHOULDERS
ACROSS CONCRETE OR ASPHALT ENTRANCES,
STREETS OR ROADS.

4 TONS GRAVEL A OR CRUSHED STONE B
CALCULATED PER ENTRANCE.

6 TONS CALCULATED PER COUNTY ROAD.

NOT TO SCALE

TYPICAL SECTIONS
SHEET 3 OF 5

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
52	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
BATES

JOB NO.
JSR0159

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

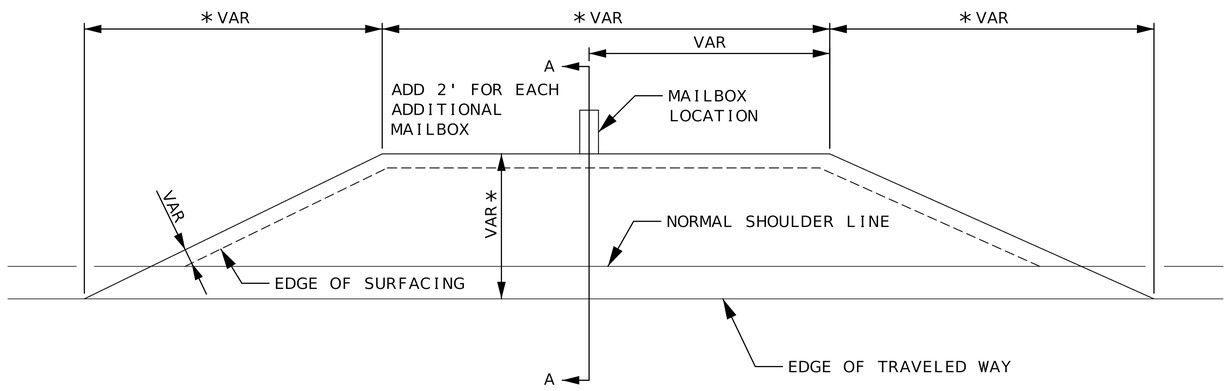
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

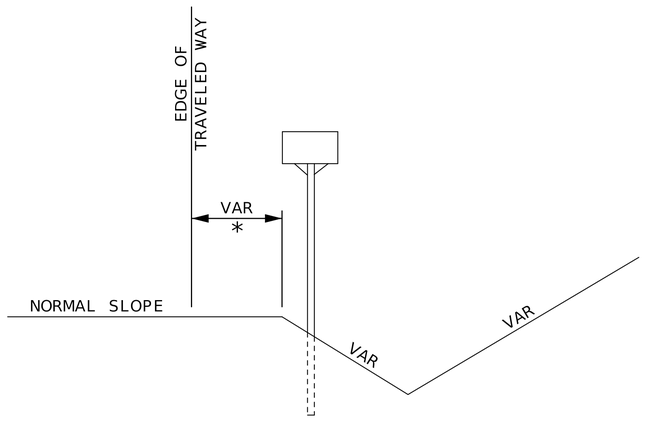
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

NOTE: MAILBOX TURNOUT QUANTITIES BASED ON 2' WIDTH AND 15' LENGTH. ADD 2' IN LENGTH PER ADDITIONAL MAILBOX AT SAME LOCATION, AS APPROVED BY THE ENGINEER.

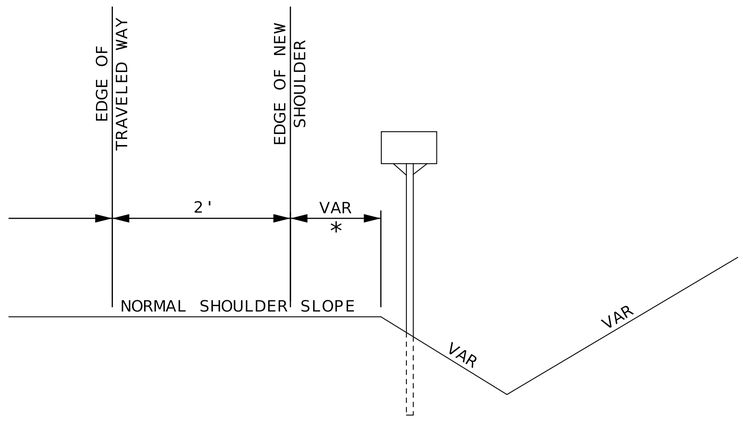
TYPICAL MAILBOX TURNOUT

*AS APPROVED BY THE ENGINEER





SECTION A-A
NO SHOULDER



SECTION A-A
SHOULDER

NOT TO SCALE

TYPICAL SECTIONS
SHEET 4 OF 5

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
52	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
BATES

JOB NO.
JSR0159

CONTRACT ID.

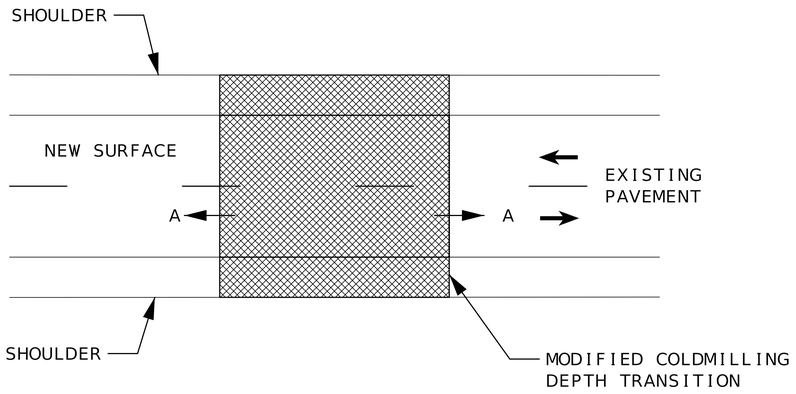
PROJECT NO.

BRIDGE NO.

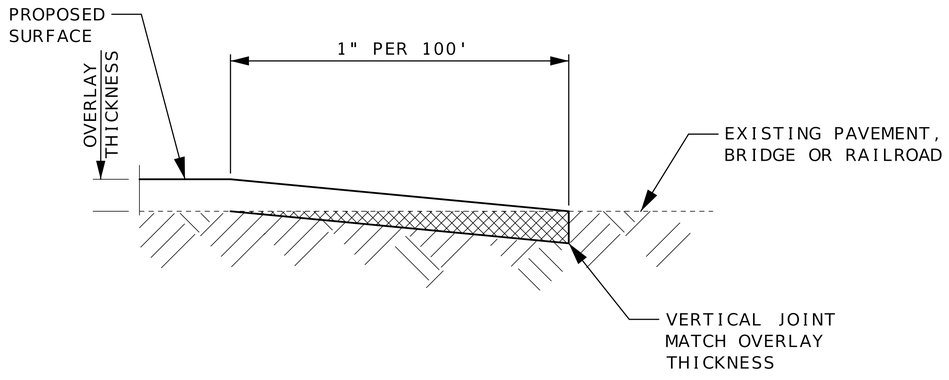
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



MAINLINE, BRIDGE, AND RAILROAD PLAN



SECTION A-A

TRANSVERSE JOINT TRANSITION FOR SINGLE LIFT
PROJECT BEGINNING, END, BRIDGE, OR RAILROAD

NOTE: MILL EXISTING CONCRETE 1" MAXIMUM.

NOT TO SCALE

TYPICAL SECTIONS
SHEET 5 OF 5

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
52	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
BATES

JOB NO.
JSR0159

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)

CONTRACTOR FURNISHED SURVEYING & STAKING
1 LUMP SUM

MOBILIZATION
1 LUMP SUM

REMOVAL OF IMPROVEMENTS						
BEGIN LOG MILE	END LOG MILE	RT/LT OFFSET	UNIT	TOTAL	DESCRIPTION	REMARKS
15.310	15.31	CL	EA	1	SIGNALS	REPLACE 1 HEAD PER SIGNAL W FYL-4 TOTAL
15.825	15.865	RT/LT	FT	300	GUARDRAIL	REMOVE AND REPLACE
TOTAL = 1 LUMP SUM						

ASPHALT, TACK, FOG SEAL, COLDMILLING, RUMBLES									
						SP095C	TACK		FOG SEAL	
						1.75"			VAR	
LT/RT OFFSET	BEGIN LOG MILE	END LOG MILE	NET LENGTH	AVG. WIDTH	MEASURED AREA	1.970 TONS/CY	0.08	0.10	0.20 GAL/SY	REMARKS
			LF	LF	SF	TONS	GAL	GAL	GAL	
LT/RT	15.160	15.186	137.3	24.0		35.1		36.6	36.6	MAINLINE
LT/RT	15.186	15.206	105.6	42.0		47.2		49.3	37.5	MAINLINE
LT/RT	15.206	15.255	258.7		11022.7	117.3		122.5	92.0	MAINLINE
LT/RT	15.255	15.365	580.8		38279.3	407.3		425.3	48.9	MAINLINE/FRAN INT
LT/RT	15.365	15.801	2302.1	30.0		734.9		767.4		MAINLINE
LT/RT	15.801	15.911	580.8		16470.0	175.2		183.0		MAINLINE/RR UNDERPASS
LT/RT	15.911	15.988	406.6		28420.0	302.4		315.8		MAINLINE/I-49 INT
LT/RT	15.988	16.113	660.0	36.0		252.8	211.2			MAINLINE
LT/RT	16.113	16.151	200.6		6959.3	74.0	61.9			MAINLINE
LT/RT	16.151	16.421	1425.6	24.0		364.1	304.1			MAINLINE
LT/RT	16.421	16.459	200.6		7129.0	75.9	63.4			MAINLINE
LT/RT	16.459	16.587	675.8	36.0		258.9	216.3			MAINLINE
LT/RT	16.587	16.625	200.6		7129.0	75.9	63.4			MAINLINE
LT/RT	16.625	17.009	2027.5	24.0		517.8	432.5			MAINLINE
LT/RT	15.988	17.009	1200.0	2.0		25.5	21.3			ENTRANCES
LT/RT	15.160	17.009	-	-	-	138.7	-	-		IRREGULARITIES 75 TONS/MILE
LT/RT	15.988	17.009	10781.8	-	-	29.0	-			SAFETY EDGE
					TOTAL	3632.0	1374.1	1899.9	215.0	ANY AND ALL IRREGULARITIES MAY BE UNDERRUN AND NO ADJUSTMENT TO ANY UNIT BID COST WILL BE MADE
					USE	3632.0	3274		215	

PERMANENT AGGREGATE EDGE TREATMENT							
				LENGTH	AGGREGATE 200 TON/MILE*	PRIME MC 800 590 GAL/MILE*	
ROUTE	LOG MILE	TO	LOG MILE	MILES	TON	GAL	REMARKS
52	15.988	-	17.009	1.021	204.2	602	
				TOTALS	204.2	602	*INCLUDES 2' WIDTH BOTH SIDES OF ROADWAY

GRAVEL (A) OR CRUSHED STONE (B)
80 TONS

SUMMARY OF QUANTITIES
SHEET 1 OF 3

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
52	MO
DISTRICT	SHEET NO.
SW	3

COUNTY
BATES

JOB NO.
JSR0159

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)

COLDMILLING

ROUTE	LOG MILE	LOG MILE	NET LENGTH LF	AVERAGE WIDTH LF	MEASURED AREA SF	MODIFIED DEPTH TRANSITION SY	FULL DEPTH COLDMILL 3" OR LESS SY	REMARKS
52	15.160	15.988	4371.8	VAR	2110.9		18998.4	MAINLINE
52	15.988	16.025	195.4	36.0		781.6		BEGIN OVERLAY
52	16.972	17.009	195.4	24.0		521.1		END OVERLAY
					TOTAL	1302.7	18998.4	
					USE	1303	18999	

GUARDRAIL

RTE 52 BEGIN LOG MILE	RTE 52 END LOG MILE	LOCATION	8' POST MGS GUARDRAIL FT	TYPE A MASH CRASHWORTHY END TERMINAL EA	TYPE C MASH CRASHWORTHY END TERMINAL EA	MGS BRIDGE APPROACH TRANSITION "REGULAR/ NO CURB" EA	SHAPING SLOPES CLASS III 100FT	REMARKS
15.825	15.855	RT	12.5	1		1	1.0	
15.845	15.855	LT	12.5		1	1	1.0	
15.855	15.885	RT	12.5	1		1	1.0	
15.855	15.865	LT	12.5		1	1	1.0	
		TOTAL	50.0	2	2	4	4.0	
		USE	50	2	2	4	4	

PAVEMENT MARKING

BEGIN LOG	END LOG	LT/RT LOCATION	CLASS 1 PAVEMENT MARKING PAINT (18-MIL, TYPE P BEADS) 4" SOLID WHITE LF	4" INT YELLOW LF	4" SOLID YELLOW LF	THERMOPLASTIC 24" MIDBLOCK LF	24" WHITE LF	24" YELLOW LF	24" x 36" YIELD TRAINGLE EACH	LEFT/RIGHT ARROW EACH	REMARKS
15.160	15.255	LT/RT	1500.0		2000.0			35.0		2.0	
15.255	15.306	LT/RT	1350.0		1350.0	168.0	48.0		16.0	5.0	FRAN INT
15.306	15.365	LT/RT	1550.0		930.0	168.0	48.0	30.0	16.0	2.0	FRAN INT
15.365	15.801	LT/RT	4600.0	1160.0	4600.0					8.0	
15.801	15.911	LT/RT	1160.0		1160.0			100.0			
15.911	15.988	LT/RT	1335.0		796.0		72.0			3.0	I-49 INT
15.988	16.122	LT/RT	1060.0	440.0	1420.0					2.0	
16.122	16.182	LT/RT	640.0		1280.0			35.0			
16.182	16.419	LT/RT	2500.0		2500.0						
16.419	16.639	LT/RT	2320.0		4640.0			200.0		1.0	
16.629	17.009	LT/RT	4020.0		4020.0						
		TOTAL	22035	1600	24696	336	168	400	32	23	
		USE	22035	26296		504		400	32	23	

PAVEMENT MARKING REMOVAL

BEGIN LOG	END LOG	LT/RT LOCATION	MARKING TAPE REMOVAL LF
15.160	17.009	LT/RT	8550.0
		TOTAL	8550
		USE	8550

SUMMARY OF QUANTITIES
SHEET 2 OF 3

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 9/28/2026
ROUTE 52 | STATE MO
DISTRICT SW | SHEET NO. 3
COUNTY BATES
JOB NO. JSR0159
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

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

SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL AREA SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NO.	DESCRIPTION
WARNING SIGNS								
WO1-1L	48X48	16.00						TURN (SYMBOL LEFT)
WO1-1R	48X48	16.00						TURN (SYMBOL RIGHT)
WO1-2L	48X48	16.00						CURVE (SYMBOL LEFT)
WO1-2R	48X48	16.00						CURVE (SYMBOL RIGHT)
WO1-3L	48X48	16.00						REVERSE TURN (SYMBOL LEFT)
WO1-3R	48X48	16.00						REVERSE TURN (SYMBOL RIGHT)
WO1-4L	48X48	16.00						REVERSE CURVE (SYMBOL LEFT)
WO1-4R	48X48	16.00						REVERSE CURVE (SYMBOL RIGHT)
WO1-4bL	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL LEFT)
WO1-4bR	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL RIGHT)
WO1-4cL	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL LEFT)
WO1-4cR	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL RIGHT)
WO1-6	60X30	12.50						HORIZONTAL ARROW (SYMBOL)
WO1-6a	72X36	18.00						HORIZ. ARROW (SYMBOL ON PERMANENT BARRICADE)
WO1-7	60X30	12.50						DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)
WO1-7a	72X36	18.00						DOUBLE HEAD HORIZ. ARROW (SYMBOL ON PERM. BARR.)
WO1-8	18X24	3.00						CHEVRON (SYMBOL)
WO1-8a	30X36	7.50						CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)
WO3-1	48X48	16.00						STOP AHEAD (SYMBOL)
WO3-2	48X48	16.00						YIELD AHEAD (SYMBOL)
WO3-3	48X48	16.00						SIGNAL AHEAD (SYMBOL)
WO3-4	48X48	16.00						BE PREPARED TO STOP
WO3-5	48X48	16.00						SPEED LIMIT AHEAD
WO4-1L	48X48	16.00						MERGE (SYMBOL FROM LEFT)
WO4-1R	48X48	16.00	2	32.00			6A	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	4	64.00			50	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	4	64.00			36	UNEVEN LANES
WO8-12	48X48	16.00	4	64.00			35	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	4	20.00			23	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)
WO12-2x	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	7	112.00			2	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	7	112.00			7	ONE LANE ROAD AHEAD
WO20-5	48X48	16.00	3	48.00			5	RIGHT/CENTER/LEFT LANE CLOSED AHEAD
WO20-5a	48X48	16.00						2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD
WO20-6a	48X48	16.00	3	48.00			6	RIGHT/CENTER/LEFT LANE CLOSED
WO20-7a	48X48	16.00	4	64.00			8	FLAGGER (SYMBOL)
WO21-2	36X36	9.00						FRESH OIL
WO21-5	48X48	16.00	2	32.00			21	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 NO.	DESCRIPTION
GUIDE SIGNS								
E05-1	36X48	12.00						GORE EXIT
E05-2	48X36	12.00						EXIT OPEN
E05-2a	48X36	12.00						EXIT CLOSED
GO20-1	60X24	10.00	2	20.00			1	ROAD WORK NEXT XX MILES
GO20-2	48X24	8.00	2	16.00			26	END ROAD WORK
GO20-4	36X18	4.50						PILOT CAR FOLLOW ME
GO20-4a	42X30	8.75						PILOT CAR IN USE WAIT & FOLLOW
GO20-4a	18X12	1.50	2	3.00			58	PILOT CAR IN USE WAIT & FOLLOW
GO20-5aP	36X24	6.00	4	24.00			54	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	6	72.00			4/25	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	2	24.00			42	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	24.00			59	WORK ZONE NO PHONE ZONE

616-10.05 CONSTRUCTION SIGNS	TOTAL	
	848.00	

616-10.10 RELOCATED SIGNS	TOTAL

EFFECTIVE: 07-01-2025

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)
6122040		WORK ZONE CRASH CUSHION (NARROW)
6122041		WORK ZONE CRASH CUSHION (RELOCATION)
6123001		TRUCK MOUNTED ATTENUATOR (TMA)
6161012		BUOYS (BOATS KEEP OUT)
6161013		BUOYS (NO WAKE)
6161014		SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)
6161020		CHANNELIZER (DRUM-LIKE)
6161022		CHANNELIZER (CONE)
6161025	305	CHANNELIZER (TRIM-LINE)
6161026		CHANNELIZER (VERTICAL PANEL)
6161030		TYPE 3 MOVEABLE BARRICADE
6161033		DIRECTION INDICATOR BARRICADE
6161040	2	FLASHING ARROW PANEL
6161047		TYPE 3 OBJECT MARKER
6161055		SEQUENTIAL FLASHING WARNING LIGHT
6161070		TUBULAR MARKER
6161095		RADAR SPEED ADVISORY SYSTEM
6161096		CHANGEABLE MESSAGE SIGN, COMMISSION FURNISHED/RETAINED
6161098A		CHANGEABLE MESSAGE SIGN WITHOUT COMM. INTERFACE, CONTRACTOR FURNISHED/RETAINED
6161099	3	CHANGEABLE MESSAGE SIGN WITH COMM. INTERFACE, CONTRACTOR FURNISHED/RETAINED
6162000A		WORK ZONE TRAFFIC SIGNAL SYSTEM
6162002		TEMPORARY LONG-TERM RUMBLE STRIPS
6173600D		TEMPORARY TRAFFIC BARRIER, CONTRACTOR FURNISHED/RETAINED
6173700B		TEMP. TRAFFIC BARRIER ANCHORED, CONTRACTOR FURNISHED/RETAINED
6173706		TEMP. TRAFFIC BARRIER STIFFNESS TRANSITION CONTRACTOR FURNISHED/RETAINED
6174000A		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION, CONTRACTOR FURNISHED/RETAINED
6175010A		RELOCATING TEMPORARY TRAFFIC BARRIER
6175011B		RELOCATING TEMP. TRAFFIC BARRIER ANCHORED
6175013		RELOCATING TEMP. TRAFFIC BARRIER STIFFNESS
6175020A		RELOCATING TEMP. TRAFFIC BARRIER HEIGHT
6208064A		TEMPORARY RAISED PAVEMENT MARKER
9029400		TEMPORARY TRAFFIC SIGNALS
9029401		TEMPORARY TRAFFIC SIGNALS AND LIGHTING

SUMMARY OF QUANTITIES
SHEET 3 OF 3

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 9/28/2026
ROUTE: 52 | STATE: MO
DISTRICT: SW | SHEET NO.: 3
COUNTY: BATES
JOB NO.: JSR0159
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

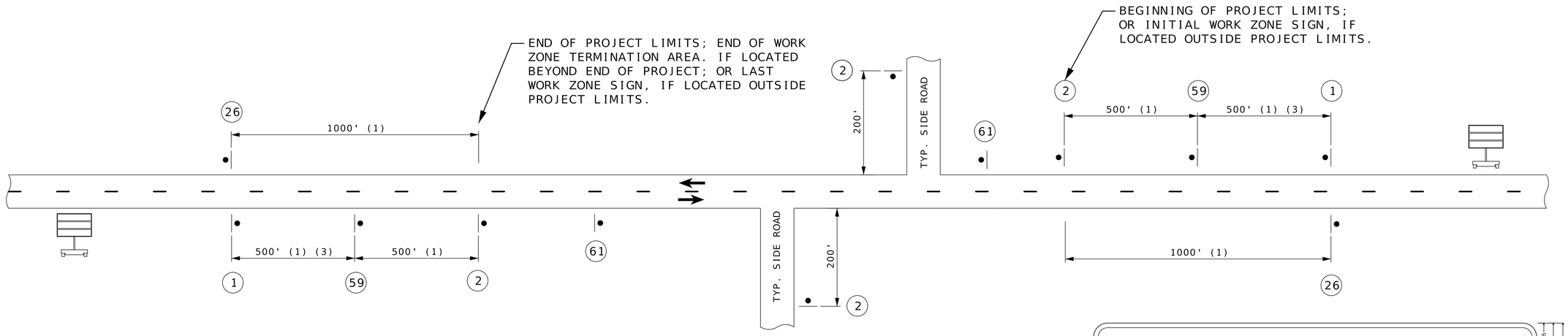
DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

GENERAL NOTES:

1. ANY EXISTING SIGNS THAT CONFLICT WITH THE TRAFFIC CONTROL SIGNING SHALL BE COMPLETELY COVERED OR REMOVED.
2. TEMPORARY SIGNING SHOWN IS FOR WORK ON ONE SIDE OF THE ROAD. FOR WORK ON THE OTHER SIDE, REVERSE ORDER OF THE SIGNS AND CHANNELIZERS.
3. SIGNING SHOWN SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE.
4. ALTERNATE TRAFFIC CONTROL MAY BE USED AS NEEDED AT THE APPROVAL OF THE ENGINEER.
5. REFER TO STANDARD DRAWING 616.10, 619.10, AND 620.10 FOR ADDITIONAL DETAILS AND 903.03 FOR SIGN AND SIGN MOUNTING REQUIREMENTS.
6. SPEED LIMIT SIGNS INDICATING THE NORMAL SPEED LIMIT SHALL BE INSTALLED AT THE END OF THE WORK ZONE, PROVIDED NO FURTHER WORK ZONES WILL BE ENCOUNTERED WITHIN THE NEXT 1/2 MILE.
7. TEMPORARY SPEED LIMIT SIGNS SHALL BE COVERED OR REMOVED WHEN THE CONDITIONS REQUIRING REDUCED SPEEDS DO NOT EXIST.
8. NO DIRECT PAYMENT WILL BE MADE FOR THE RELOCATION OF CHANNELIZERS, CONSTRUCTION SIGNS, OR FLASHING ARROW PANEL.
9. ALL SIGNS SHALL BE PORTABLE MOUNT AND ARE TO BE MOVED AS WORK PROGRESSES, UNLESS OTHERWISE NOTED. ALL TRAFFIC CONTROL ITEMS SHALL BE REMOVED FROM THE ROADWAY DURING NON-WORKING HOURS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING PROPER TRAFFIC CONTROL SETUPS THROUGHOUT CONSTRUCTION AS DESCRIBED IN THESE PLANS OR AS APPROVED BY THE ENGINEER.
11. WHERE MINIMUM LANE WIDTHS CANNOT BE ACHIEVED ON THE SIDE STREETS, THE CONTRACTOR SHALL CLOSE HALF OF THE APPROACH AND POSITION A FLAGGER AT EACH END OF THE WORK AREA. LOCATION TO BE DETERMINED BY THE ENGINEER. ADVANCE FLAGGER SIGNING SHALL BE INSTALLED AS OUTLINED IN THE MUTCD.
12. THE CONTRACTOR SHALL MAINTAIN PUBLIC ACCESS TO ALL BUSINESSES AND STREETS. NO STREET OR ENTRANCE SHALL BE COMPLETELY BLOCKED.
13. SPACING & DISTANCES OF TRAFFIC CONTROL DEVICES ARE APPROXIMATE. THE EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD & APPROVED BY THE ENGINEER.
14. TRAFFIC CONTROL SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
15. ADJUST ADVANCE WARNING SIGN SPACING TO AVOID SIGN PLACEMENT WITHIN THE LIMITS OF THE RAILROAD RIGHT OF WAY.



TYPICAL BEGINNING AND END OF PROJECT

(UNDIVIDED HIGHWAY)

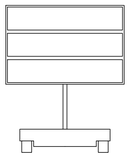
(1) DISTANCE MAY BE ADJUSTED ACCORDING TO FIELD CONDITIONS. WHERE TRAFFIC BACKUPS ARE EXPECTED BEYOND THE ADVANCE WARNING AREA, ADDITIONAL SIGNING MAY BE NEEDED.

(2) CONST-5-96 SIGN IS PLACED IN A VISIBLE AREA WITHIN THE PROJECT LIMITS PROVIDED ITS PLACEMENT DOES NOT DISRUPT A SEQUENCE OF SIGNS. IF A VISIBLE LOCATION WITHIN THE PROJECT IS NOT AVAILABLE, THE SIGN MAY BE PLACED 500 FEET BEFORE SIGN CONST-7-72.

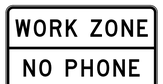
(3) THE "WORK ZONE NO PHONE ZONE" SIGN IS PLACED A MINIMUM OF 500 FEET BEFORE THE ROAD WORK AHEAD SIGN.

(4) CMS PLACEMENT SHALL BE APPROVED BY THE ENGINEER.

(5) GO20-1 IS NOT USED WHEN WORK AREA IS LESS THAN 2 MILES. GO20-2 IS OPTIONAL WHEN GO20-1 IS NOT USED

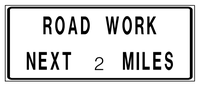


(4)



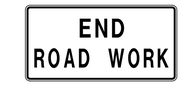
CONST-8

59 (3)



GO20-1

1 (5)



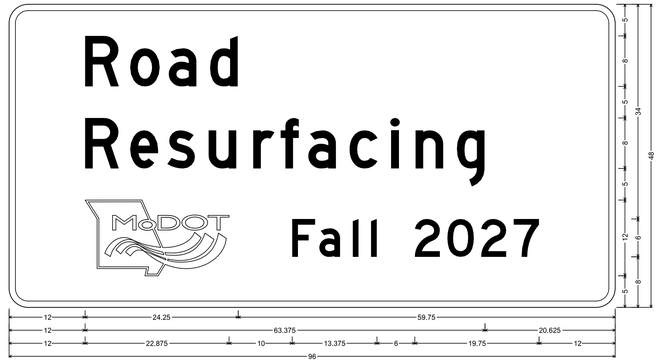
GO20-2

26 (5)



WO20-1

2

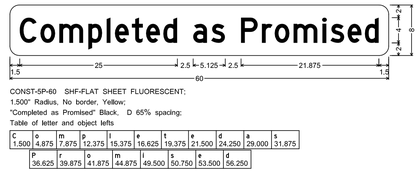


CONST-5 SH-FLAT SHEET;
3.000" Radius, 1.000" Border, White on, Green;
"Road", D; "Resurfacing", D; "Fall 2027", D;
Table of letter and object lefts

R 12.000	o 19.125	a 25.250	d 31.875
R 12.000	e 19.125	s 25.000	u 31.625	r 38.625	f 43.000	a 47.375	c 53.875	l 60.500	n 64.375	g 70.875
F 12.000	F 44.875	a 49.125	l 54.500	l 57.375	2 64.250	0 69.375	2 74.750	7 79.875	

CONST-5-96

61 (2)



CONST-5P-60 SHF-FLAT SHEET FLUORESCENT;
1.500" Radius, No border, Yellow;
"Completed as Promised" Black, D 65% spacing;
Table of letter and object lefts

C 1.500	o 4.875	m 7.875	p 12.375	l 15.375	e 16.625	t 19.375	e 21.500	d 24.250	a 29.000	s 31.875	
P 36.625	r 39.875	o 41.875	m 44.875	l 49.500	s 50.750	e 53.500	d 56.250				

NOT TO SCALE

TRAFFIC CONTROL SHEET 1 OF 13

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 9/28/2026

ROUTE	STATE
52	MO
DISTRICT	SHEET NO.
SW	4

COUNTY: BATES

JOB NO.: JSR0159

CONTRACT ID.:

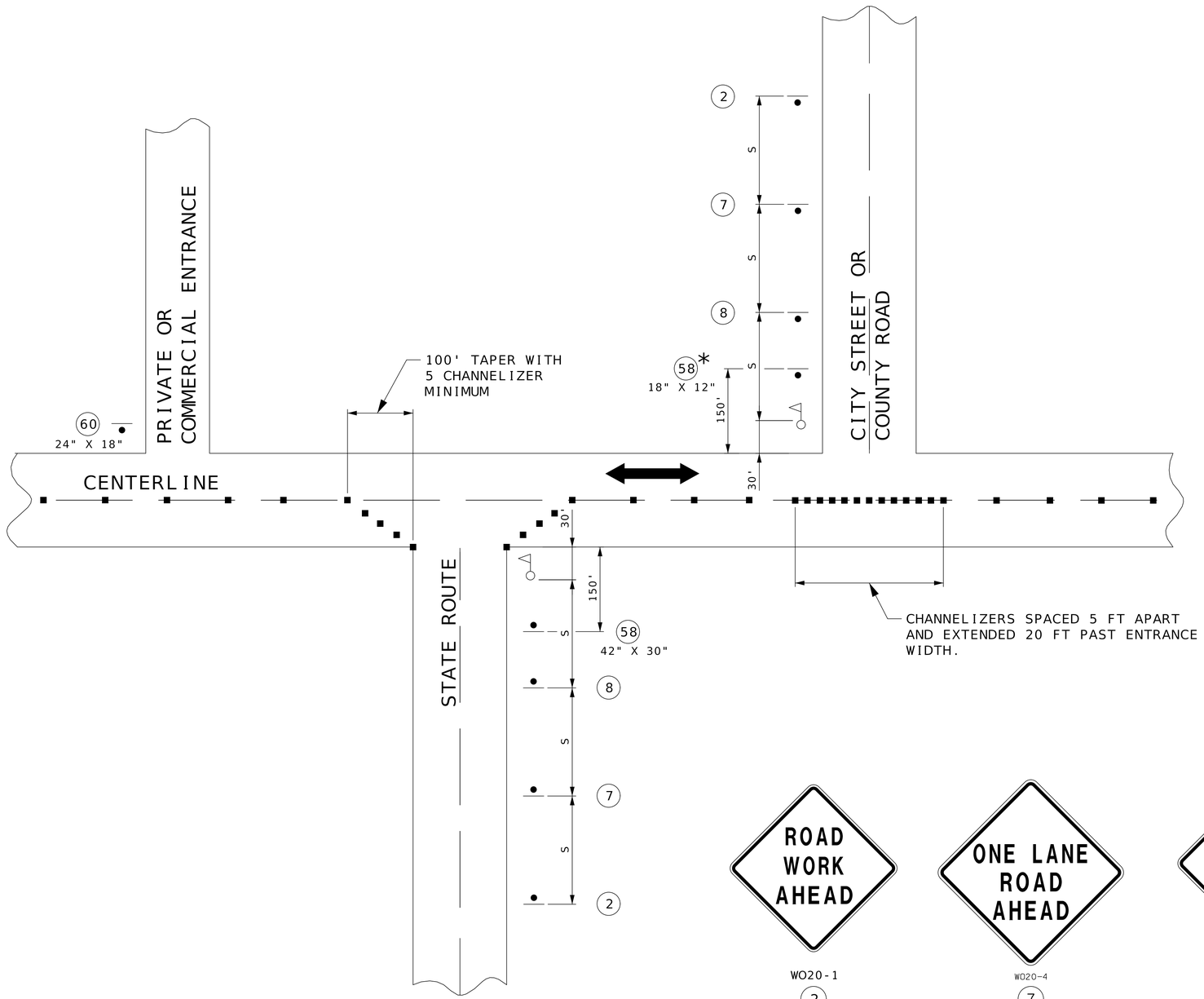
PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

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

SIDE ROADS ENTERING WORK ZONES



SPEED	SIGN SPACING (FT.)	CHANNELIZER SPACING (FT)
PERMANENT POSTED (MPH)	NON-DIVIDED HIGHWAYS (S)	BUFFER WORK AREA
0-35	200	40
40-45	350	80
50-55	500	80
60-70	1000	120

DISTANCE MAY BE ADJUSTED ACCORDING TO FIELD CONDITIONS.

NOTES:
WARNING SIGNS SHALL BE ERECTED AT EACH INTERSECTION WITH ANOTHER STATE HIGHWAY WITHIN THE WORK ZONE.

ADDITIONAL WARNING SIGNS SHALL BE ERECTED AT OTHER INTERSECTIONS WITHIN THE WORK ZONE, AS DIRECTED BY THE ENGINEER.

- SIGN (SINGLE SIDED)
- FLAGGER
- CHANNELIZER

IF USED AT NIGHT, THE FLAGGER STATIONS SHALL BE ILLUMINATED WITH AN AVERAGE MAINTAINED INTENSITY OF 0.6 FOOTCANDLES (6.5 LUX).



GO20-4a
(58)

SHALL BE USED ON ALL INTERSECTIONS.

* THE SMALLER 18" X 12" SIGN 58 IS USED ON ALL OTHER NON-STATE ROUTES (CITY STREETS, COUNTY ROADS, ETC.).



24" X 18"
(60)

SHALL ONLY BE USED AT PRIVATE AND COMMERCIAL ENTRANCES. SEE STD PLAN 616.10 FOR SIGN DETAILS.

WO20-1
(2)

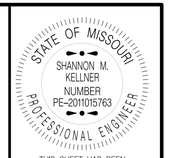
WO20-4
(7)



WO20-7a
(8)

NOT TO SCALE

TRAFFIC CONTROL
SHEET 2 OF 13



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
52	MO
DISTRICT	SHEET NO.
SW	5

COUNTY
BATES

JOB NO.
JSR0159

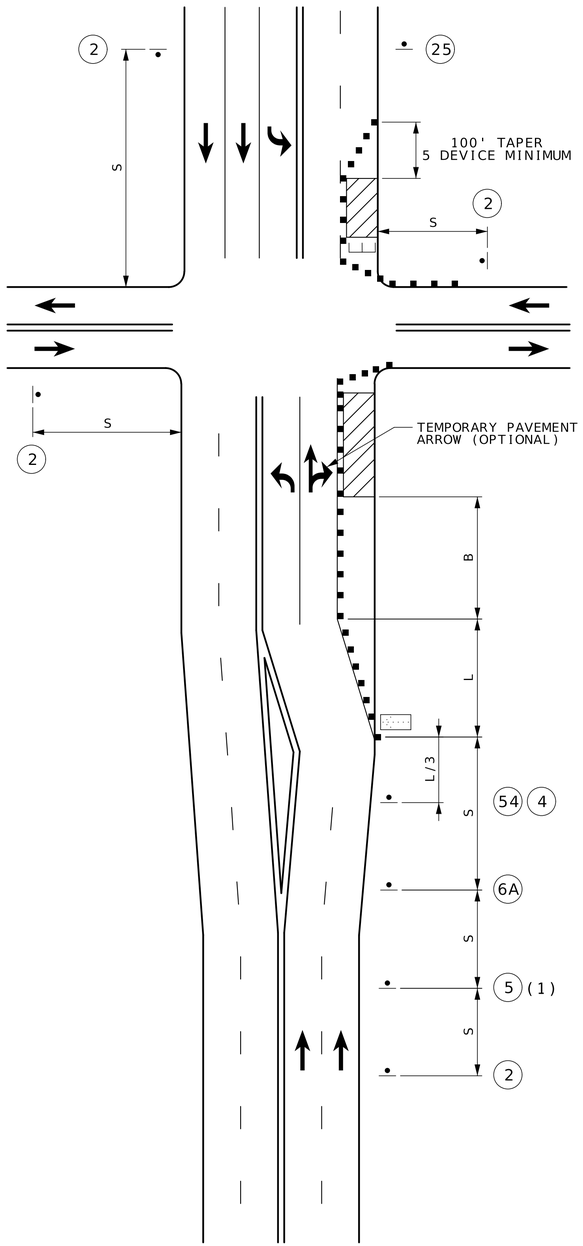
CONTRACT ID.

PROJECT NO.

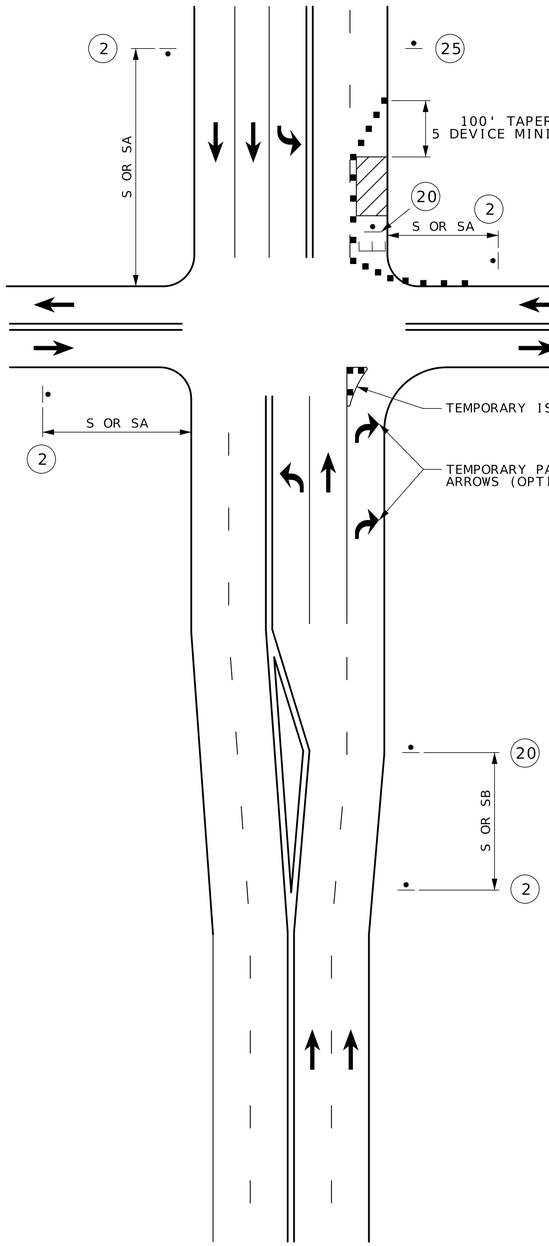
BRIDGE NO.

DESCRIPTION	DATE

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



WORK ON NEAR OR FAR SIDE



WORK ON FAR SIDE ONLY (2)

RIGHT LANE CLOSURE AT INTERSECTION

SPEED	SIGN SPACING (FT)		MINIMUM TAPER LENGTH (L) FOR LANE WIDTHS (W)			OPTIONAL	CHANNELIZER SPACING (FT)	
NORMAL POSTED (MPH)	UNDIVIDED HIGHWAYS (S)	DIVIDED (S)	10 FT	11 FT	12 FT	BUFFER LENGTH (FT) (B)	TAPERS	BUFFER/ WORK AREAS
0-35	200	200	205	225	245	250	35	40
40-45	350	500	450	495	540	360	40	80
50-55	500	1000	550	605	660	495	50	80
60-70	1000	SA - 1000 SB - 1500 SC - 2640	700	770	840	730	60	120

NOTES:
FOR SIGNALIZED INTERSECTIONS, ADJUSTMENTS MAY NEED TO BE MADE TO SIGNAL PHASING, TIMING, INDICATIONS OR DETECTOR SETTINGS.

REMOVE AND/OR MODIFY EXISTING PAVEMENT MARKING AS NEEDED.

PAVEMENT MARKING AND BARRICADES OPTIONAL FOR SHORT TERM OPERATIONS.

TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM LANE CLOSURES.

FOR SHORT TERM OPERATION, WHERE IT IS NOT FEASIBLE TO MODIFY PAVEMENT MARKING, A 10-FEET DEVICE SPACING IS USED WHERE TRAFFIC IS GUIDED ACROSS DOUBLE YELLOW LINES OR OTHER CONFLICTING PAVEMENT MARKING. ALL OTHER SPACINGS ARE ONE-HALF OF THE SPACING.

(1) RIGHT LANE CLOSED AHEAD SIGN MAY BE OMITTED IN LOW SPEED URBAN AREAS WHERE THERE IS NOT SUFFICIENT SPACE FOR THE FULL SIGN SERIES.

(2) TYPICAL APPLICATION ONLY APPLIES WHERE A SIGNIFICANT PERCENTAGE OF THE APPROACH TRAFFIC TURNS RIGHT.

(3) TEMPORARY ISLAND MAY BE USED TO EMPHASIZE THE MANDATORY RIGHT TURN MOVEMENT WHERE THERE IS A SUFFICIENT RIGHT TURN RADIUS.

TRAFFIC CONTROL LEGEND

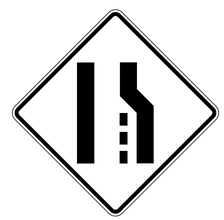
- SIGN (SINGLE SIDED)
- CHANNELIZER
- BARRICADE
- FLASHING ARROW PANEL



WO20-1
2



WO20-5
5



WO4-2R
6A



R3-7R
20

GO20-5aP





R2-1
54
4



R2-1
25
(NORMAL SPEED)

NOT TO SCALE

TRAFFIC CONTROL
SHEET 3 OF 13

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
52	MO
DISTRICT	SHEET NO.
SW	6

COUNTY
BATES

JOB NO.
JSR0159

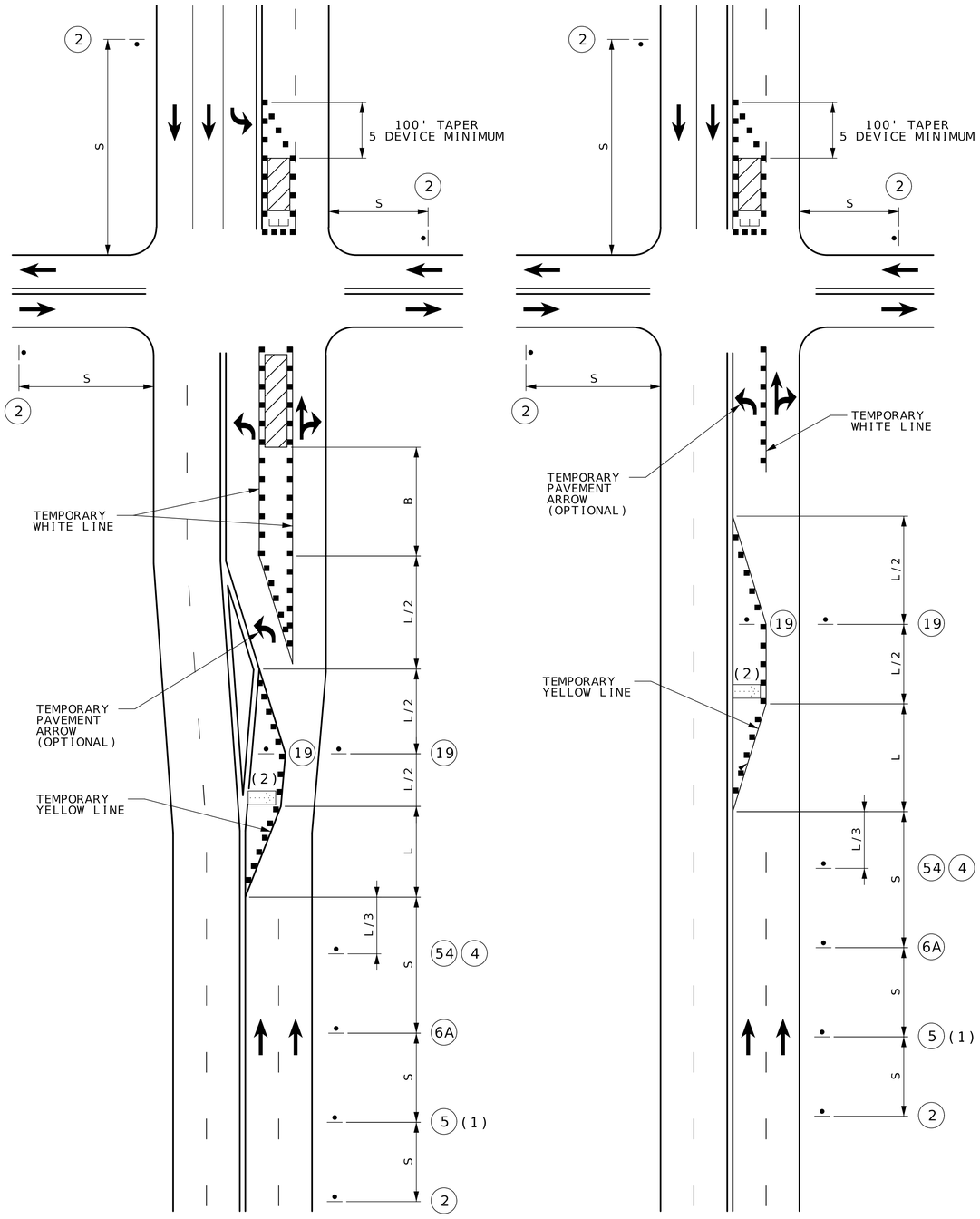
CONTRACT ID.

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)



WORK ON NEAR OR FAR SIDE

WORK ON FAR SIDE ONLY

LEFT LANE CLOSURE AT INTERSECTION

SPEED	SIGN SPACING (FT)		MINIMUM TAPER LENGTH (L) FOR LANE WIDTHS (W)			OPTIONAL	CHANNELIZER SPACING (FT)	
NORMAL POSTED (MPH)	UNDIVIDED HIGHWAYS (S)	DIVIDED (S)	10 FT	11 FT	12 FT	BUFFER LENGTH (FT) (B)	TAPERS	BUFFER/ WORK AREAS
0-35	200	200	205	225	245	250	35	40
40-45	350	500	450	495	540	360	40	80
50-55	500	1000	550	605	660	495	50	80
60-70	1000	SA - 1000 SB - 1500 SC - 2640	700	770	840	730	60	120

NOTES:

FOR SIGNALIZED INTERSECTIONS, ADJUSTMENTS MAY NEED TO BE MADE TO SIGNAL PHASING, TIMING, INDICATIONS OR DETECTOR SETTINGS.

REMOVE AND/OR MODIFY EXISTING PAVEMENT MARKING AS NEEDED.

PAVEMENT MARKING AND BARRICADES OPTIONAL FOR SHORT TERM OPERATIONS.

TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM LANE CLOSURES.

FOR SHORT TERM OPERATION, WHERE IT IS NOT FEASIBLE TO MODIFY PAVEMENT MARKING, A 10-FEET DEVICE SPACING IS USED WHERE TRAFFIC IS GUIDED ACROSS DOUBLE YELLOW LINES OR OTHER CONFLICTING PAVEMENT MARKING. ALL OTHER SPACINGS ARE ONE-HALF OF THE SPACING.

(1) LEFT LANE CLOSED AHEAD SIGN MAY BE OMITTED IN LOW SPEED URBAN AREAS WHERE THERE IS NOT SUFFICIENT SPACE FOR THE FULL SIGN SERIES.

(2) FLASHING ARROW BOARD SHOULD BE LOCATED AT THE BEGINNING OF THE MERGING TAPER WHEN MEDIAN WIDTH ALLOWS THIS PLACEMENT.

TRAFFIC CONTROL LEGEND

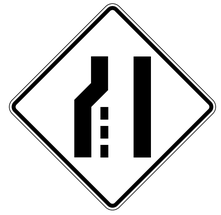
- SIGN (SINGLE SIDED)
- CHANNELIZER
- BARRICADE
- FLASHING ARROW PANEL



WO20-1
(2)



WO20-5
(5)



WO4-2L
(6A)



R3-7L
(19)

GO20-5aP





R2-1
(54)
(4)



R2-1
(25)
(NORMAL SPEED)

NOT TO SCALE

TRAFFIC CONTROL
SHEET 4 OF 13

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
52	MO
DISTRICT	SHEET NO.
SW	7

COUNTY
BATES

JOB NO.
JSR0159

CONTRACT ID.

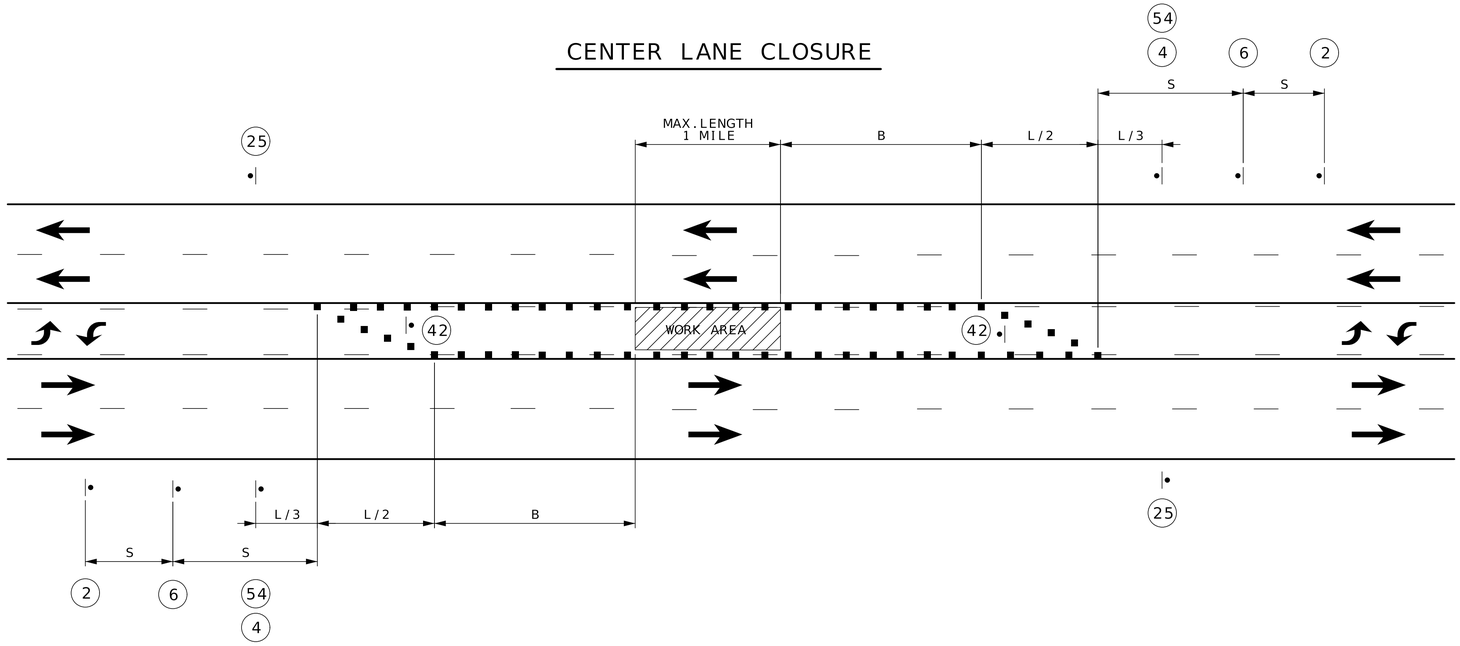
PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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

CENTER LANE CLOSURE



SPEED	SIGN SPACING (FT)	MINIMUM TAPER LENGTH (L) FOR LANE WIDTHS (W)			OPTIONAL	CHANNELIZER SPACING (FT)	
NORMAL POSTED (MPH)	UNDIVIDED (S)	10 FT	11 FT	12 FT	BUFFER LENGTH (FT) (B)	TAPERS	BUFFER/ WORK AREAS
0-35	200	205	225	245	250	35	40
40-45	350	450	495	540	360	40	80
50-55	500	550	605	660	495	50	80
60-70	1000	700	770	840	730	60	120

NOTES:

SEE BEGIN/END OF PROJECT SIGNING SHEET FOR ADDITIONAL SIGNS.

IN TAPER SECTIONS, QUANTITY OF CHANNELIZERS IS DOUBLED WHEN COMPARED TO MAXIMUM CHANNELIZER SPACING IN CHART.

TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM CLOSURE, NO DIRECT PAY.

NO DIRECT PAYMENT WILL BE MADE FOR RELOCATION OF CHANNELIZERS, SIGNS, AND FLASHING ARROW PANEL.

FOR SHORT TERM OPERATIONS WHERE IT IS NOT FEASIBLE TO MODIFY PAVEMENT MARKING, DEVICE SPACING IS ONE-HALF SPACING SHOWN IN TABLE.

SPEED LIMIT SIGNS INDICATING NORMAL SPEED LIMIT SHALL BE INSTALLED AT END OF THE WORK ZONE, PROVIDED NO FURTHER WORK ZONES WILL BE ENCOUNTERED WITHIN THE NEXT 1/2 MILE.

ALL SIGNS, EXCEPT "NO PHONE ZONE" AND "POINT OF PRESENCE" SHALL BE PORTABLE MOUNT AND ARE TO BE MOVED AS WORK PROGRESSES, UNLESS OTHERWISE NOTED. ALL TRAFFIC CONTROL ITEMS SHALL BE REMOVED FROM THE ROADWAY DURING NON-WORKING HOURS. SEE JOB SPECIAL PROVISIONS.

WORK WILL REQUIRE LANE CLOSURES UNLESS OTHERWISE APPROVED BY THE ENGINEER.

SEE STANDARD DRAWING 616.10 FOR ADDITIONAL DETAILS.



WO20-1

(2)



WO20-6a

(6)



R4-7a

(42)

GO20-5aP



R2-1

(54)
(4)



R2-1

(25)

(NORMAL SPEED)

NOT TO SCALE

TRAFFIC CONTROL
SHEET 5 OF 13

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
52	MO
DISTRICT	SHEET NO.
SW	8

COUNTY
BATES

JOB NO.
JSR0159

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)

SPEED	SIGN SPACING (FT)	MINIMUM TAPER LENGTH (L) FOR LANE WIDTHS (W)			OPTIONAL	CHANNELIZER SPACING (FT)	
NORMAL POSTED (MPH)	UNDIVIDED (S)	10 FT	11 FT	12 FT	BUFFER LENGTH (FT) (B)	TAPERS	BUFFER/ WORK AREAS
0-35	200	205	225	245	250	35	40
40-45	350	450	495	540	360	40	80
50-55	500	550	605	660	495	50	80
60-70	1000	700	770	840	730	60	120

NOTES:

(1) NEXT XX MILES SIGN NOT REQUIRED FOR NARROW LANE SECTIONS LESS THAN ONE MILE.



WO20-1

(2)



WO21-5

(21)



WO5-1



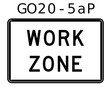
(1)

WO7-3a

(43) *

*OMIT SIGN 43 FOR NO TRAVELWAY ENCROACHMENT.

GO20-5aP





R2-1

(54)
(4)



R2-1

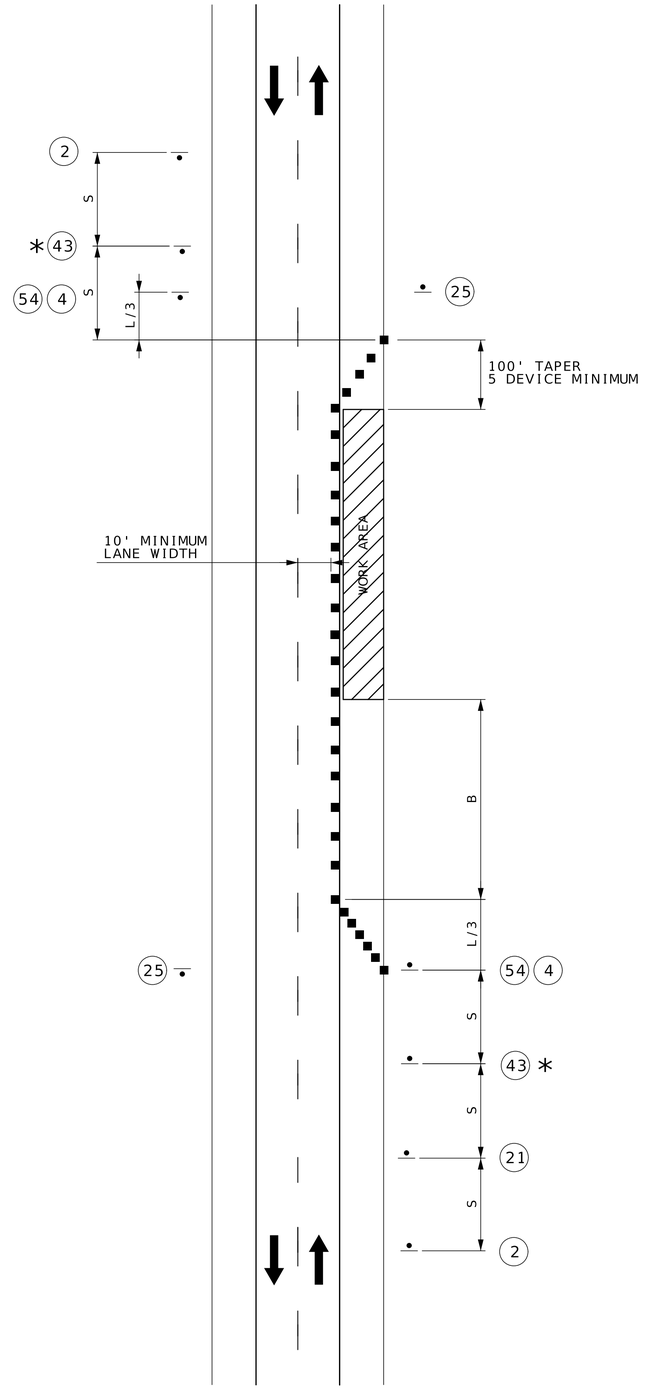
(25)

(NORMAL SPEED)

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZER

SHOULDER WORK WITH MINOR TRAVELWAY ENCROACHMENT OR NO ENCROACHMENT (UNDIVIDED HIGHWAY)



NOT TO SCALE

TRAFFIC CONTROL
SHEET 6 OF 13

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

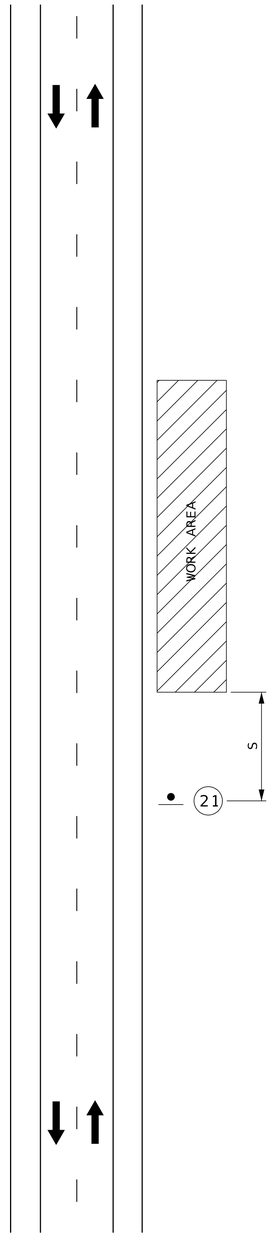
ROUTE 52 | STATE MO
DISTRICT SW | SHEET NO. 9
COUNTY BATES
JOB NO. JSR0159
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

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

WORK BEYOND THE SHOULDER

(UNDIVIDED HIGHWAY)



SPEED	SIGN SPACING (FT) (1)
PERMANENT POSTED (MPH)	UNDIVIDED HIGHWAYS (S)
0-35	200
40-45	350
50-55	500
60-70	1000

SPACING NOTES:

(1) SPACING BETWEEN SIGNS MAY BE ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS, AS APPROVED BY ENGINEER.



WO21-5

21

NOT TO SCALE

TRAFFIC CONTROL
SHEET 7 OF 13

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
52	MO
DISTRICT	SHEET NO.
SW	10

COUNTY
BATES

JOB NO.
JSR0159

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



WO20-1

2



WO20-4

7



WO20-7a

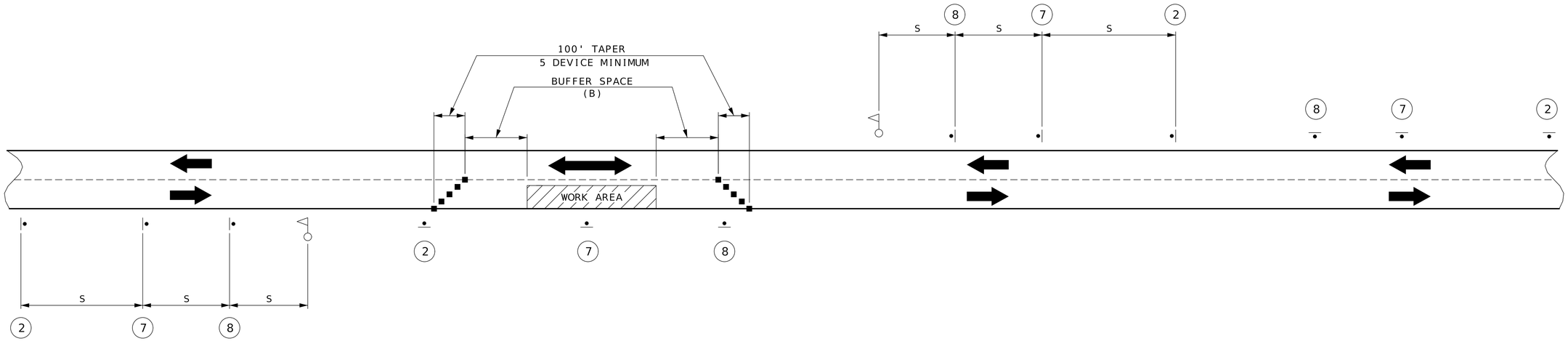
8



GO20-4

53

SIGN 53, "PILOT CAR FOLLOW ME" SHALL BE IN CONTRACTOR'S RESPONSIBILITY WHEN IN USE DURING OPERATION.



SET 1
ACTIVE

SET 2
INACTIVE

SET 3
ACTIVE

SET 4
INACTIVE

NOTES:
THIS PLAN IS FOR DAYLIGHT FLAGGING OPERATIONS ONLY. WHEN NIGHT WORK IS REQUIRED, OR OTHERWISE ALLOWED BY THE ENGINEER, WORK ZONE LIGHTING SHALL BE PROVIDED IN ACCORDANCE WITH SEC 616.5.2.

CHANNELIZING DEVICES LOCATED DOWNSTREAM OF THE ONE-LANE, TWO-WAY TAPER ARE OPTIONAL. THESE DEVICES SHOULD BE ELIMINATED WHEN THEIR USE WILL REDUCE THE USABLE LANE WIDTH, INCLUDING ANY ACCEPTABLE SHOULDERS, TO LESS THAN 10' OR WILL SIGNIFICANTLY AFFECT THE RESURFACING OPERATION.

SIGN SETS 1 AND 3 ARE ACTIVE AND (I.E., SIGNS FACE ONCOMING TRAFFIC). SIGN SETS 2 AND 4 ARE INACTIVE (I.E., SIGNS DO NOT FACE EITHER DIRECTION OF TRAFFIC) WHEN THE RESURFACING OPERATION IS LOCATED BETWEEN SIGN SETS 1 AND 3.

WHEN SIGN SETS 2 AND 4 ARE ACTIVE, SIGN SETS 1 AND 3 BECOME INACTIVE AND ARE ADVANCED TO BECOME SETS 2 AND 4 WITH SIGN LEGENDS TURNED AWAY FROM BOTH DIRECTIONS OF TRAFFIC. WHEN THE RESURFACING OPERATION ADVANCES TO BETWEEN SIGN SETS 2 AND 4, SIGN SETS 2 AND 4 BECOME ACTIVE (I.E., NEW SIGN SETS 1 AND 3) AND SIGN SETS 1 AND 3 ADVANCED IN THE DIRECTION OF THE OPERATION (I.E., NEW SIGN SETS 2 AND 4).

- SIGN (SINGLE SIDED)
- FLAGGER
- CHANNELIZER

SPEED	SIGN SPACING (FT) (1)	BUFFER SPACE
PERMANENT POSTED (MPH)	NON-DIVIDED HIGHWAYS (S)	LENGTH (FT) (B)
0-35	200	250
40-45	350	360
50-55	500	495
60-70	1000	730

SPACING NOTES:

(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, AS APPROVED BY ENGINEER.

MOVING FLAGGER OPERATION
(UNDIVIDED HIGHWAY)

NOT TO SCALE

TRAFFIC CONTROL
SHEET 8 OF 13

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2010015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
52	MO
DISTRICT	SHEET NO.
SW	11

COUNTY
BATES

JOB NO.
JSR0159

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)



BRIDGE
OR
RAMP

WO20-1

2



WO20-4

7



WO20-7a

8

GO20-5aP



R2-1

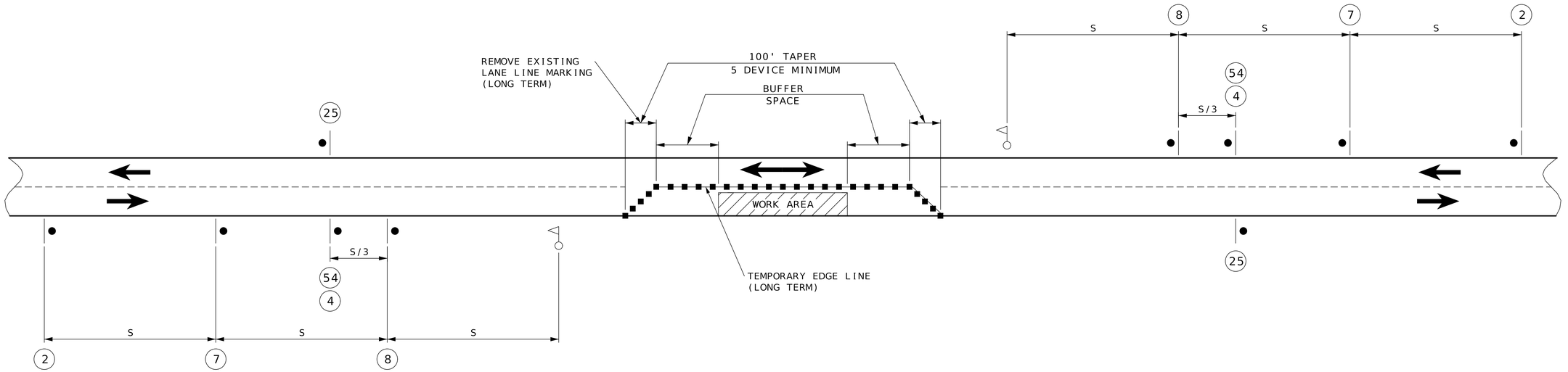
54
4



R2-1

25

(NORMAL SPEED)



NOTES:
THIS PLAN IS FOR DAYLIGHT FLAGGING OPERATIONS ONLY. WHEN NIGHT WORK IS REQUIRED, OR OTHERWISE ALLOWED BY THE ENGINEER, WORK ZONE LIGHTING SHALL BE PROVIDED IN ACCORDANCE WITH SEC 616.5.2.

CHANNELIZING DEVICES LOCATED DOWNSTREAM OF THE ONE-LANE, TWO-WAY TAPER ARE OPTIONAL.
THESE DEVICES SHOULD BE ELIMINATED WHEN THEIR USE WILL REDUCE THE USABLE LANE WIDTH, INCLUDING ANY ACCEPTABLE SHOULDERS, TO LESS THAN 10' OR WILL SIGNIFICANTLY AFFECT THE RESURFACING OPERATION.

FLAG ASSEMBLIES FOR SIGN W020-7a ARE SUBSIDIARY TO THE SIGN.

TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM CLOSURE. NO DIRECT PAY.

SPEED	SIGN SPACING (FT) (1)	CHANNELIZER SPACING (FT)	OPTIONAL
PERMANENT POSTED (MPH)	UNDIVIDED HIGHWAYS (S)	BUFFER/ WORK AREAS	BUFFER LENGTH (FT)
0-35	200	40	250
40-45	350	80	360
50-55	500	80	495
60-70	1000	120	730

SPACING NOTES:

(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, AS APPROVED BY ENGINEER.

• SIGN (SINGLE SIDED)

FLAGGER

■ CHANNELIZER

LANE CLOSURE USING FLAGGERS
(UNDIVIDED HIGHWAY)

NOT TO SCALE

TRAFFIC CONTROL
SHEET 9 OF 13

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
52	MO
DISTRICT	SHEET NO.
SW	12

COUNTY
BATES

JOB NO.
JSR0159

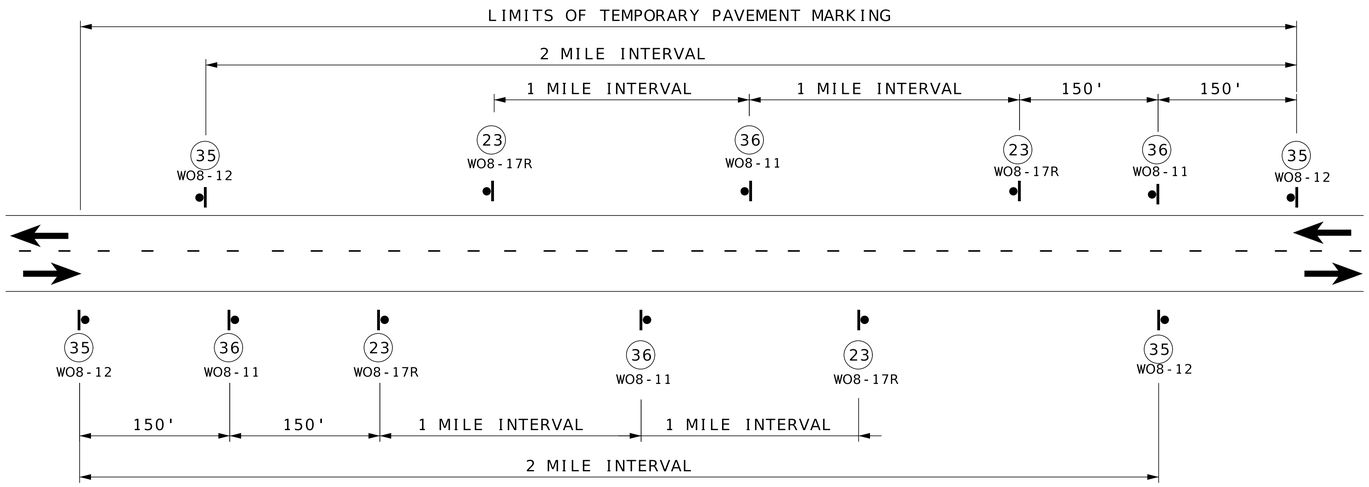
CONTRACT ID.

PROJECT NO.

BRIDGE NO.

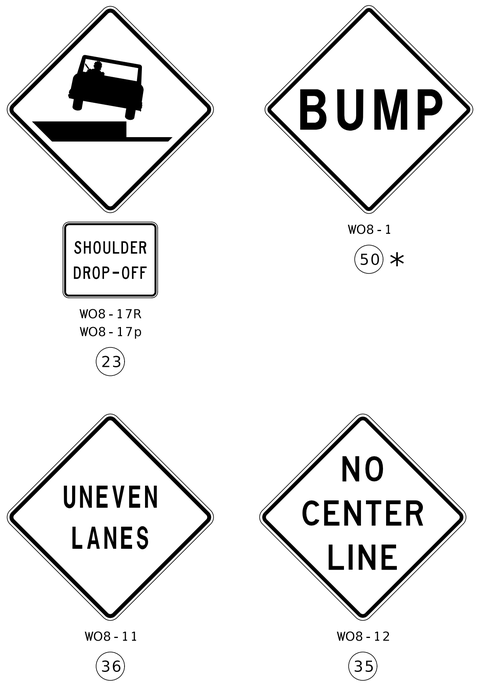
DESCRIPTION | DATE

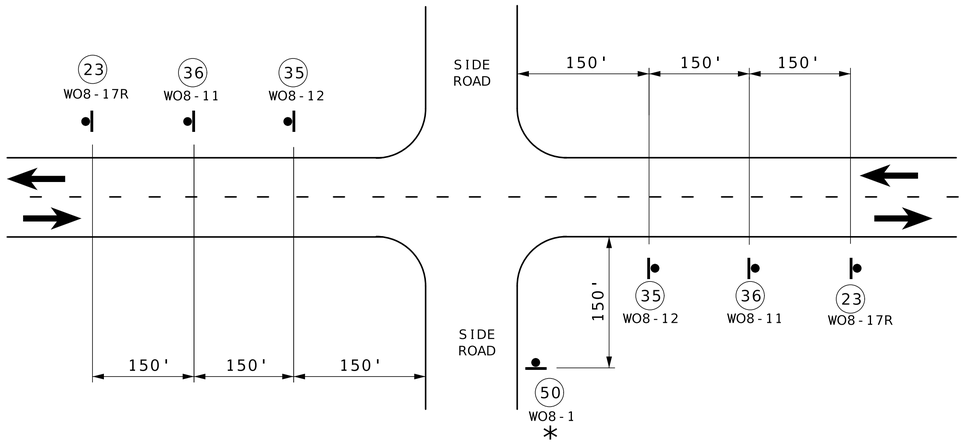
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



SIGN SPACING FOR MAINLINE

(DETAIL SHOWN IS BASED ON A PROJECT MEETING ALL CONDITIONS: NO CENTER STRIPE, UNEVEN LANES, SHOULDER DROP-OFF AND BUMP.)
WHEN BOTH UNEVEN LANES AND SHOULDER DROP-OFF SIGNS ARE USED, BOTH SIGHS SHALL STAY IN PLACE UNTIL BOTH CONDITIONS NO LONGER EXIST.
IF ONLY ONE CONDITION EXISTS (UNEVEN LANES OR SHOULDER DROP-OFF). THE SIGN SPACING SHALL BE AT 1 MILE INTERVALS.





SIGN SPACING AT STATE ROUTE INTERSECTIONS

* BUMP SIGN SHOULD BE IN ACCORDANCE WITH STANDARD PLAN 619.10.
UNLESS REQUIRED BY STANDARD PLAN 619.10, BUMP SIGN AT CONTRACTOR'S EXPENSE, NO DIRECT PAY. SEE STANDARD SPECIFICATION 622.2.4.

GENERAL NOTES:

FOR DETAILS OF TEMPORARY PAVEMENT MARKING, SEE STD. 620.10, SHEET 1 OF 5.

SIGN (35) AND TEMPORARY PAVEMENT MARKING INSTALLED WHERE CENTERLINE STRIPING HAS BEEN COVERED OR REMOVED. SIGNS ARE TO REMAIN IN PLACE UNTIL THE PERMANENT CENTERLINE PAVEMENT MARKINGS ARE IN PLACE. SIGNS SHALL BE COVERED OR REMOVED WHEN PAVEMENT CENTERLINE MARKING HAS BEEN INSTALLED.

SIGN (35) IS PLACED AT APPROXIMATELY TWO-MILE INTERVALS AND AT STATE ROUTE JUNCTIONS. WHEN THE INSTALLATION AT A JUNCTION IS WITHIN ONE-EIGHTH MILE OF THE NORMAL MAINLINE SIGN (35) , THE LATTER MAY BE ELIMINATED.

ALL SIGNS SHALL BE POST MOUNTED AND IN ACCORDANCE WITH STANDARD PLAN 616.10 AND 903.03.

WHEN SHOULDER DROP-OFF SIGNS ARE IN PLACE FOR GREATER THAN THREE DAYS, THE SHOULDER DROP-OFF PLAQUE SHOULD BE USED IN ADDITION WITH THE SHOULDER DROP-OFF SIGN.

FOR BRIDGE EXCEPTIONS AND COLDMILLED AREAS, LOCATION OF SIGN (50) TO BE APPROVED BY THE ENGINEER. UNLESS REQUIRED BY STANDARD PLAN 619.10, SIGN (50) AT CONTRACTOR'S EXPENSE, NO DIRECT PAY. SEE STANDARD SPECIFICATION 622.2.4.

NOT TO SCALE

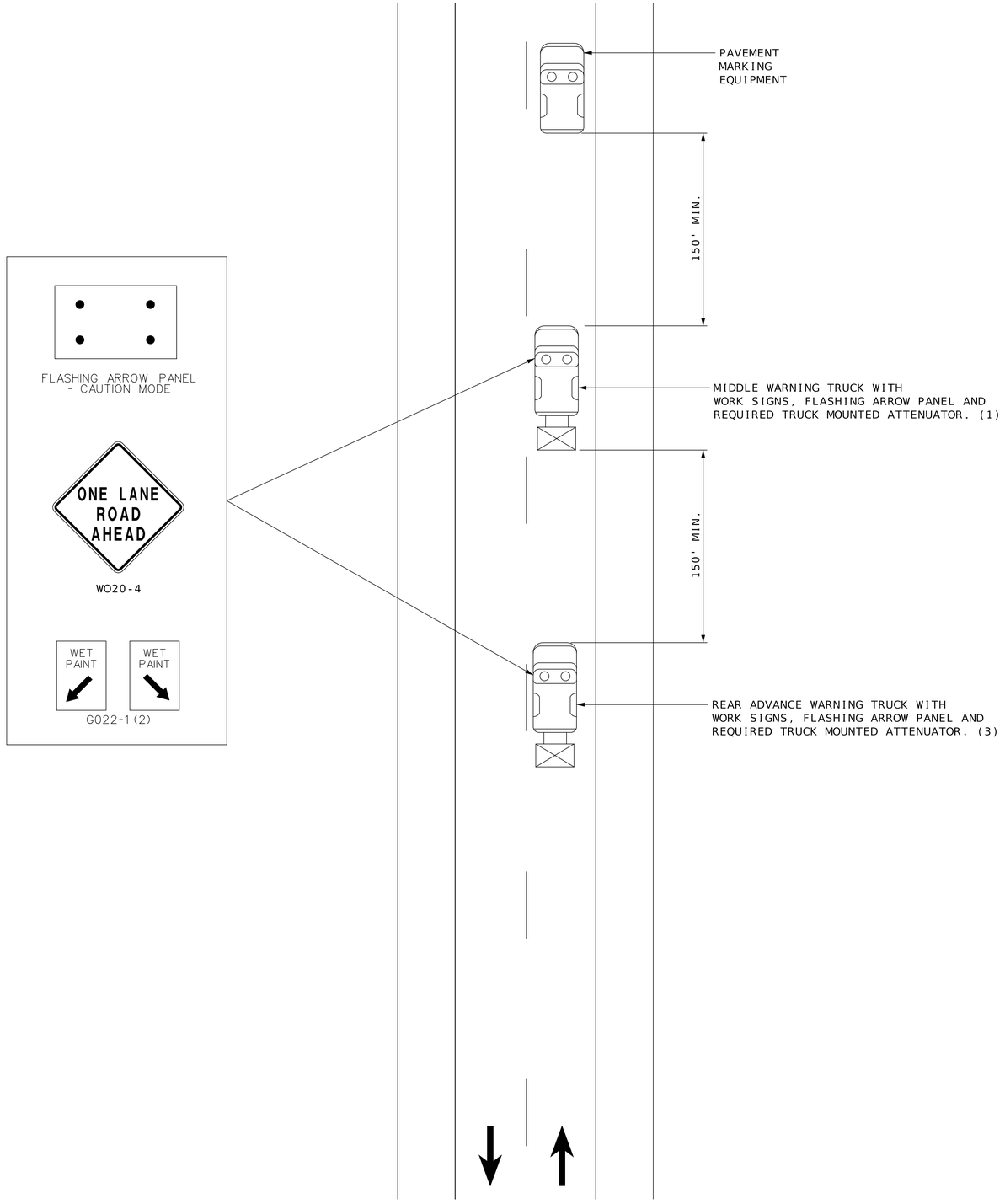
TRAFFIC CONTROL
SHEET 10 OF 13

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 9/28/2026
ROUTE 52 | STATE MO
DISTRICT SW | SHEET NO. 13
COUNTY BATES
JOB NO. JSR0159
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

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



PAVEMENT MARKING ON TWO-LANE HIGHWAY

NOTES:

UPON APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY PROVIDE ADDITIONAL PROTECTIVE TRUCKS EQUIPPED WITH PROPER WARNING DEVICES.

PROTECTIVE TRUCKS AND WORK VEHICLES SHALL DISPLAY HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS.

VEHICLE HAZARD WARNING SIGNALS SHALL NOT BE USED INSTEAD OF THE VEHICLE'S HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS.

VEHICLE-MOUNTED SIGNS SHALL BE MOUNTED IN A MANNER SUCH THAT THEY ARE NOT OBSCURED BY EQUIPMENT OR SUPPLIES. SIGN LEGENDS ON VEHICLE-MOUNTED SIGNS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS.

FLASHING ARROW PANELS SHALL BE INCIDENTAL TO TRUCK MOUNTED ATTENUATORS, WHEREVER USED. NO ADDITIONAL PAYMENT WILL BE MADE.

(1) TRUCK IS OPTIONAL ON TWO-LANE UNDIVIDED HIGHWAYS IF SIGNING AND ARROW BOARD ARE MOUNTED ON THE PAVEMENT MARKING EQUIPMENT.

(2) WET PAINT SIGNS ARE INSTALLED TO INDICATE THE SIDE IN WHICH THE PAVEMENT MARKING MATERIAL IS BEING APPLIED. AT THE CONTRACTOR'S OPTION, A FRONT FACING WET PAINT SIGN MAY BE INSTALLED ON THE LEFT SIDE OF THE PAVEMENT MARKING EQUIPMENT.

(3) REAR WARNING TRUCK IS POSITIONED AT THE NO TRACK POINT OF THE PAVEMENT MARKING MATERIAL, OR VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE, OR SPACING SHOWN, WHICHEVER IS GREATER.

NOT TO SCALE

TRAFFIC CONTROL
SHEET 11 OF 13

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 9/28/2026

ROUTE	STATE
52	MO

DISTRICT	SHEET NO.
SW	14

COUNTY: BATES

JOB NO.: JSR0159

CONTRACT ID.:

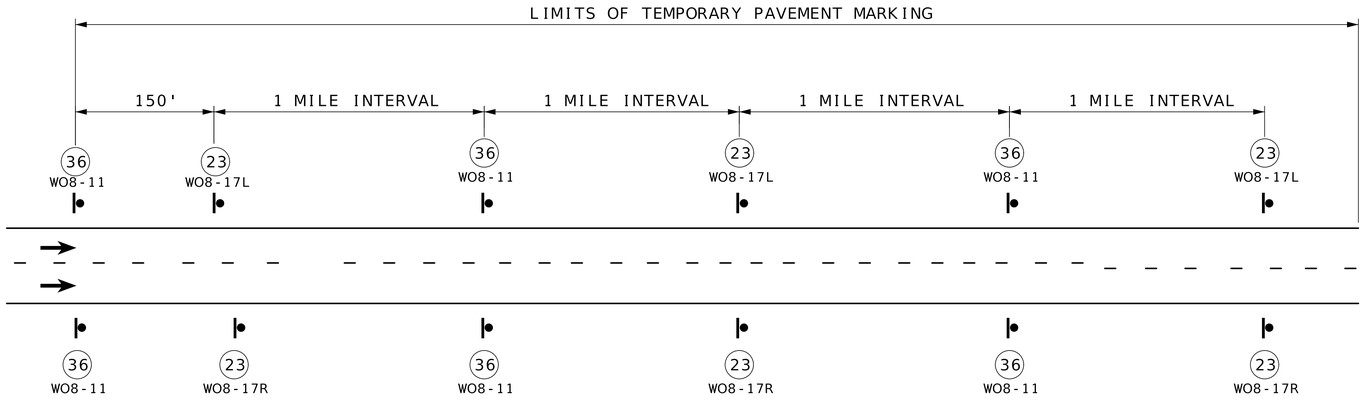
PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

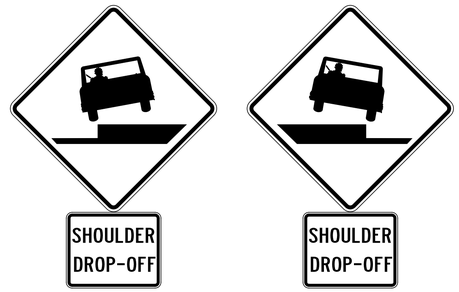
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



SIGN SPACING FOR DIVIDED OR MULTI-LANE HIGHWAY

(DETAIL SHOWN IS BASED ON A PROJECT MEETING CONDITIONS OF UNEVEN LANES AND SHOULDER DROP-OFF.)
WHEN BOTH UNEVEN LANES AND SHOULDER DROP-OFF SIGNS ARE USED, BOTH SIGNS SHALL STAY IN PLACE UNTIL BOTH CONDITIONS NO LONGER EXISTS.
WHEN ONLY ONE CONDITION EXISTS (UNEVEN LANES OR SHOULDER DROP-OFF), SIGN SPACING SHALL BE AT 1 MILE INTERVALS

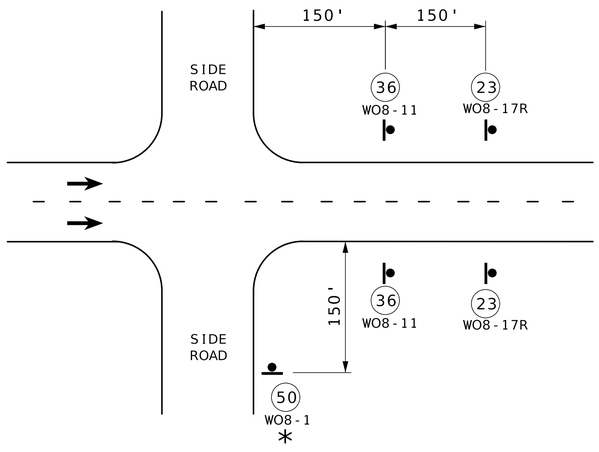


GENERAL NOTES:

ALL SIGNS SHALL BE POST MOUNTED AND IN ACCORDANCE WITH STANDARD PLANS 616.10 AND 903.03.

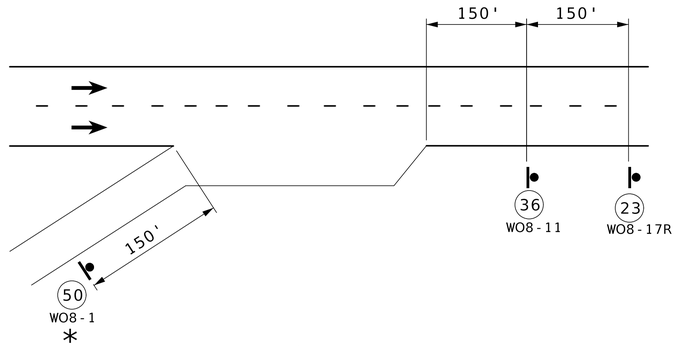
WHEN SHOULDER DROP-OFF SIGNS ARE IN PLACE FOR GREATER THAN THREE DAYS, THE SHOULDER DROP-OFF PLAQUE SHOULD BE USED IN ADDITION WITH THE SHOULDER DROP-OFF SIGN.

FOR BRIDGE EXCEPTIONS AND COLDMILLED AREAS, LOCATION OF SIGN (50) TO BE APPROVED BY THE ENGINEER. UNLESS REQUIRED BY STANDARD PLAN 619.10, SIGN (50) AT CONTRACTOR'S EXPENSE, NO DIRECT PAY. SEE STANDARD SPECIFICATION 622.2.4.



SIGN SPACING AT SIDE ROAD INTERSECTIONS

* BUMP SIGN SHOULD BE IN ACCORDANCE WITH STANDARD PLAN 619.10. UNLESS REQUIRED BY STANDARD PLAN 619.10, BUMP SIGN AT CONTRACTOR'S EXPENSE, NO DIRECT PAY. SEE STANDARD SPECIFICATION 622.2.4.



SIGN SPACING AT RAMPS

* BUMP SIGN SHOULD BE IN ACCORDANCE WITH STANDARD PLAN 619.10. UNLESS REQUIRED BY STANDARD PLAN 619.10, BUMP SIGN AT CONTRACTOR'S EXPENSE, NO DIRECT PAY. SEE STANDARD SPECIFICATION 622.2.4.

NOT TO SCALE

TRAFFIC CONTROL
SHEET 12 OF 13

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
52	MO
DISTRICT	SHEET NO.
SW	15

COUNTY
BATES

JOB NO.
JSR0159

CONTRACT ID.

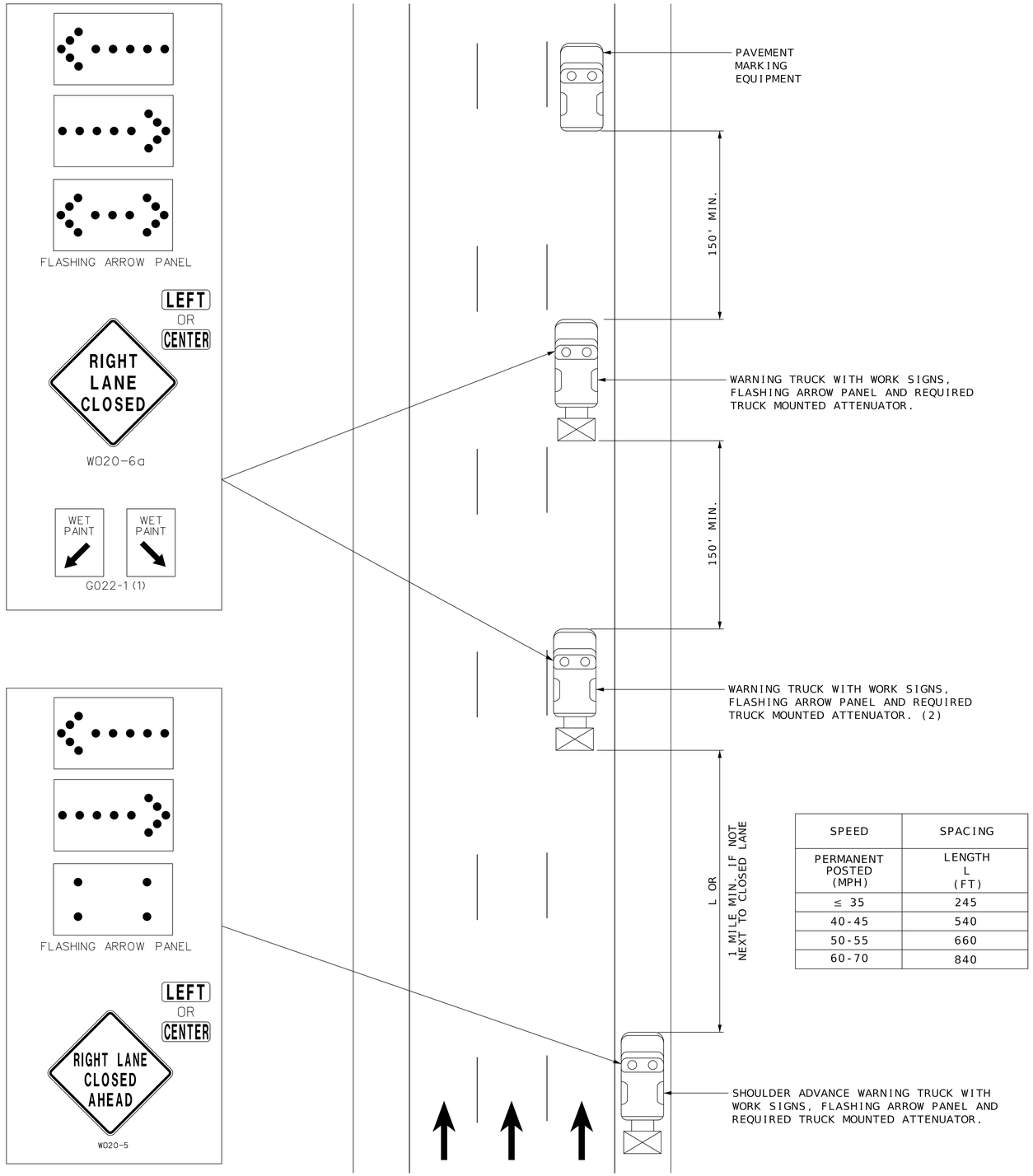
PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



SPEED	SPACING
PERMANENT POSTED (MPH)	LENGTH L (FT)
≤ 35	245
40-45	540
50-55	660
60-70	840

NOTES:

UPON APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY PROVIDE ADDITIONAL PROTECTIVE TRUCKS EQUIPPED WITH PROPER WARNING DEVICES.

PROTECTIVE TRUCKS AND WORK VEHICLES SHALL DISPLAY HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS.

VEHICLE HAZARD WARNING SIGNALS SHALL NOT BE USED INSTEAD OF THE VEHICLE'S HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS.

VEHICLE-MOUNTED SIGNS SHALL BE MOUNTED IN A MANNER SUCH THAT THEY ARE NOT OBSCURED BY EQUIPMENT OR SUPPLIES. SIGN LEGENDS ON VEHICLE-MOUNTED SIGNS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS.

FLASHING ARROW PANELS SHALL BE INCIDENTAL TO TRUCK MOUNTED ATTENUATORS, WHEREVER USED. NO ADDITIONAL PAYMENT WILL BE MADE.

FLASHING ARROW PANELS SHALL, AS A MINIMUM, BE TYPE B, WITH A SIZE OF 60 X 30 INCHES.

A FLASHING ARROW BOARD SHALL BE USED WHEN A FREEWAY LANE IS CLOSED. WHEN MORE THAN ONE LANE CLOSED, A SEPARATE FLASHING ARROW BOARD SHALL BE USED FOR EACH CLOSED LANE.

(1) WET PAINT SIGNS ARE INSTALLED TO INDICATE THE SIDE IN WHICH THE PAVEMENT MARKING MATERIAL IS BEING APPLIED. AT THE CONTRACTOR'S OPTION, A FRONT FACING WET PAINT SIGN MAY BE INSTALLED ON THE LEFT SIDE OF THE PAVEMENT MARKING EQUIPMENT.

(2) WARNING TRUCK IS POSITIONED AT THE NO TRACK POINT OF THE PAVEMENT MARKING MATERIAL, OR SPACING SHOWN, WHICH EVER IS GREATER.

PAVEMENT MARKING ON DIVIDED HIGHWAY

NOT TO SCALE

TRAFFIC CONTROL
SHEET 13 OF 13

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
52	MO
DISTRICT	SHEET NO.
SW	16

COUNTY
BATES

JOB NO.
JSR0159

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)



FOG SEAL
SHOULDERS

1 ¾" COLDMILL
1 ¾" SP095C (PG64-22)

1 ¾" OVERLAY
SP095C (PG64-22)



(NOT TO SCALE)
SPECIAL SHEET
SHEET 1 OF 1

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2010015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
52	MO
DISTRICT	SHEET NO.
SW	17

COUNTY
BATES

JOB NO.
JSR0159

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

NOTES:

1) ALL TRAFFIC SIGNAL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE MISSOURI STANDARDS SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, SECTION 902 "TRAFFIC SIGNALS", UNLESS OTHERWISE NOTED.

2) PROTECT ALL EXISTING SIGNAL EQUIPMENT IN PLACE UNLESS OTHERWISE NOTED.

3) IT IS THE INTENT OF THIS DESIGN TO REPLACE THE EXISTING LEFT TURN LANE SIGNAL HEADS. ALL OTHER SIGNAL/PEDESTRIAN SIGNAL IS EXPECTED TO BE PROTECTED IN PLACE. FOR THIS REASON THE EXISTING PEDESTRIAN SIGNALS ARE NOT SHOWN.

TRAFFIC SIGNALS LEGEND

- CONTROLLER
- CONTROLLER (EXISTING)
- JCT JUNCTION BOX
- POWER SUPPLY
- WOOD POST
- SIGNAL HEAD (OPT LIM CONV)
- SIGNAL HEAD (OPT LIM)
- SIGNAL HEAD (PEDESTRIAN)
- SIGNAL HEAD (STANDARD)
- CCTV CAMERA
- VIDEO DETECTOR
- PUSH BUTTON DETECTOR
- PREFORMED PULL BOX TYPE 1
- PREFORMED PULL BOX TYPE 2
- CONCRETE PULL BOX TYPE 1
- CONCRETE PULL BOX TYPE 2
- ITS PULL BOX TYPE 2
- ITS PULL BOX TYPE 5
- 6 X 6 LOOP DETECTOR
- 6 X 15 LOOP DETECTOR
- 30 X 6 LOOP DETECTOR
- CONDUIT MEDIAN
- CONDUIT PUSHED
- CONDUIT BRIDGE
- CONDUIT EXISTING
- CONDUIT TRENCHED
- SPAN WIRE
- MAST ARM - TYPE A BASE
- MAST ARM - TYPE C BASE
- MAST ARM - TYPE F BASE



RTE 52 AND FRAN AVE
SIGNAL SHEET
SHEET 1 OF 6

NOT TO SCALE

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
9/28/2026	
ROUTE	STATE
52	MO
DISTRICT	SHEET NO.
SW	18
COUNTY	
BATES	
JOB NO.	
JSR0159	
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)

| POST NUMBER | PULL BOX NUMBER | LOCATION | | | BASE | | | | | | | | | | | | | PULL BOX | | | | | | | | | | POST | | | | | | | | | | | | |

CONDUIT (WITH #14 TRACER WIRE)

CABLE

FROM	TO	CENTER TO CENTER DISTANCE	LOOP DET.	TRENCH				PUSHED			MEDIAN			ON STRUCTURE			REMARKS
			1"	2"	3"	4"		2"	3"	4"	2"	3"	4"	2"	3"		
RTE 52 AND FRAN AVE.																	
1	31			E													UIP EXISTING
1	2				E												UIP EXISTING
2	1				E												UIP EXISTING
2	3				E												UIP EXISTING
3	2				E												UIP EXISTING
2	5				E												UIP EXISTING
5	4				E												UIP EXISTING
5	4				E												UIP EXISTING
4	3				E												UIP EXISTING

POWER SUPPLY

LOCATION			POWER SUPPLY ASSEMBLY		CIRCUIT BREAKER TRIP RATING*				LIGHTING CONTROL * (ON POWER SUPPLY)		SERVICE POLE	
					CONTROLLER		POWER SUPPLY DISCONNECT					
APPROACH	STATION	OFFSET	DRAWING 902.15	DRAWING	AUXILIARY BREAKER	CONT & SIGNAL LAMPS	MAIN BREAKER		120 VOLT CONTROL CABINET	MAIN BREAKER	CONTRACT FURNISH	UTILITY COMPANY
							SIGNALS	LIGHTING				
RTE 52 & FRAN AVE	UIP EXISTING											

CONTROLLER ASSEMBLY AND AUXILIARY EQUIPMENT

LOCATION			SYSTEM MASTER (CLOSED LOOP)		ACTUATED		ON-OFF* SWITCH		COORDINATION INTERFACE *					TIME * CLOCK	NEMA CABINET TYPE *			170 CABINET TYPE *		170 SOFTWARE *	
							TYPE		12C/7C HARDWIRE (1)		TIME BASE	CLOSED LOOP		FIBER							
APPROACH	STATION	OFFSET	NEMA	170	NEMA	170	I	II	MASTER	LOCAL		NEMA	170								
RTE 52 & FRAN AVE	UIP EXISTING																				

SIGNAL SIGNS

QUANTITY	MUTCD SIGN NUMBER	SIZE	AREA	SIGN TOTAL AREA ITEM NO. 90208.33	SIGNAL SIGN MOUNTING HARDWARE ITEM NO. 90208.34
		INCHES	SQ.FT.	SQ.FT.	EA.
	R10-10L	24 X 30	5.0		
	R10-10R	24 X 30	5.0		
	R3-5L	30 X 36	7.5		
	R3-5R	30 X 36	7.5		
	R3-5A	30 X 36	7.5		
	R3-6L	30 X 36	7.5		
	R3-6R	30 X 36	7.5		
	R3-2	24 X 24	4.0		
	R3-1	24 X 24	4.0		
	R3-3	24 X 24	4.0		
	D3-1 ***	VAR. X 18			
	D3-1B ***	VAR. X 18			
	R10-3E	9 X 15	0.9		
	R10-11A	24 X 30	5.0		
	R10-13	36 X 24	6.0		
4	R10-27A	30 X 36	7.5	30	4
			SUBTOTAL	30	4
			TOTAL	30	4

DETECTOR SCHEDULE

DETECTOR NUMBER	APPROACH	TYPE				
		PUSH BUTTON	INDUCTION LOOP (2)			VIDEO
			STANDARD	DELAY/ EXTEND *	CALL UNIT *	
UIP EXISTING						

NEMA DETECTOR ASSIGNMENT

		CARD POSITION							
		1	2	3	4	5	6	7	8
CHANNEL	1	UIP EXISTING							
	2								

TOTAL NUMBER OF DETECTOR CARDS(2-CHANNEL) = (2)

NEMA LOAD SWITCH ASSIGNMENTS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ø11	Ø21	Ø31	Ø41	Ø51	Ø61	Ø71	Ø81	PED Ø2	PED Ø4	PED Ø6	PED Ø8	OL A (Ø1 FYL)	OL B (Ø3 FYL)	OL C (Ø5 FYL)	OL D (Ø7 FYL)

* ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.

*** USE D3-1 FOR ONE LINE. USE D3-1B FOR TWO LINE.

(1) MoDOT "D" PLUG SHALL BE WIRED INTO ALL NEMA CONTROLLERS WITH 7C HARDWIRE INTERCONNECT.

(2) PAYMENT IS MADE FOR THE NUMBER OF 2-CHANNEL DETECTOR CARDS AS SHOWN BELOW THE ASSIGNMENT CHART.

* NOTE: LEFT TURN "L" SHALL BE WIRED INTO PEDESTRIAN AMBER IN LOAD SWITCH

RTE 52 AND FRAN AVE
SIGNAL PLAN
SHEET 4 OF 6

D-37C

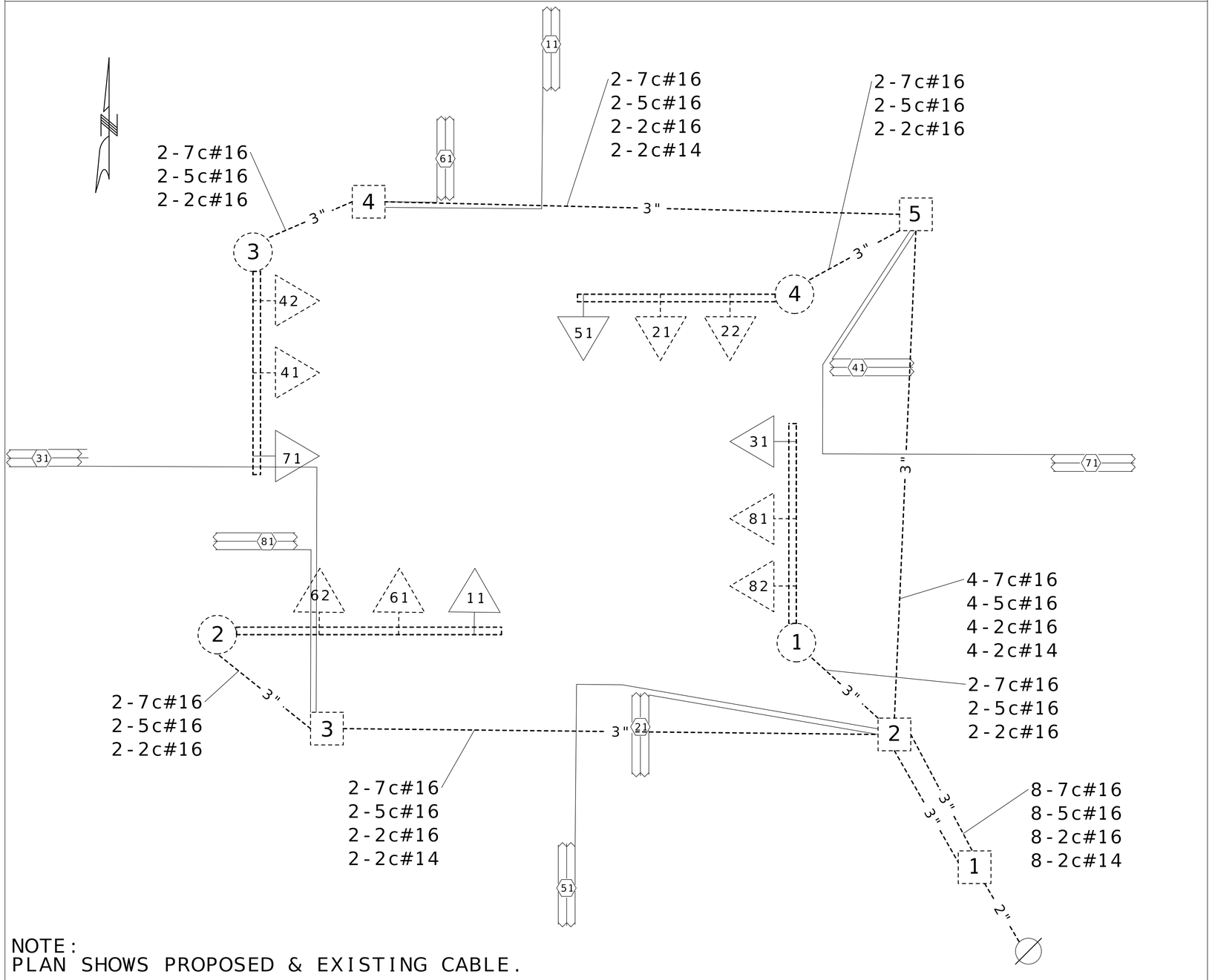
STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 9/28/2026
ROUTE 52 | STATE MO
DISTRICT SW | SHEET NO. 21
COUNTY BATES
JOB NO. JSR0159
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)

WIRING DIAGRAM



NOTE:
PLAN SHOWS PROPOSED & EXISTING CABLE.

LEGEND

3" ———	CONDUIT CONTAINING CABLE WITH SIZE
3" - - - -	EXISTING CONDUIT CONTAINING CABLE WITH SIZE
———	CABLE
X-Xc	MULTI-CONDUCTOR CABLE #16 AWG (UNLESS OTHERWISE INDICATED)
LIC	#14 AWG DETECTOR LEAD-IN CABLE (2C TWISTED SHIELDED)
X	PULL BOX WITH NUMBER
X	POST WITH NUMBER
X	POST WITH MAST ARM
X	POST WITH MAST ARM AND LUMINAIRE
X	DETECTOR WITH NUMBER
X	SIGNAL HEAD WITH NUMBER
	SIGNAL CONTROLLER
	POWER SUPPLY
	LIGHTING CONTROLLER
	30 X 60 LOOP DETECTOR

RTE 52 AND FRAN AVE
SIGNAL PLAN
SHEET 5 OF 6

D-37D

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
52	MO
DISTRICT	SHEET NO.
SW	22

COUNTY
BATES

JOB NO.
JSR0159

CONTRACT ID.

PROJECT NO.

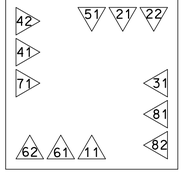
BRIDGE NO.

DESCRIPTION	DATE

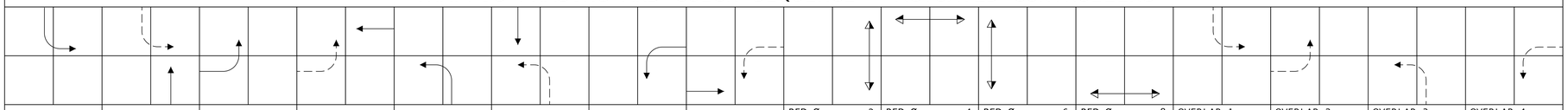
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

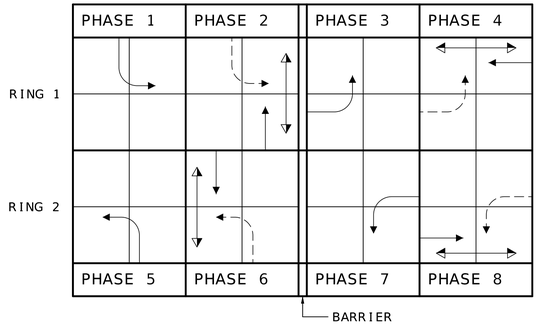
SIGNAL FACE LOCATION



TRAFFIC PHASING AND COLOR SEQUENCE - ACTUATED CONTROLLERS



	PHASE 1				PHASE 2				PHASE 3				PHASE 4				PHASE 5				PHASE 6				PHASE 7				PHASE 8				PED Ø 2 OVERLAP				PED Ø 4 OVERLAP				PED Ø 6 OVERLAP				PED Ø 8 OVERLAP				OVERLAP 1				OVERLAP 2				OVERLAP 3				OVERLAP 4				
FACE NUMBERS	11				21	22	11		31				41	42	31		51				61	62	51		71				81	82	71		UIP	EXISTING			UIP	EXISTING			UIP	EXISTING			UIP	EXISTING																			FACE NUMBERS
SIGNAL INDICATIONS R	RL				R	R	RL		RL				R	R	RL		RL				R	R	RL		RL				R	R	RL		DW	DW			DW	DW			DW	DW			DW	DW																			R
SIGNAL INDICATIONS Y	YL				Y	Y	YL		YL				Y	Y	YL		YL				Y	Y	YL		YL				Y	Y	YL		DW	DW			DW	DW			DW	DW			DW	DW																			Y
SIGNAL INDICATIONS FYA							FYL								FYL								FYL								FYL		FDW	FDW			FDW	FDW			FDW	FDW			FDW	FDW																			FYA
SIGNAL INDICATIONS G	L				G	G			L				G	G			L				G	G			L				G	G			W	W			W	W			W	W			W	W																			G
DETECTOR ASSIGNMENTS	11				21	22	11		31				41	42	31		51				61	62	51		71				81	82	71																														DETECTOR ASSIGNMENTS
DETECTOR ASSIGNMENTS (PEDS. ONLY)																																	E	E			E	E			E	E			E	E																			
OVERLAP PARENT PHASES																																																															



RING STRUCTURE

IF CALLED, ALL NON-CONFLICTING PHASES SHALL COMBINE AND TIME CONCURRENTLY. TIME TO BE DETERMINED BY THE ENGINEER AT SIGNAL TURN ON AND SET IN THE CONTROLLER BY THE CONTRACTOR.

LEGEND

- ACTUATED VEHICULAR MOVEMENT
- PARTIALLY RESTRICTED ACTUATED VEHICULAR MOVEMENT
- NON-ACTUATED VEHICULAR MOVEMENT
- PARTIALLY RESTRICTED NON-ACTUATED VEHICULAR MOVEMENT
- ACTUATED PEDESTRIAN MOVEMENT
- NON-ACTUATED PEDESTRIAN MOVEMENT
- VEHICLE STOPPED
- FDW — FLASHING DON'T WALK
- W — WALK
- DW — DON'T WALK
- R/W — RIGHT OF WAY INTERVAL
- YRt — YELLOW RIGHT ARROW
- RT. — GREEN RIGHT ARROW
- LY-YL — YELLOW LEFT ARROW
- L — GREEN LEFT ARROW
- S — GREEN STRAIGHT AHEAD ARROW
- G — CIRCULAR GREEN
- Y — CIRCULAR YELLOW
- R — CIRCULAR RED
- RL — RED LEFT ARROW
- Ø — TRAFFIC PHASE
- AO — ALL OTHERS
- FR — FLASHING RED
- FY — FLASHING CIRCULAR YELLOW
- FYL — FLASHING YELLOW LEFT ARROW

FLASHING OPERATION

ALL PHASES	FR
	FY

CONTROLLER TYPE	2070

TRAFFIC SIGNAL CONTROL OPERATION

INTERSECTION OF RTE 52

WITH FRAN AVE

RTE 52 AND FRAN AVE
SIGNAL PLAN
SHEET 6 OF 6

D-38A

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

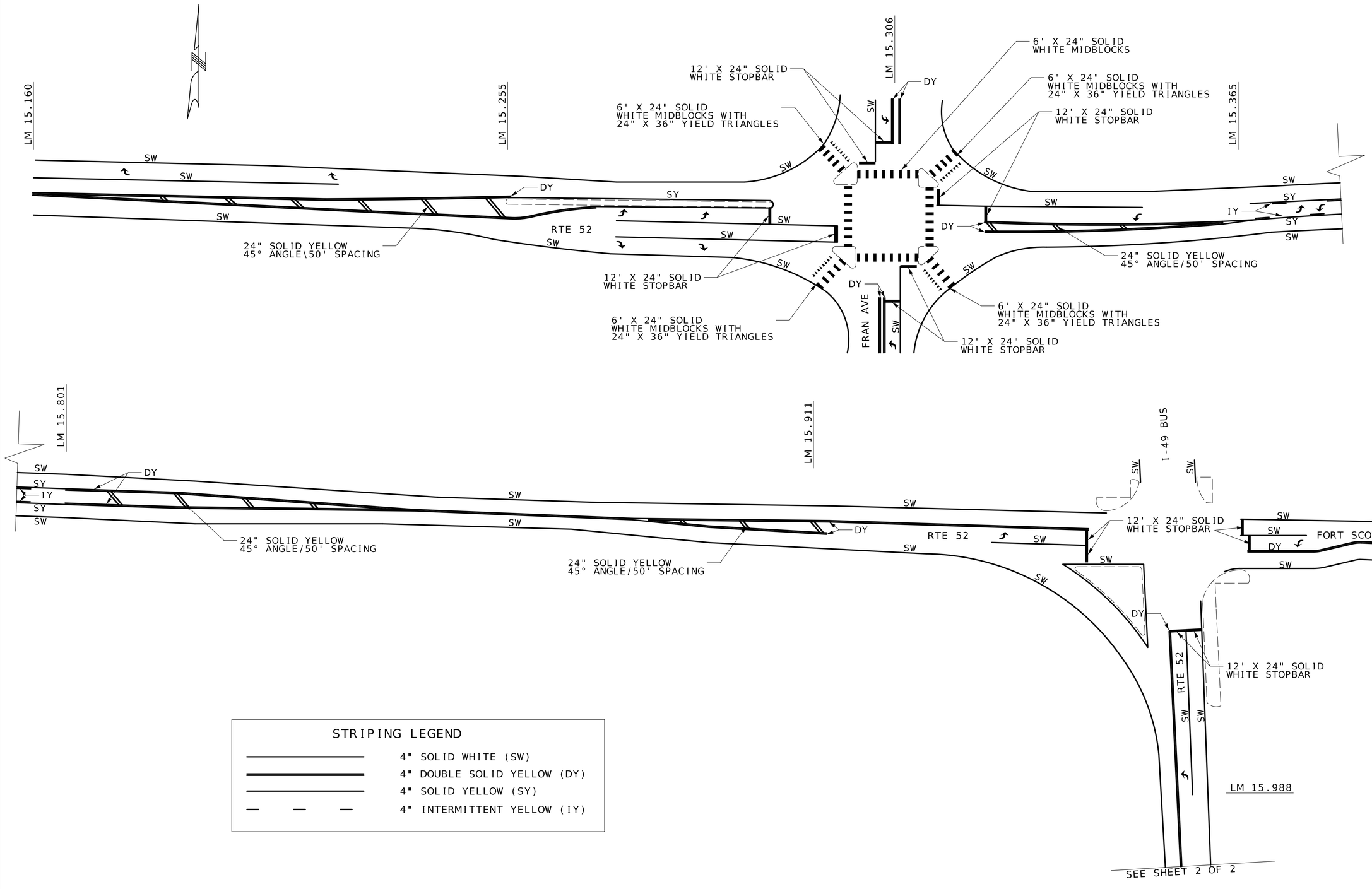
DATE PREPARED	9/28/2026
ROUTE	STATE
52	MO
DISTRICT	SHEET NO.
SW	23
COUNTY	BATES
JOB NO.	JSR0159
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



STRIPING LEGEND

———	4" SOLID WHITE (SW)
═══	4" DOUBLE SOLID YELLOW (DY)
———	4" SOLID YELLOW (SY)
— — —	4" INTERMITTENT YELLOW (IY)

NOT TO SCALE

PAVEMENT MARKING
SHEET 1 OF 2

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

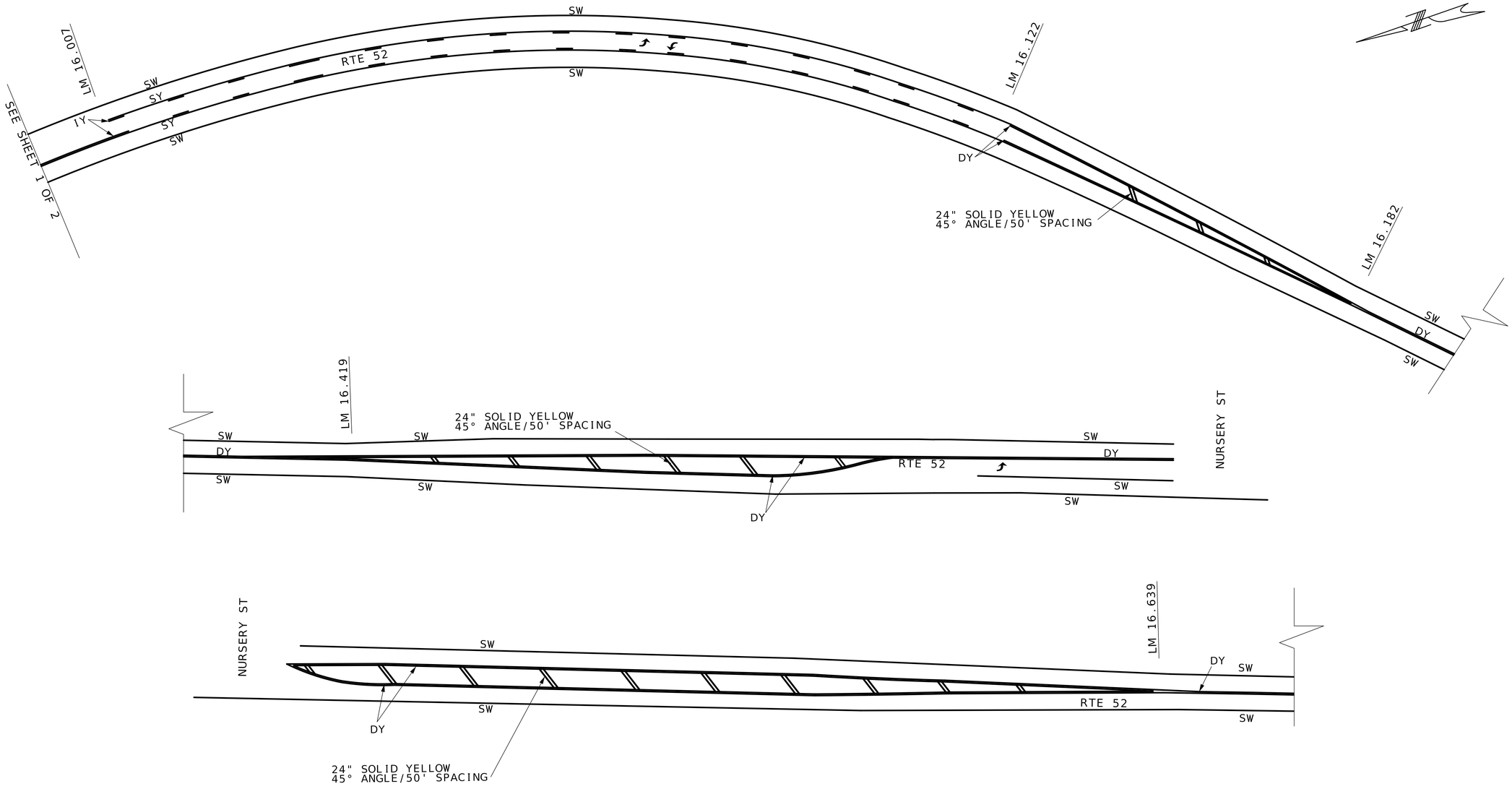
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	9/28/2026
ROUTE	STATE
52	MO
DISTRICT	SHEET NO.
SW	24
COUNTY	BATES
JOB NO.	JSR0159
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)



STRIPING LEGEND

———	4" SOLID WHITE (SW)
═══	4" DOUBLE SOLID YELLOW (DY)
———	4" SOLID YELLOW (SY)
— — —	4" INTERMITTENT YELLOW (IY)

NOT TO SCALE

PAVEMENT MARKING
SHEET 2 OF 2

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
52	MO
DISTRICT	SHEET NO.
SW	25

COUNTY
BATES

JOB NO.
JSR0159

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)

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
PLANS FOR PROPOSED
STATE HIGHWAY

BATES COUNTY

DESIGN DESIGNATION

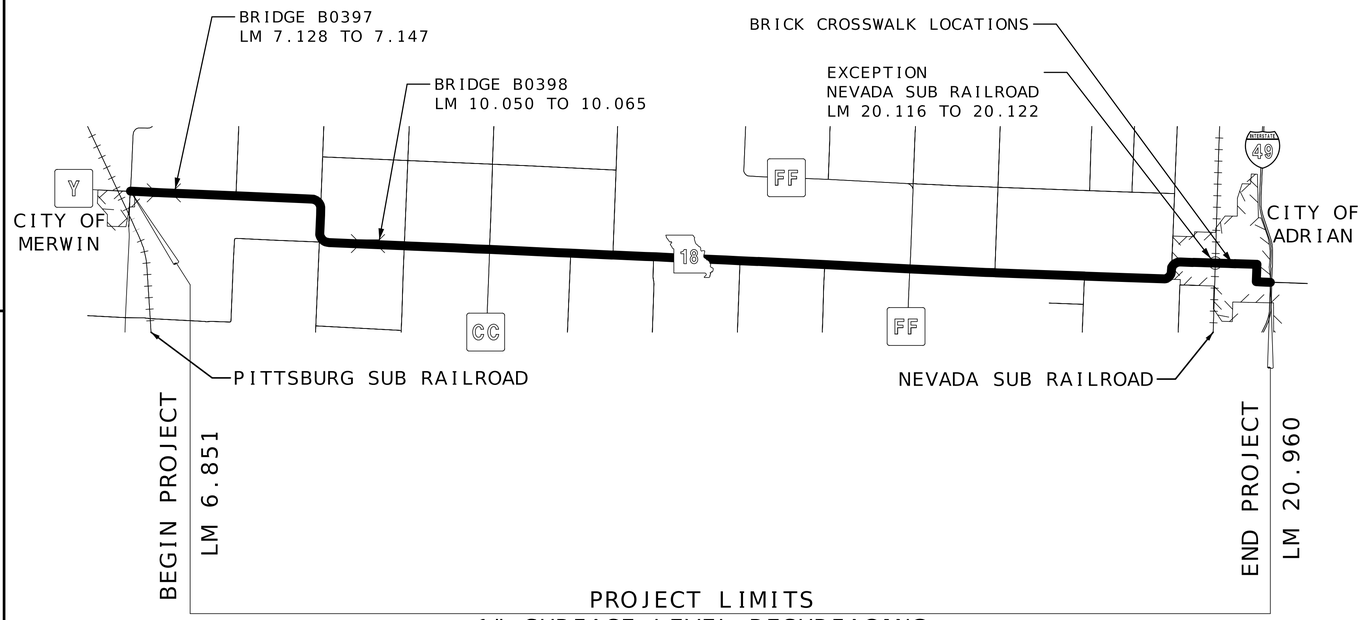
A.A.D.T. - 2028 = 1680
T = 12.41%
V = 25, 35, 55 M.P.H.

FUNCTIONAL CLASSIFICATION-MAJOR COLLECTOR

NO NEW R/W REQUIRED



KEY MAP
LOCATION OF BATES COUNTY



NOT TO SCALE

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

DESCRIPTION	SHEET NUMBER
TITLE SHEET	1
TYPICAL SECTIONS (TS) (5 SHEETS)	2
QUANTITIES (QU) (3 SHEETS)	3
SPECIAL SHEETS (SS)	4-10
TRAFFIC CONTROL SHEETS (TC)	11-17

LENGTH OF PROJECT

LOG MILES FROM 2022 ARAN

BEGINNING OF PROJECT	LM.	6.851
END OF PROJECT	LM.	20.960
APPARENT LENGTH		74495.52 FEET
EQUATIONS AND EXCEPTIONS:		
NEVADA SUB RAILROAD EXCEPTION: LM: 20.116 - 20.122		-31.68 FEET
TOTAL CORRECTIONS		-31.68 FEET
NET LENGTH OF PROJECT		74463.84 FEET
STATE LENGTH		14.103 MILES
FOR INFORMATION ONLY ESTIMATED DISTURBED ACRES		0.00 ACRES

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 9/28/2026
ROUTE: 18 | STATE: MO
DISTRICT: SW | SHEET NO.: 1
COUNTY: BATES
JOB NO.: JSR0308
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

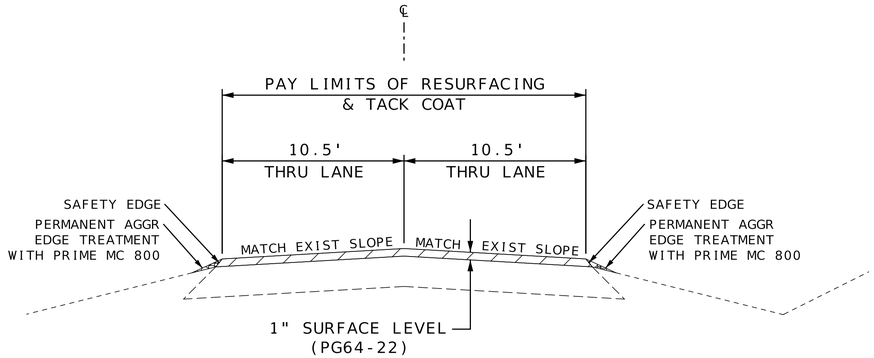
DESCRIPTION | DATE

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

NOTES: LANE WIDTH NOTED IS TYPICAL LANE WIDTH.
ADJUST PAVING WIDTHS TO EXISTING FIELD CONDITIONS.

SURFACE PLACEMENT - ONE PASS PER LANE

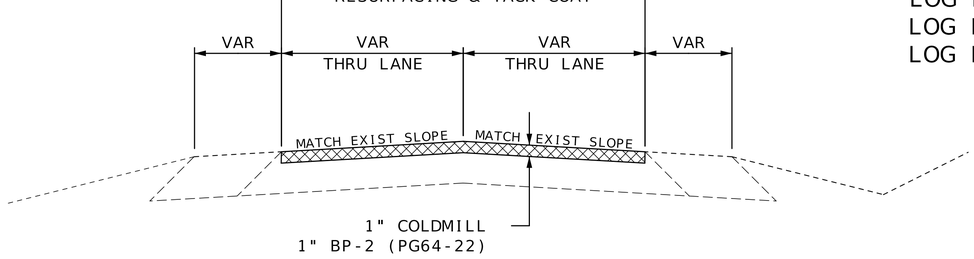
NO S.E. CORRECTION



MO 18

LOG MILE 6.851 TO LOG MILE 7.128
LOG MILE 7.147 TO LOG MILE 10.050
LOG MILE 10.065 TO LOG MILE 20.013
LOG MILE 20.27 TO LOG MILE 20.349
LOG MILE 20.351 TO LOG MILE 20.463
LOG MILE 20.465 TO LOG MILE 20.797

ASPHALT FACTORS	
COMBINED FACTOR	
SURFACE LEVEL	1.975 TONS/CY
TACK COAT	
OVERLAY	0.08 GAL/SY
MILLING	0.10 GAL/SY
PRIME LIQUID ASPHALT MC 800	
PERMANENT AGGREGATE EDGE TREATMENT	0.25 GAL/SY
IRREGULARITIES:	75 TONS/MI



MO 18

BRIDGE B0397 LOG MILE 7.128 TO LOG MILE 7.147 (10.5' LANES)
BRIDGE B0398 LOG MILE 10.050 TO LOG MILE 10.065 (10.5' LANES)
LOG MILE 20.013 TO LOG MILE 20.116 (10.5' LANES)
LOG MILE 20.122 TO LOG MILE 20.132 (12' LANES)
LOG MILE 20.133 TO LOG MILE 20.189 (12' LANES)
LOG MILE 20.190 TO LOG MILE 20.200 (12' LANES)
LOG MILE 20.201 TO LOG MILE 20.258 (12' LANES)
LOG MILE 20.259 TO LOG MILE 20.269 (12' LANES)
PEDESTRIAN CROSSING LOG MILE 20.349 TO LOG MILE 20.351
PEDESTRIAN CROSSING LOG MILE 20.463 TO LOG MILE 20.465
LOG MILE 20.797 TO LOG MILE 20.960 (12' LANES)

NEVADA SUB RAILROAD EXCEPTION
LOG MILE 20.116 TO LOG MILE 20.122

UIP BRICK SIDEWALKS

LOG MILE 20.132 TO LOG MILE 20.133
LOG MILE 20.189 TO LOG MILE 20.190
LOG MILE 20.200 TO LOG MILE 20.201
LOG MILE 20.258 TO LOG MILE 20.259
LOG MILE 20.269 TO LOG MILE 20.270

TYPICAL SECTIONS
SHEET 1 OF 5

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
18	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
BATES

JOB NO.
JSR0308

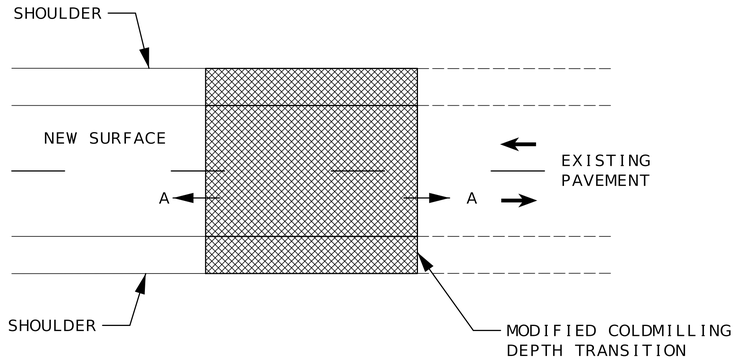
CONTRACT ID.

PROJECT NO.

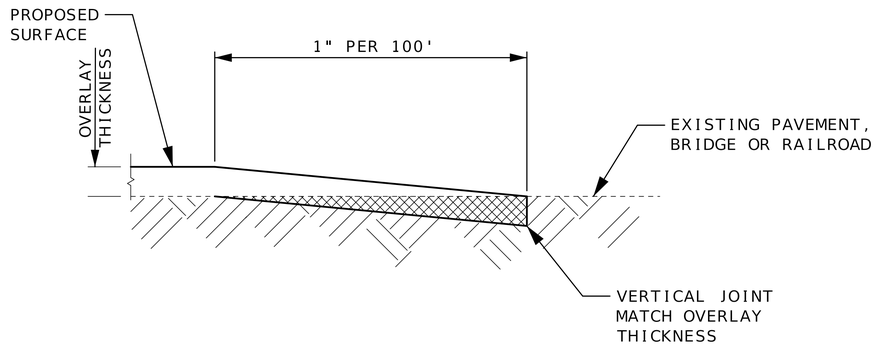
BRIDGE NO.

DESCRIPTION	DATE

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



MAINLINE, BRIDGE, AND RAILROAD PLAN



SECTION A-A

TRANSVERSE JOINT TRANSITION FOR SINGLE LIFT
PROJECT BEGINNING, END, BRIDGE, OR RAILROAD

NOTE: MILL EXISTING CONCRETE 1" MAXIMUM.

TYPICAL SECTIONS
SHEET 2 OF 5

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
18	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
BATES

JOB NO.
JSR0308

CONTRACT ID.

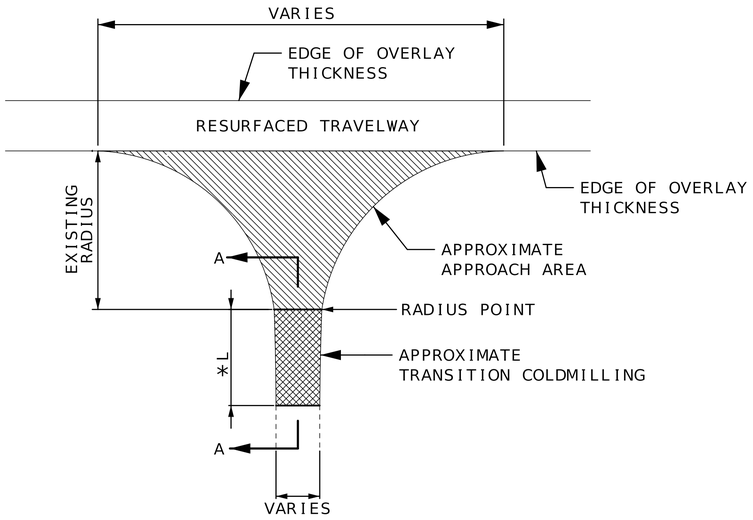
PROJECT NO.

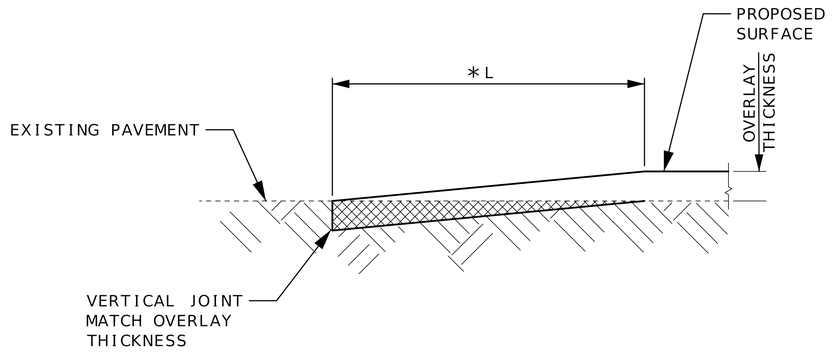
BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



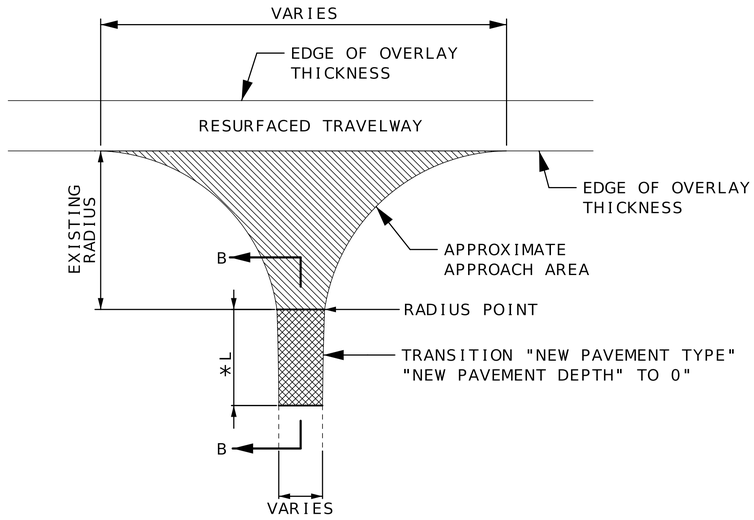


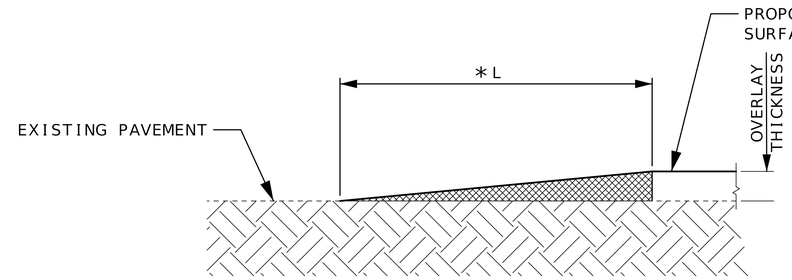
SECTION A-A

SURFACING REQUIREMENTS FOR
OVERLAYS AT STATE ROUTES.
SEE QUANTITY SHEETS FOR LOCATIONS.

*TRANSITION LENGTHS

OVERLAY THICKNESS	DEPTH TRANS. LENGTH (L)
1"	20.0'
1 ½"	40.0'
1 ¾"	50.0'
2"	60.0'





SECTION B-B

SURFACING REQUIREMENTS FOR OVERLAYS
AT EXISTING COLD MIX STATE ROUTES.
SEE QUANTITY SHEETS FOR LOCATIONS.

*TRANSITION LENGTHS

OVERLAY THICKNESS	DEPTH TRANS. LENGTH (L)
1"	20.0'
1 ½"	40.0'
1 ¾"	50.0'
2"	60.0'

TYPICAL SECTIONS
SHEET 3 OF 5

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

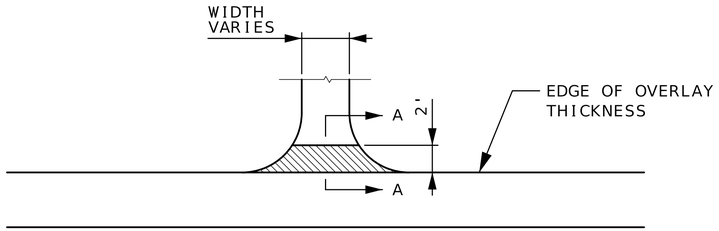
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

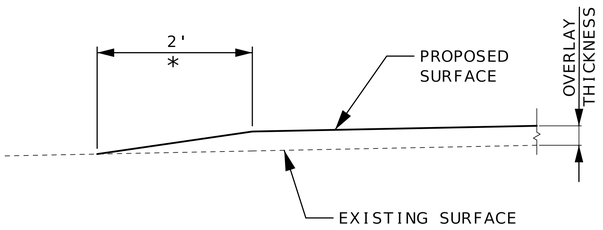
DATE PREPARED
9/28/2026

ROUTE 18 | STATE MO
DISTRICT SW | SHEET NO. 2
COUNTY BATES
JOB NO. JSR0308
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)



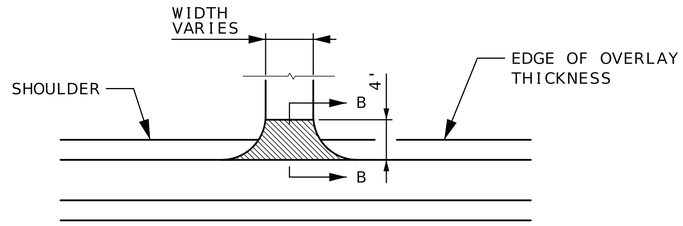


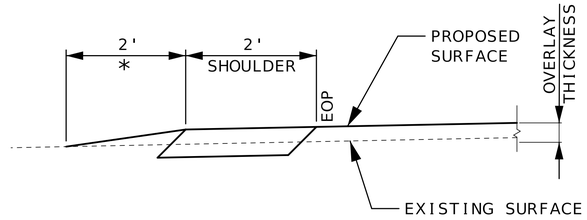
SECTION A-A

TYPICAL ENTRANCE - NO SHOULDER
(FIELD, PRIVATE OR COUNTY ROAD)
*TAPER AT 1:1 FOR FIELD ENTRANCE

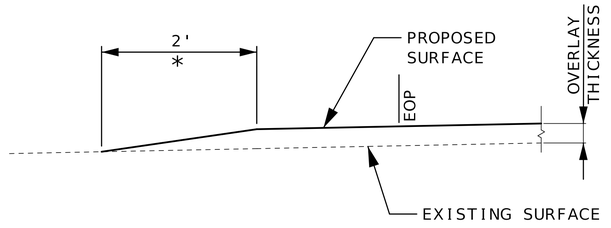
NOTE: 4 TONS GRAVEL A OR CRUSHED STONE CALCULATED PER ENTRANCE.

6 TONS CALCULATED PER COUNTY ROAD.





AGGREGATE & EARTH ENTRANCES



ASPHALT & CONCRETE ENTRANCES

SECTION B-B

TYPICAL ENTRANCE - EXIST/NEW SHOULDER
(FIELD, PRIVATE OR COUNTY ROAD)
*TAPER AT 1:1 FOR FIELD ENTRANCE

NOTES: DO NOT BUILD 2' MODIFIED A3 SHOULDERS ACROSS CONCRETE OR ASPHALT ENTRANCES, STREETS OR ROADS.

4 TONS GRAVEL A OR CRUSHED STONE B CALCULATED PER ENTRANCE.

6 TONS CALCULATED PER COUNTY ROAD.

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
18	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
BATES

JOB NO.
JSR0308

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

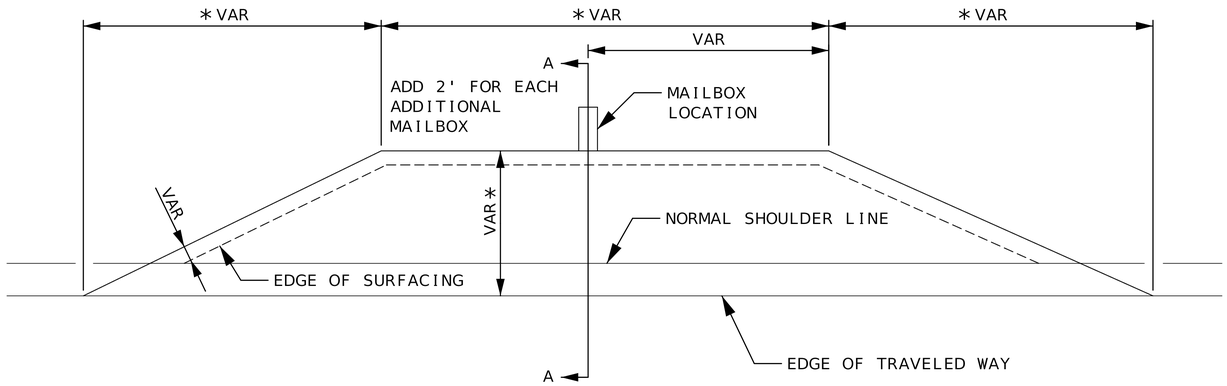
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

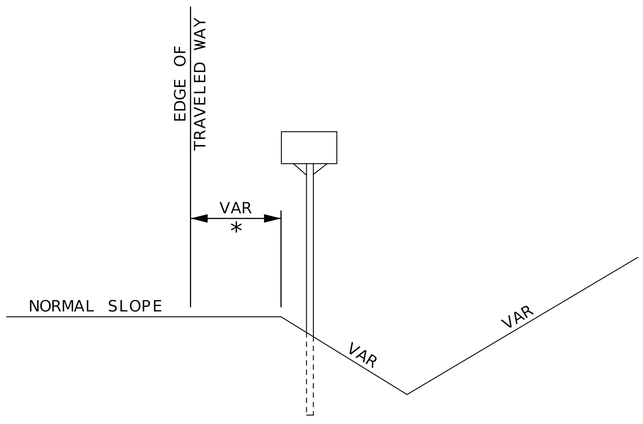
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

NOTE: MAILBOX TURNOUT QUANTITIES BASED ON 2' WIDTH AND
15' LENGTH. ADD 2' IN LENGTH PER ADDITIONAL
MAILBOX AT SAME LOCATION, AS APPROVED BY THE ENGINEER.

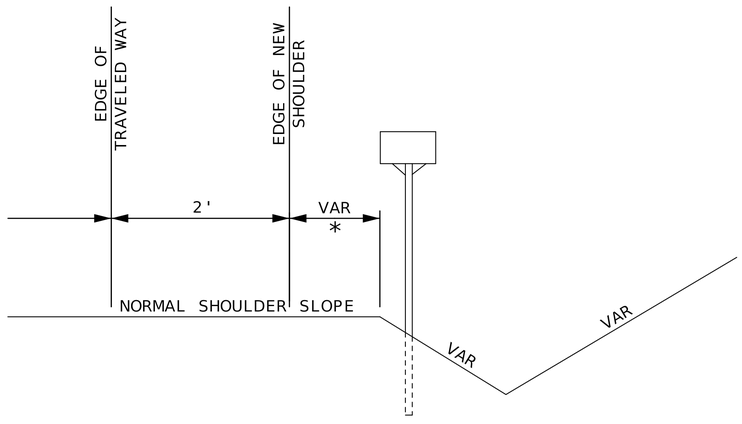
TYPICAL MAILBOX TURNOUT

*AS APPROVED BY THE ENGINEER





SECTION A-A
NO SHOULDER



SECTION A-A
SHOULDER

TYPICAL SECTIONS
SHEET 5 OF 5

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
18	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
BATES

JOB NO.
JSR0308

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)

REMOVAL OF IMPROVEMENTS

ROUTE	BEGIN LOG MILE	END LOG MILE	RT/LT OFFSET	UNIT	TOTAL	DESCRIPTION	REMARKS
MO 18	20.941	20.959	LT	FT	97	GUARDRAIL	MO 18 TO BRIDGE A2611
MO 18	20.941	20.959	RT	FT	97	GUARDRAIL	MO 18 TO BRIDGE A2611
TOTAL = 1 LUMP SUM							

ASPHALT, TACK, AND COLDMILL

ROUTE	BEGIN LOG MILE	END LOG MILE	NET LENGTH	AVG. WIDTH	MEASURED AREA	SURFACE LEVEL 1.00" 1.975 TONS/CY	TACK 0.08	TACK 0.10	MODIFED DEPTH TRANSITION	COLDMILL 3" OR LESS	REMARKS
			LF	LF	SF	TONS	GAL	GAL	SY	SY	
18	6.851	6.870	100.3	21.0		12.8		23.4	234.0		BEGIN
18	6.870	7.109	1261.9	21.0		161.5	235.6				SURFACE LEVEL
18	7.109	7.128	100.3	21.0		12.8		23.4	234.0		DEPTH TRANSITION
18	7.128	7.147	100.3	21.0		12.8		23.4		234.0	BRIDGE B0397
18	7.147	7.166	100.3	21.0		12.8		23.4	234.0		DETPH TRANSITION
18	7.166	10.031	15127.2	21.0		1936.4	2823.7				SURFACE LEVEL
18	10.031	10.050	100.3	21.0		12.8		23.4	234.0		DEPTH TRANSITION
18	10.050	10.065	79.2	21.0		10.1		18.5		184.8	BRIDGE B0398
18	10.065	10.084	100.3	21.0		12.8		23.4	234.0		DEPTH TRANSITION
18	10.084	19.994	52324.8	21.0		6698.1	9767.3				SURFACE LEVEL
18	19.994	20.013	100.3	21.0		12.8		23.4	234.0		DEPTH TRANSITION
18	20.013	20.116	543.8	21.0		69.6		126.9		1268.9	MILL FILL
18	20.116	20.122									NEVADA SUB RAILROAD CROSSING
18	20.122	20.132	52.8	24.0		7.7		14.1		140.8	MILL FILL
18	20.132	20.133									DND UIP BRICK PEDESTRIAN CROSSING
18	20.133	20.189	295.7	24.0		43.3		78.9		788.5	MILL FILL
18	20.189	20.190									DND UIP BRICK PEDESTRIAN CROSSING
18	20.190	20.200	52.8	24.0		7.7		14.1		140.8	MILL FILL
18	20.200	20.201									DND UIP BRICK PEDESTRIAN CROSSING
18	20.201	20.258	301.0	24.0		44.0		80.3		802.7	MILL FILL
18	20.258	20.259									DND UIP BRICK PEDESTRIAN CROSSING
18	20.259	20.269	52.8	24.0		7.7		14.1		140.8	MILL FILL
18	20.269	20.270									DND UIP BRICK PEDESTRIAN CROSSING
18	20.270	20.289	100.3	24.0		14.7		26.7	267.5		DEPTH TRANSITION
18	20.289	20.330	216.5	24.0		31.7	46.2				SURFACE LEVEL
18	20.330	20.349	100.3	24.0		14.7		26.7	267.5		DEPTH TRANSITION
18	20.349	20.351	10.0	24.0		1.5		2.7		26.7	PEDESTRIAN CROSSING
18	20.351	20.370	100.3	24.0		14.7		26.7	267.5		DEPTH TRANSITION
18	20.370	20.466	506.9	24.0		74.2	108.1				SURFACE LEVEL
18	20.466	20.485	100.3	24.0		14.7		26.7	267.5		DEPTH TRANSITION
18	20.485	20.487	10.0	24.0		1.5		2.7		26.7	PEDESTRIAN CROSSING
18	20.487	20.506	100.3	24.0		14.7		26.7	267.5		DEPTH TRANSITION
18	20.506	20.595	469.9	24.0		68.7	100.2				SURFACE LEVEL
18	20.595	20.617	116.2		4637.0	28.3	41.2				SURFACE LEVEL
18	20.617	20.778	850.1	24.0		124.4	181.4				SURFACE LEVEL
18	20.778	20.797	100.3	24.0		14.7		26.7	267.5		DEPTH TRANSITION
18	20.797	20.823	137.3		6505.0	39.7		72.3		722.8	MILL FILL
18	20.823	20.960	723.4	24.0		105.8		192.9		1929.1	END
CC	0.003	0.012	47.5		2939.0	17.9	26.1				
CC	0.012	0.016	21.1	20.0		2.6		4.7	46.9		
FF	5.847	5.851	21.1	20.0		2.6		4.7	46.9		
FF	5.851	5.860	47.5		2490.0	15.2	22.1				
FF	5.865	5.874	47.5		2539.0	15.5	22.6				
FF	5.874	5.878	21.1	20.0		2.6		4.7	46.9		
18	6.851	20.960	9280.0	2.0	-	113.1	-	-			ENTRANCES & SIDEROADS
18	6.851	20.960	1031.0	2.0	-	12.6	-	-			MAILBOX TURNOUTS
18	6.851	20.960		-	-	1058.2	-	-			IRREGULARITIES 75 TONS/MILE
18	6.851	20.960	74495.5	-	-	65.5	-	-			SAFETY EDGE
					TOTAL	10945.5	13374.5	955.6	3149.7	6406.6	
					USE	10945.5	14330		3150	6407	
ANY AND ALL IRREGULARITIES MAY BE UNDERRUN AND NO ADJUSTMENT TO ANY UNIT BID COST WILL BE MADE											

SUMMARY OF QUANTITIES
SHEET 1 OF 3

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 9/28/2026
ROUTE 18 | STATE MO
DISTRICT SW | SHEET NO. 3
COUNTY BATES
JOB NO. JSR0308
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)

PERMANENT AGGREGATE EDGE TREATMENT							
ROUTE	BEGIN LOG MILE	TO	END LOG MILE	LENGTH MILES	AGGREGATE 200 TON/MILE* TON	PRIME MC 800 590 GAL/MILE* GAL	REMARKS
18	6.851	-	7.128	0.277	55.4	163	
18	7.147	-	10.050	2.903	580.6	1713	
18	10.065	-	20.116	10.051	2010.2	5930	
18	20.270	-	20.349	0.079	15.8	47	
18	20.351	-	20.485	0.134	26.8	79	
18	20.487	-	20.797	0.310	62.0	183	
				TOTALS	2750.8	8115	*INCLUDES 2' WIDTH BOTH SIDES OF ROADWAY

PAVEMENT MARKING						
			WATERBORNE CLASS 1 PAINT, TYPE P BEADS		THERMOPLASTIC	
ROUTE	BEGIN LOG MILE	END LOG MILE	4" SOLID WHITE LF	4" SOLID YELLOW LF	RR CROSSING EACH	24" WHITE LF
18	6.851	20.116	140080.0	140080.0		
18	20.122	20.960	8840.0	8840.0		
18	20.108				1.0	
18	20.122					12.0
18	20.138				1.0	
18	20.350					30.0
18	20.485					30.0
		TOTAL	148920.0	148920.0	2.0	72.0
		USE	148920	148920	2	72

CONTRACTOR FURNISHED SURVEYING & STAKING
1 LUMP SUM

MOBILIZATION
1 LUMP SUM

GRAVEL (A) OR CRUSHED STONE (B)
596 TONS

GUARDRAIL							
BEGIN LOG MILE	END LOG MILE	LOCATION	MGS GUARDRAIL FT	MASH CRASHWORTHY END TERMINAL EA	MGS BRIDGE APPROACH TRANSITION "REGULAR/ NO CURB" EA	SHAPING SLOPES CLASS III 100FT	REMARKS
20.941	20.959	MO 18 TO BRIDGE A2611	12.5	1	1	0.3	NORTH OF MO 18
20.941	20.959	MO 18 TO BRIDGE A2611	12.5	1	1	0.3	SOUTH OF MO 18
		TOTAL	25.0	2	2	0.6	ALL GUARDRAIL LENGTH IS ROUNDED
		USE	25	2	2	1	UP TO THE NEAREST 12.5'

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
18	MO
DISTRICT	SHEET NO.
SW	3

COUNTY
BATES

JOB NO.
JSR0308

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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

SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL AREA SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NO.	DESCRIPTION
WARNING SIGNS								
WO1-1L	48X48	16.00						TURN (SYMBOL LEFT)
WO1-1R	48X48	16.00						TURN (SYMBOL RIGHT)
WO1-2L	48X48	16.00						CURVE (SYMBOL LEFT)
WO1-2R	48X48	16.00						CURVE (SYMBOL RIGHT)
WO1-3L	48X48	16.00						REVERSE TURN (SYMBOL LEFT)
WO1-3R	48X48	16.00						REVERSE TURN (SYMBOL RIGHT)
WO1-4L	48X48	16.00						REVERSE CURVE (SYMBOL LEFT)
WO1-4R	48X48	16.00						REVERSE CURVE (SYMBOL RIGHT)
WO1-4bL	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL LEFT)
WO1-4bR	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL RIGHT)
WO1-4cL	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL LEFT)
WO1-4cR	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL RIGHT)
WO1-6	60X30	12.50						HORIZONTAL ARROW (SYMBOL)
WO1-6a	72X36	18.00						HORIZ. ARROW (SYMBOL ON PERMANENT BARRICADE)
WO1-7	60X30	12.50						DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)
WO1-7a	72X36	18.00						DOUBLE HEAD HORIZ. ARROW (SYMBOL ON PERM. BARR.)
WO1-8	18X24	3.00						CHEVRON (SYMBOL)
WO1-8a	30X36	7.50						CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)
WO3-1	48X48	16.00						STOP AHEAD (SYMBOL)
WO3-2	48X48	16.00						YIELD AHEAD (SYMBOL)
WO3-3	48X48	16.00						SIGNAL AHEAD (SYMBOL)
WO3-4	48X48	16.00						BE PREPARED TO STOP
WO3-5	48X48	16.00						SPEED LIMIT AHEAD
WO4-1L	48X48	16.00						MERGE (SYMBOL FROM LEFT)
WO4-1R	48X48	16.00						MERGE (SYMBOL FROM RIGHT)
WO4-1aL	48X48	16.00						MERGE (LEFT)
WO4-1aR	48X48	16.00						MERGE (RIGHT)
WO5-1	48X48	16.00	2	32.00				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	2	10.00				NEXT XX MILES (PLAQUE)
WO8-1	48X48	16.00	1	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	30	480.00				UNEVEN LANES
WO8-12	48X48	16.00	16	256.00				NO CENTER LINE
WO8-15	48X48	16.00						GROOVED PAVEMENT
WO8-15P	30X24	5.00						MOTORCYCLE (PLAQUE)
WO8-17L	48X48	16.00						SHOULDER DROP-OFF (SYMBOL LEFT)
WO8-17R	48X48	16.00	5	80.00				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)
WO12-2x	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	28	448.00				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	26	416.00				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	26	416.00				FLAGGER (SYMBOL)
WO21-2	36X36	9.00						FRESH OIL
WO21-5	48X48	16.00	1	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 NO.	DESCRIPTION
GUIDE SIGNS								
E05-1	36X48	12.00						GORE EXIT
E05-2	48X36	12.00						EXIT OPEN
E05-2a	48X36	12.00						EXIT CLOSED
GO20-1	60X24	10.00	2	20.00				ROAD WORK NEXT XX MILES
GO20-2	48X24	8.00	2	16.00				END ROAD WORK
GO20-4	36X18	4.50	2	9.00				PILOT CAR FOLLOW ME
GO20-4a	42X30	8.75	4	35.00				PILOT CAR IN USE WAIT & FOLLOW
GO20-4a	18X12	1.50	18	27.00				PILOT CAR IN USE WAIT & FOLLOW
GO20-5aP	36X24	6.00	2	12.00				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	2	24.00				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	1	32.00				POINT OF PRESENCE
CONST-8	48X36	12.00	2	24.00				WORK ZONE NO PHONE ZONE
CONST-5P	60X8	3.33	1	3.33				

616-10.05 CONSTRUCTION SIGNS	TOTAL
	2377

616-10.10 RELOCATED SIGNS	TOTAL

ITEM NUMBER	TOTAL QTY	EFFECTIVE: 07-01-2025 DESCRIPTION
6122008		IMPACT ATTENUATOR 40 MPH (SAND BARRELS)
6122009		IMPACT ATTENUATOR 45 MPH (SAND BARRELS)
6122010		IMPACT ATTENUATOR 50 MPH (SAND BARRELS)
6122012		IMPACT ATTENUATOR 55 MPH (SAND BARRELS)
6122014		IMPACT ATTENUATOR 60 MPH (SAND BARRELS)
6122017		IMPACT ATTENUATOR 65 MPH (SAND BARRELS)
6122019		IMPACT ATTENUATOR 70 MPH (SAND BARRELS)
6122020		REPLACEMENT SAND BARREL
6122030		IMPACT ATTENUATOR (RELOCATION)
6122040		WORK ZONE CRASH CUSHION (NARROW)
6122041		WORK ZONE CRASH CUSHION (RELOCATION)
6123001		TRUCK MOUNTED ATTENUATOR (TMA)
6161012		BUOYS (BOATS KEEP OUT)
6161013		BUOYS (NO WAKE)
6161014		SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)
6161020		CHANNELIZER (DRUM-LIKE)
6161022		CHANNELIZER (CONE)
6161025	100	CHANNELIZER (TRIM-LINE)
6161026		CHANNELIZER (VERTICAL PANEL)
6161030		TYPE 3 MOVEABLE BARRICADE
6161033		DIRECTION INDICATOR BARRICADE
6161040	2	FLASHING ARROW PANEL
6161047		TYPE 3 OBJECT MARKER
6161055		SEQUENTIAL FLASHING WARNING LIGHT
6161070		TUBULAR MARKER
6161095		RADAR SPEED ADVISORY SYSTEM
6161096		CHANGEABLE MESSAGE SIGN, COMMISSION FURNISHED/RETAINED
6161098A		CHANGEABLE MESSAGE SIGN WITHOUT COMM. INTERFACE, CONTRACTOR FURNISHED/RETAINED
6161099	2	CHANGEABLE MESSAGE SIGN WITH COMM. INTERFACE, CONTRACTOR FURNISHED/RETAINED
6162000A		WORK ZONE TRAFFIC SIGNAL SYSTEM
6162002		TEMPORARY LONG-TERM RUMBLE STRIPS
6173600D		TEMPORARY TRAFFIC BARRIER, CONTRACTOR FURNISHED/RETAINED
6173700B		TEMP. TRAFFIC BARRIER ANCHORED, CONTRACTOR FURNISHED/RETAINED
6173706		TEMP. TRAFFIC BARRIER STIFFNESS TRANSITION CONTRACTOR FURNISHED/RETAINED
6174000A		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION, CONTRACTOR FURNISHED/RETAINED
6175010A		RELOCATING TEMPORARY TRAFFIC BARRIER
6175011B		RELOCATING TEMP. TRAFFIC BARRIER ANCHORED
6175013		RELOCATING TEMP. TRAFFIC BARRIER STIFFNESS
6175020A		RELOCATING TEMP. TRAFFIC BARRIER HEIGHT
6208064A		TEMPORARY RAISED PAVEMENT MARKER
9029400		TEMPORARY TRAFFIC SIGNALS
9029401		TEMPORARY TRAFFIC SIGNALS AND LIGHTING

SUMMARY OF QUANTITIES
SHEET 3 OF 3

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 9/28/2026
ROUTE: 18 | STATE: MO
DISTRICT: SW | SHEET NO.: 3
COUNTY: BATES
JOB NO.: JSR0308
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

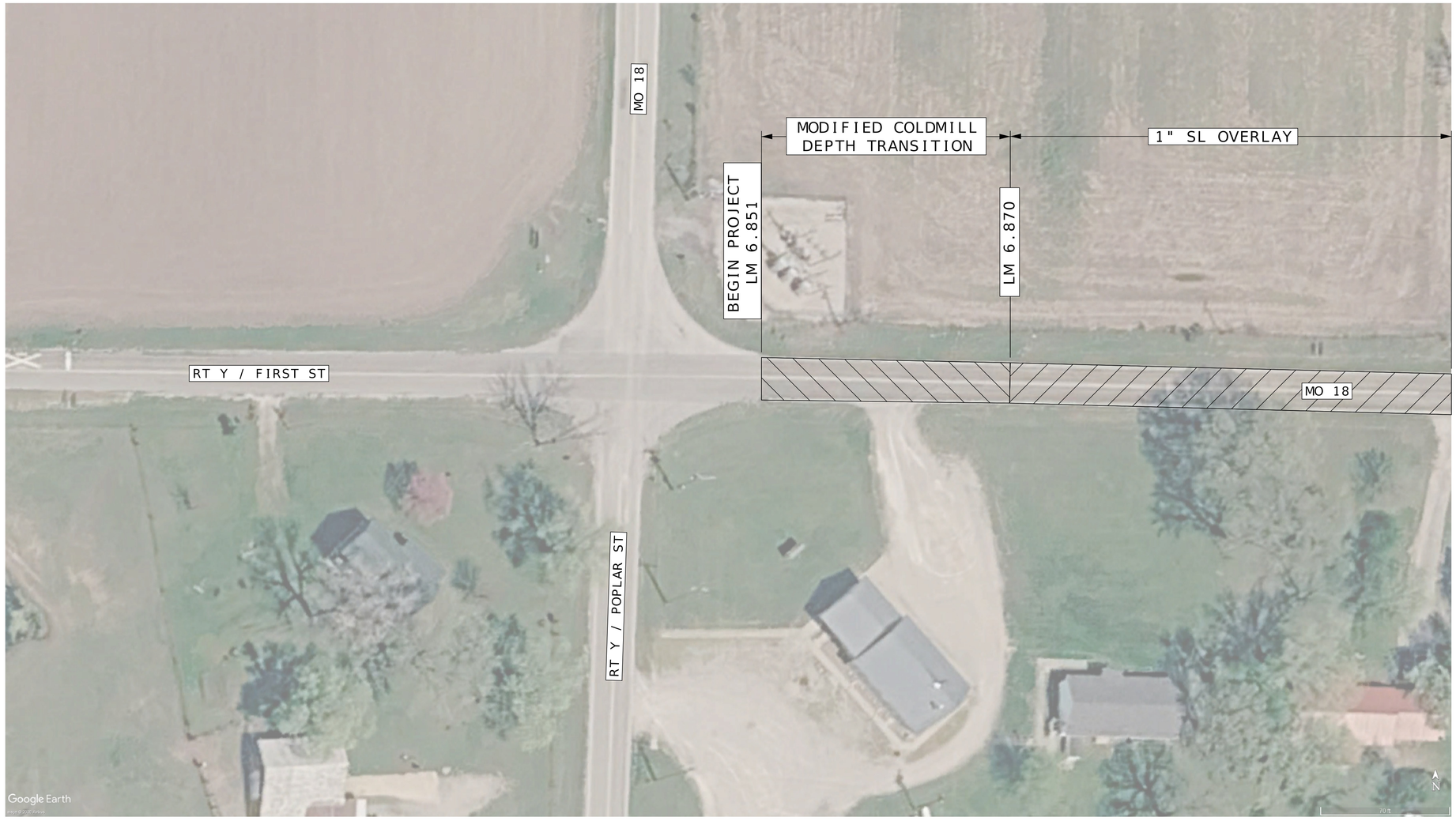
DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

NOTE: ANY WORK INDICATED ON THE PLANS THAT EXTENDS BEYOND THE PROJECTS LIMITS IS CONSIDERED INCIDENTAL TO AND A PART OF CONSTRUCTION OF THIS PROJECT
ALL STATIONS AND/OR LOCATIONS SHOWN ON PLANS ARE APPROXIMATE AND CAN VARY AS APPROVED BY ENGINEER

BEGINNING OF PROJECT



1" SL OVERLAY

MODIFIED COLDMILL DEPTH TRANSITION

NOT TO SCALE

SPECIAL SHEET
SHEET 1 OF 7

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 9/28/2026

ROUTE	STATE
18	MO
DISTRICT	SHEET NO.
SW	4

COUNTY: BATES
JOB NO.: JSR0308
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)

BRIDGE B0397



1" SL OVERLAY

MODIFIED COLDMILL DEPTH TRANSITION

1" COLDMILLING WITH 1" SL FILL

NOT TO SCALE

SPECIAL SHEET
SHEET 2 OF 7

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
18	MO

DISTRICT	SHEET NO.
SW	5

COUNTY
BATES

JOB NO.
JSR0308

CONTRACT ID.

PROJECT NO.

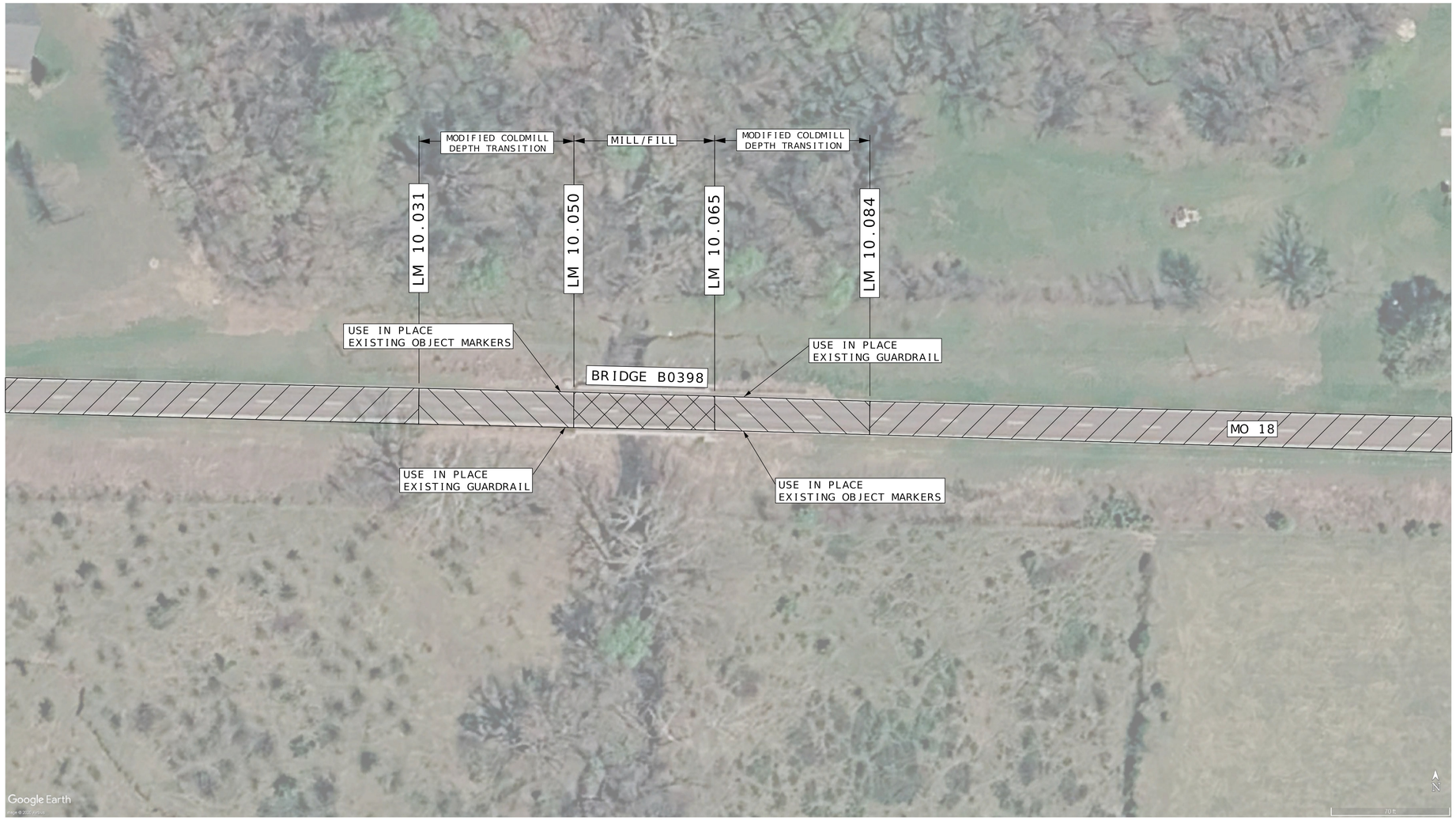
BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

BRIDGE B0398



1" SL OVERLAY

MODIFIED COLDMILL DEPTH TRANSITION

1" COLDMILLING WITH 1" SL FILL

NOT TO SCALE

SPECIAL SHEET
SHEET 3 OF 7

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
18	MO
DISTRICT	SHEET NO.
SW	6

COUNTY
BATES

JOB NO.
JSR0308

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)

RAILROAD EXCEPTION



1" SL OVERLAY

MODIFIED COLDMILL
DEPTH TRANSITION

1" COLDMILLING WITH
1" SL FILL

NOT TO SCALE

SPECIAL SHEET
SHEET 4 OF 7

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
18	MO

DISTRICT	SHEET NO.
SW	7

COUNTY
BATES

JOB NO.
JSR0308

CONTRACT ID.

PROJECT NO.

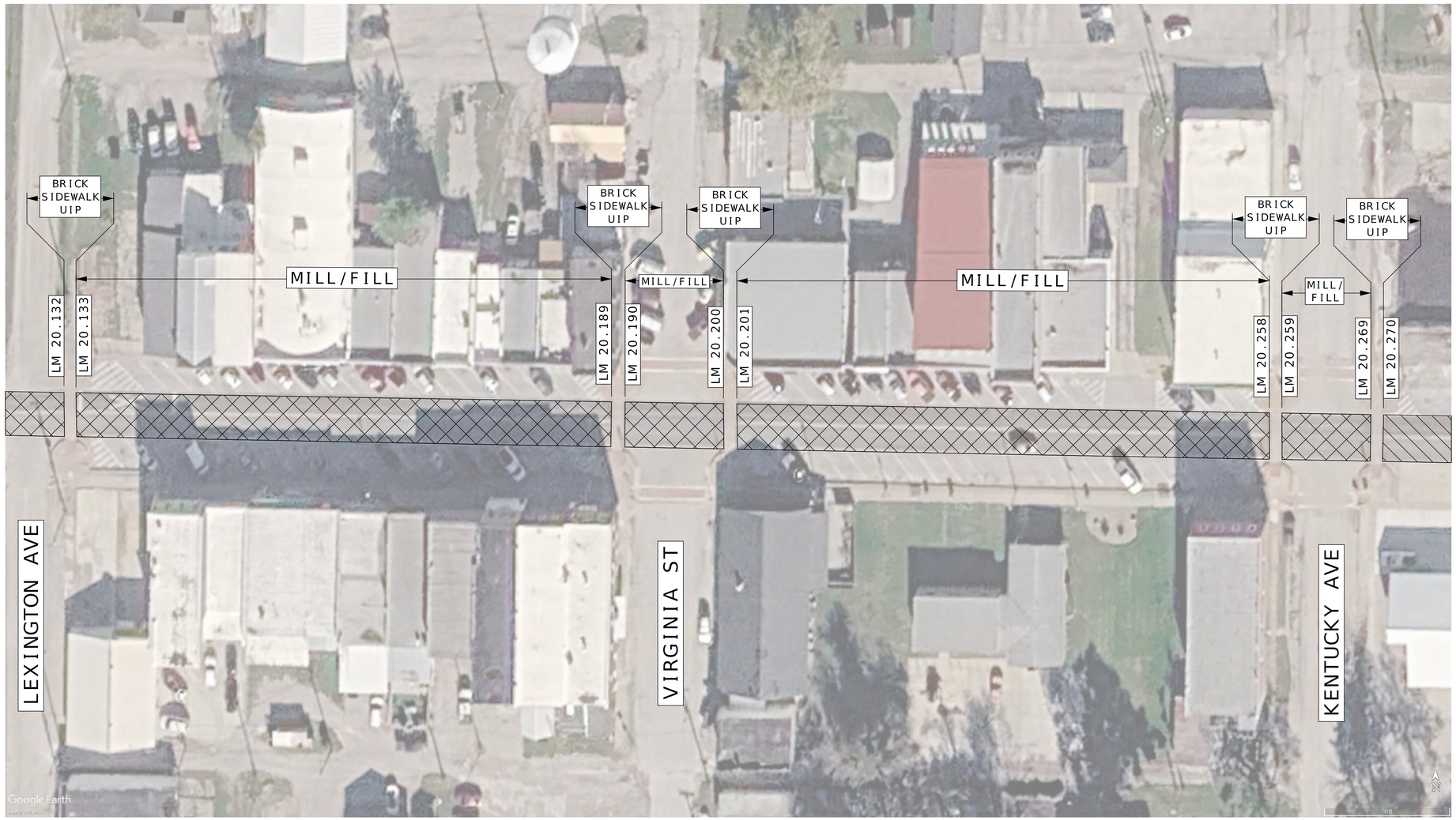
BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

BRICK SIDEWALKS



MODIFIED COLDMILL DEPTH TRANSITION

1" COLDMILLING WITH 1" SL FILL

NOT TO SCALE

SPECIAL SHEET
SHEET 5 OF 7

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 9/28/2026

ROUTE	STATE
18	MO
DISTRICT	SHEET NO.
SW	8

COUNTY: BATES

JOB NO.: JSR0308

CONTRACT ID.:

PROJECT NO.:

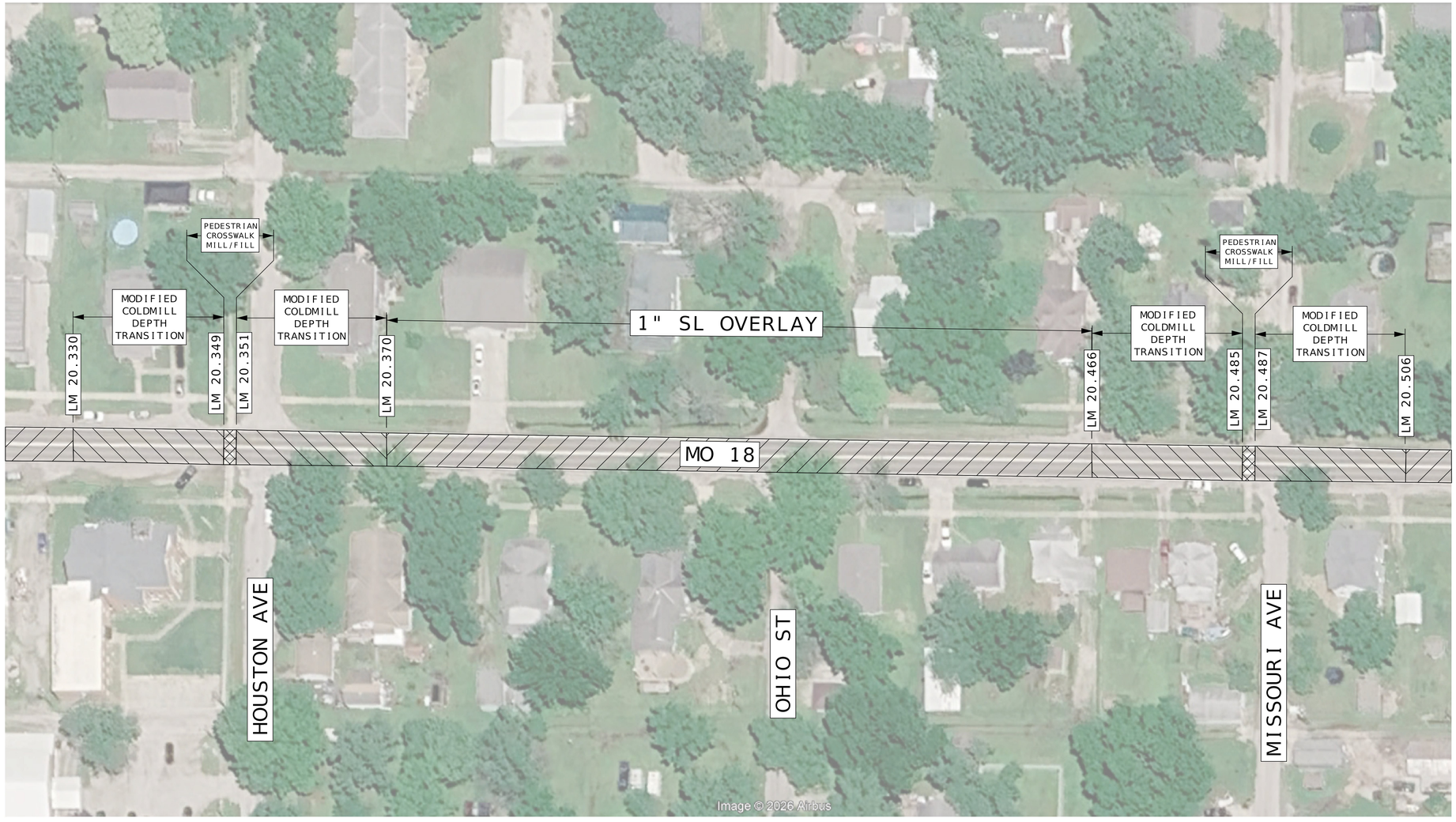
BRIDGE NO.:

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

PEDESTRIAN CROSSING



1" SL OVERLAY

MODIFIED COLDMILL DEPTH TRANSITION

1" COLDMILLING WITH 1" SL FILL

NOT TO SCALE

SPECIAL SHEET
SHEET 6 OF 7

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
18	MO

DISTRICT	SHEET NO.
SW	9

COUNTY
BATES

JOB NO.
JSR0308

CONTRACT ID.

PROJECT NO.

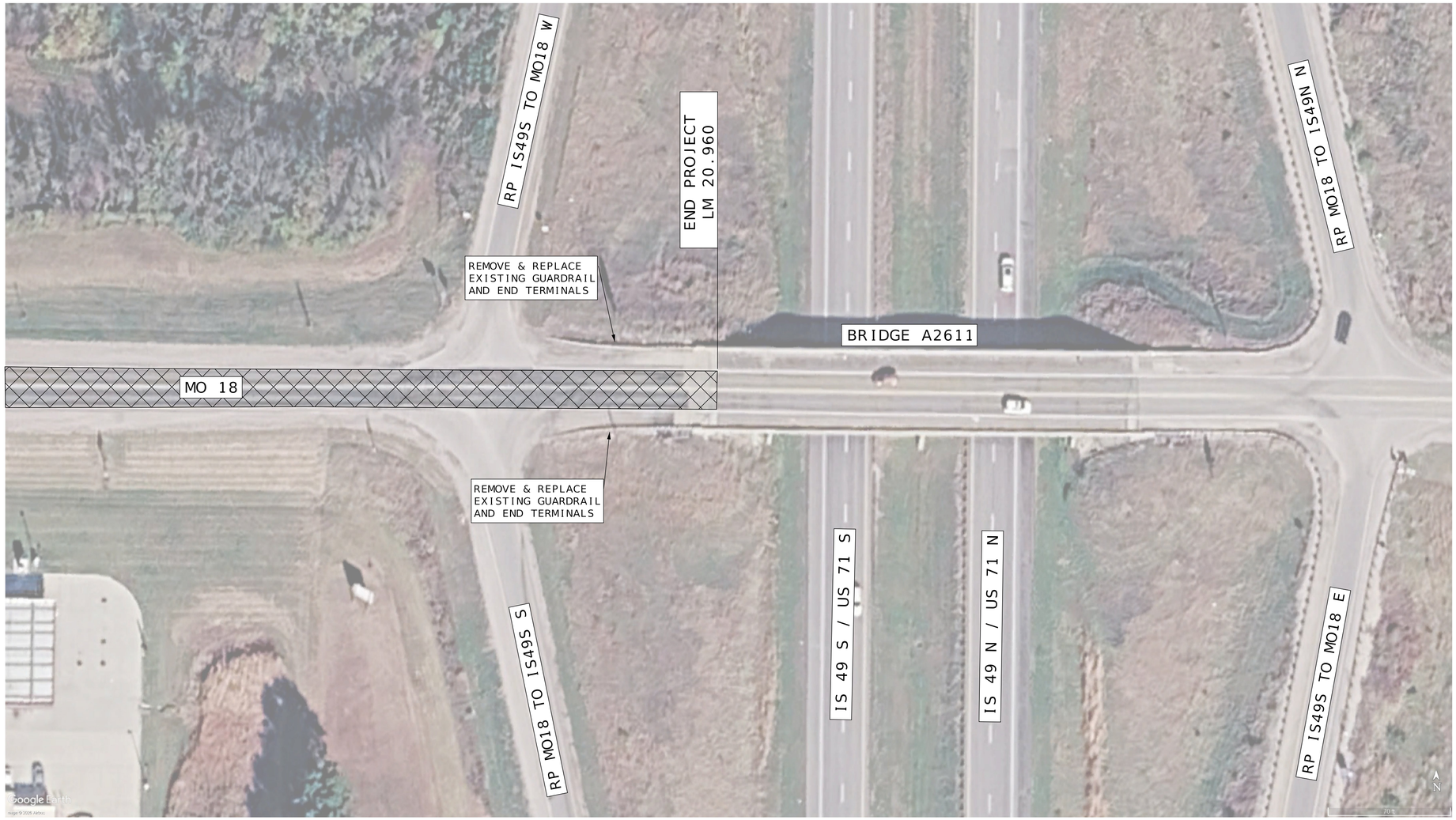
BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

END OF PROJECT



1" COLDMILLING WITH
1" SL FILL

NOT TO SCALE

SPECIAL SHEET
SHEET 7 OF 7

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
18	MO
DISTRICT	SHEET NO.
SW	10

COUNTY
BATES

JOB NO.
JSR0308

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

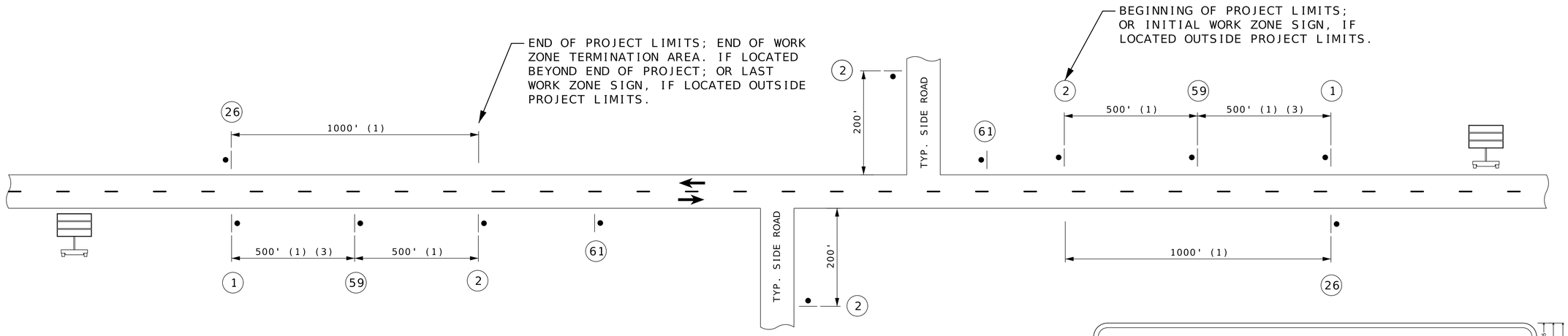
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

GENERAL NOTES:

1. ANY EXISTING SIGNS THAT CONFLICT WITH THE TRAFFIC CONTROL SIGNING SHALL BE COMPLETELY COVERED OR REMOVED.
2. TEMPORARY SIGNING SHOWN IS FOR WORK ON ONE SIDE OF THE ROAD. FOR WORK ON THE OTHER SIDE, REVERSE ORDER OF THE SIGNS AND CHANNELIZERS.
3. SIGNING SHOWN SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE.
4. ALTERNATE TRAFFIC CONTROL MAY BE USED AS NEEDED AT THE APPROVAL OF THE ENGINEER.
5. REFER TO STANDARD DRAWING 616.10, 619.10, AND 620.10 FOR ADDITIONAL DETAILS AND 903.03 FOR SIGN AND SIGN MOUNTING REQUIREMENTS.
6. SPEED LIMIT SIGNS INDICATING THE NORMAL SPEED LIMIT SHALL BE INSTALLED AT THE END OF THE WORK ZONE, PROVIDED NO FURTHER WORK ZONES WILL BE ENCOUNTERED WITHIN THE NEXT 1/2 MILE.
7. TEMPORARY SPEED LIMIT SIGNS SHALL BE COVERED OR REMOVED WHEN THE CONDITIONS REQUIRING REDUCED SPEEDS DO NOT EXIST.
8. NO DIRECT PAYMENT WILL BE MADE FOR THE RELOCATION OF CHANNELIZERS, CONSTRUCTION SIGNS, OR FLASHING ARROW PANEL.
9. ALL SIGNS SHALL BE PORTABLE MOUNT AND ARE TO BE MOVED AS WORK PROGRESSES, UNLESS OTHERWISE NOTED. ALL TRAFFIC CONTROL ITEMS SHALL BE REMOVED FROM THE ROADWAY DURING NON-WORKING HOURS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING PROPER TRAFFIC CONTROL SETUPS THROUGHOUT CONSTRUCTION AS DESCRIBED IN THESE PLANS OR AS APPROVED BY THE ENGINEER.
11. WHERE MINIMUM LANE WIDTHS CANNOT BE ACHIEVED ON THE SIDE STREETS, THE CONTRACTOR SHALL CLOSE HALF OF THE APPROACH AND POSITION A FLAGGER AT EACH END OF THE WORK AREA. LOCATION TO BE DETERMINED BY THE ENGINEER. ADVANCE FLAGGER SIGNING SHALL BE INSTALLED AS OUTLINED IN THE MUTCD.
12. THE CONTRACTOR SHALL MAINTAIN PUBLIC ACCESS TO ALL BUSINESSES AND STREETS. NO STREET OR ENTRANCE SHALL BE COMPLETELY BLOCKED.
13. SPACING & DISTANCES OF TRAFFIC CONTROL DEVICES ARE APPROXIMATE. THE EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD & APPROVED BY THE ENGINEER.
14. TRAFFIC CONTROL SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
15. ADJUST ADVANCE WARNING SIGN SPACING TO AVOID SIGN PLACEMENT WITHIN THE LIMITS OF THE RAILROAD RIGHT OF WAY.
16. CONTRACTOR SHALL COORDINATE WITH ADA PROJECT, JXXXXXX.



TYPICAL BEGINNING AND END OF PROJECT

(UNDIVIDED HIGHWAY)

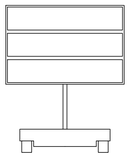
(1) DISTANCE MAY BE ADJUSTED ACCORDING TO FIELD CONDITIONS. WHERE TRAFFIC BACKUPS ARE EXPECTED BEYOND THE ADVANCE WARNING AREA, ADDITIONAL SIGNING MAY BE NEEDED.

(2) CONST-5-96 SIGN IS PLACED IN A VISIBLE AREA WITHIN THE PROJECT LIMITS PROVIDED ITS PLACEMENT DOES NOT DISRUPT A SEQUENCE OF SIGNS. IF A VISIBLE LOCATION WITHIN THE PROJECT IS NOT AVAILABLE, THE SIGN MAY BE PLACED 500 FEET BEFORE SIGN CONST-7-72.

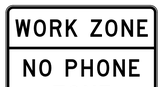
(3) THE "WORK ZONE NO PHONE ZONE" SIGN IS PLACED A MINIMUM OF 500 FEET BEFORE THE ROAD WORK AHEAD SIGN.

(4) CMS PLACEMENT SHALL BE APPROVED BY THE ENGINEER.

(5) GO20-1 IS NOT USED WHEN WORK AREA IS LESS THAN 2 MILES. GO20-2 IS OPTIONAL WHEN GO20-1 IS NOT USED

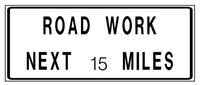


(4)



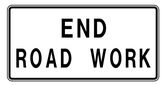
CONST-8

59 (3)



GO20-1

1 (5)



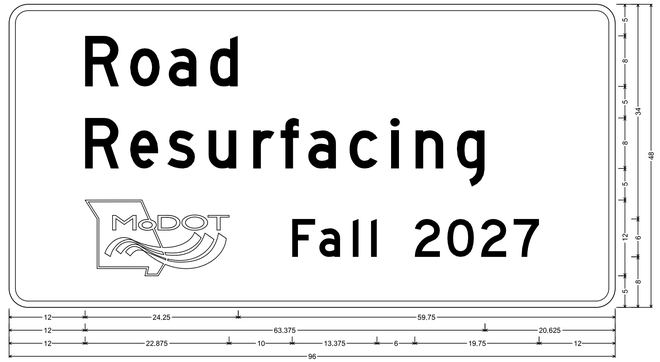
GO20-2

26 (5)



WO20-1

2

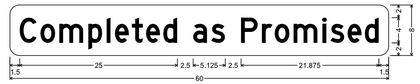


CONST-5 SH-FLAT SHEET;
3.000" Radius, 1.000" Border, White on, Green;
"Road", D; "Resurfacing", D; "Fall 2027", D;
Table of letter and object lefts

R	o	a	d											
12.000	19.125	25.250	31.875											
R	o	a	d		r	f	a	c	i	n	g			
12.000	19.125	25.000	31.625	38.625	43.000	47.375	53.875	60.500	64.375	70.875				
	F	a	l	l		2	0	2	7					
12.000	44.875	49.125	54.500	57.375	64.250	69.375	74.750	79.875						

CONST-5-96

61 (2)



CONST-5P-60 SHF-FLAT SHEET FLUORESCENT;
1.500" Radius, No border, Yellow;
"Completed as Promised" Black, D 65% spacing;
Table of letter and object lefts

C	o	m	p	l	e	t	e	d	a	s				
1.500	4.875	7.875	12.375	15.375	16.625	19.375	21.500	24.250	29.000	31.875				
P	r	o	m	i	s	e	d							
36.625	39.875	41.875	44.875	49.500	50.750	53.500	56.250							

NOT TO SCALE

TRAFFIC CONTROL SHEET 1 OF 7

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 9/28/2026

ROUTE	STATE
18	MO
DISTRICT	SHEET NO.
SW	11

COUNTY: BATES

JOB NO.: JSR0308

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)



BRIDGE
OR
RAMP

WO20-1

2



WO20-4

7



WO20-7a

8

GO20-5aP



R2-1

54

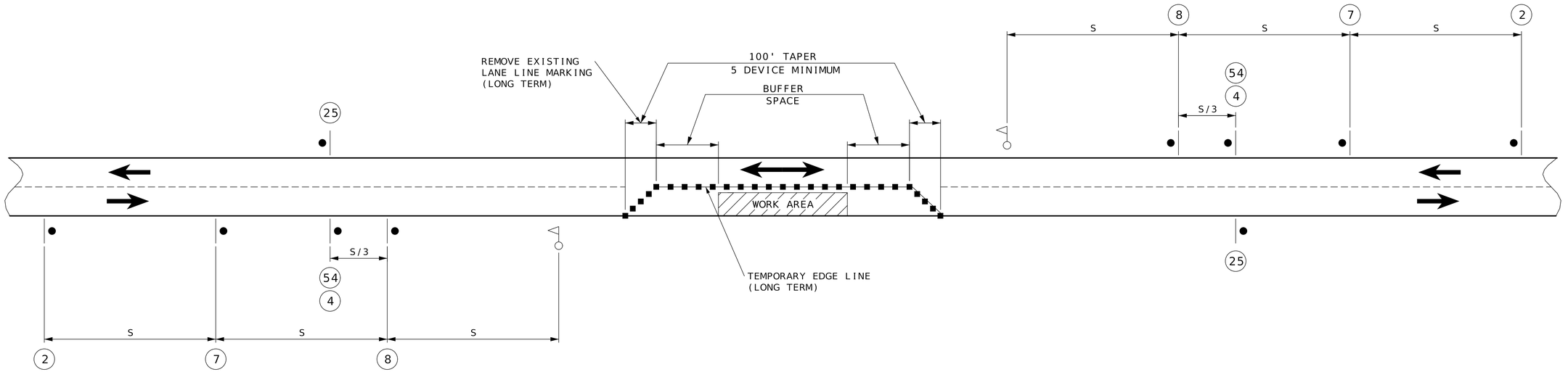
4



R2-1

25

(NORMAL SPEED)



NOTES:
THIS PLAN IS FOR DAYLIGHT FLAGGING OPERATIONS ONLY. WHEN NIGHT WORK IS REQUIRED, OR OTHERWISE ALLOWED BY THE ENGINEER, WORK ZONE LIGHTING SHALL BE PROVIDED IN ACCORDANCE WITH SEC 616.5.2.

CHANNELIZING DEVICES LOCATED DOWNSTREAM OF THE ONE-LANE, TWO-WAY TAPER ARE OPTIONAL.
THESE DEVICES SHOULD BE ELIMINATED WHEN THEIR USE WILL REDUCE THE USABLE LANE WIDTH, INCLUDING ANY ACCEPTABLE SHOULDERS, TO LESS THAN 10' OR WILL SIGNIFICANTLY AFFECT THE RESURFACING OPERATION.

FLAG ASSEMBLIES FOR SIGN W020-7a ARE SUBSIDIARY TO THE SIGN.

TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM CLOSURE. NO DIRECT PAY.

SPEED	SIGN SPACING (FT) (1)	CHANNELIZER SPACING (FT)	OPTIONAL
PERMANENT POSTED (MPH)	UNDIVIDED HIGHWAYS (S)	BUFFER/ WORK AREAS	BUFFER LENGTH (FT)
0-35	200	40	250
40-45	350	80	360
50-55	500	80	495
60-70	1000	120	730

SPACING NOTES:

(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, AS APPROVED BY ENGINEER.

• SIGN (SINGLE SIDED)

FLAGGER

■ CHANNELIZER

LANE CLOSURE USING FLAGGERS
(UNDIVIDED HIGHWAY)

NOT TO SCALE

TRAFFIC CONTROL
SHEET 2 OF 7



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
18	MO
DISTRICT	SHEET NO.
SW	12

COUNTY
BATES

JOB NO.
JSR0308

CONTRACT ID.

PROJECT NO.

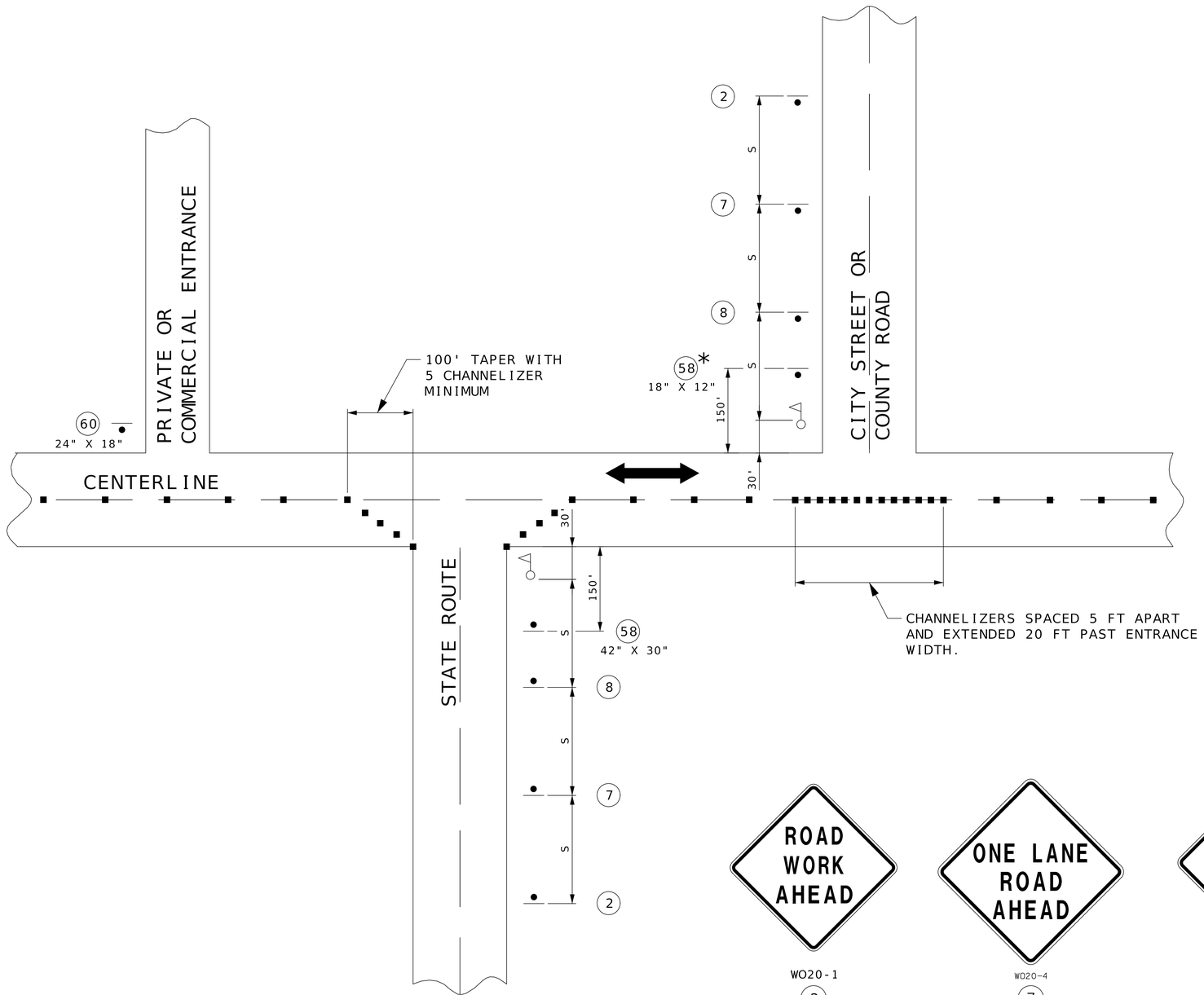
BRIDGE NO.

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

SIDE ROADS ENTERING WORK ZONES



SPEED	SIGN SPACING (FT.)	CHANNELIZER SPACING (FT)
PERMANENT POSTED (MPH)	NON-DIVIDED HIGHWAYS (S)	BUFFER WORK AREA
0-35	200	40
40-45	350	80
50-55	500	80
60-70	1000	120

DISTANCE MAY BE ADJUSTED ACCORDING TO FIELD CONDITIONS.

NOTES:
WARNING SIGNS SHALL BE ERECTED AT EACH INTERSECTION WITH ANOTHER STATE HIGHWAY WITHIN THE WORK ZONE.

ADDITIONAL WARNING SIGNS SHALL BE ERECTED AT OTHER INTERSECTIONS WITHIN THE WORK ZONE, AS DIRECTED BY THE ENGINEER.

- SIGN (SINGLE SIDED)
- FLAGGER
- CHANNELIZER

IF USED AT NIGHT, THE FLAGGER STATIONS SHALL BE ILLUMINATED WITH AN AVERAGE MAINTAINED INTENSITY OF 0.6 FOOTCANDLES (6.5 LUX).



GO20-4a
(58)

SHALL BE USED ON ALL INTERSECTIONS.

* THE SMALLER 18" X 12" SIGN 58 IS USED ON ALL OTHER NON-STATE ROUTES (CITY STREETS, COUNTY ROADS, ETC.).



24" X 18"
(60)

SHALL ONLY BE USED AT PRIVATE AND COMMERCIAL ENTRANCES. SEE STD PLAN 616.10 FOR SIGN DETAILS.

WO20-1
(2)

WO20-4
(7)



WO20-7a
(8)

NOT TO SCALE

TRAFFIC CONTROL
SHEET 3 OF 7

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
18	MO
DISTRICT	SHEET NO.
SW	13

COUNTY
BATES

JOB NO.
JSR0308

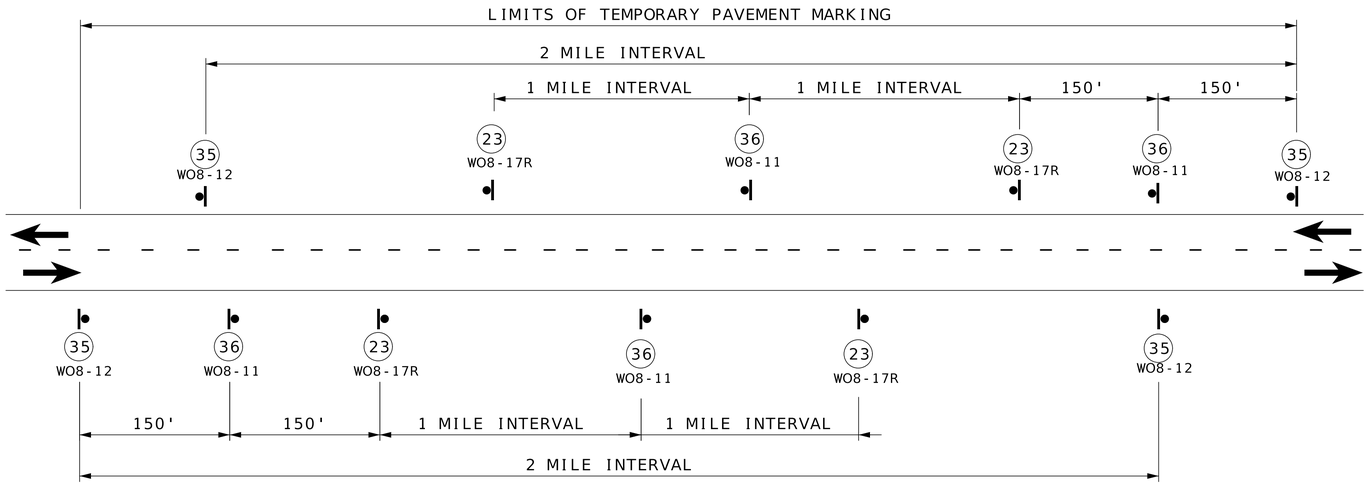
CONTRACT ID.

PROJECT NO.

BRIDGE NO.

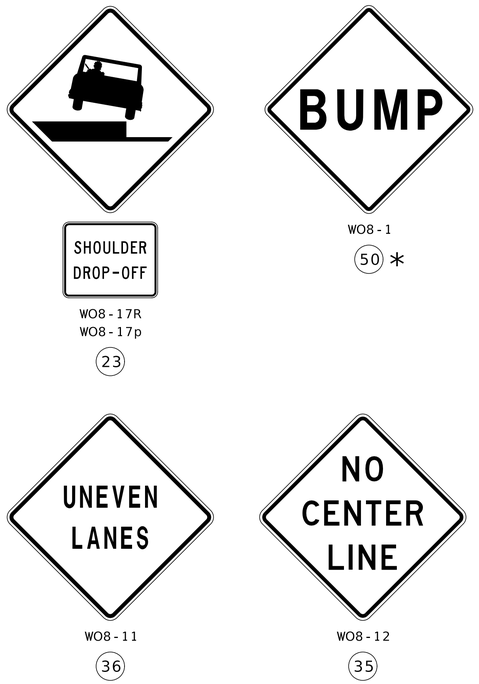
DESCRIPTION	DATE

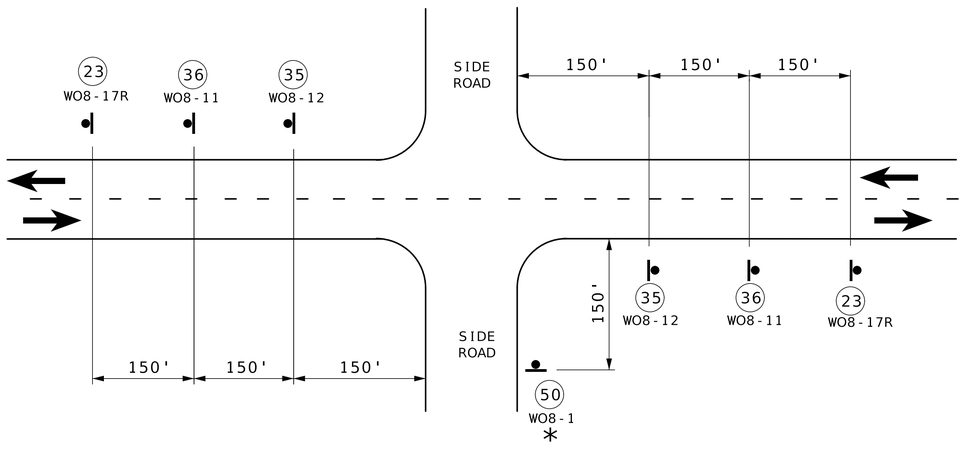
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



SIGN SPACING FOR MAINLINE

(DETAIL SHOWN IS BASED ON A PROJECT MEETING ALL CONDITIONS: NO CENTER STRIPE, UNEVEN LANES, SHOULDER DROP-OFF AND BUMP.)
WHEN BOTH UNEVEN LANES AND SHOULDER DROP-OFF SIGNS ARE USED, BOTH SIGHS SHALL STAY IN PLACE UNTIL BOTH CONDITIONS NO LONGER EXIST.
IF ONLY ONE CONDITION EXISTS (UNEVEN LANES OR SHOULDER DROP-OFF). THE SIGN SPACING SHALL BE AT 1 MILE INTERVALS.





SIGN SPACING AT STATE ROUTE INTERSECTIONS

* BUMP SIGN SHOULD BE IN ACCORDANCE WITH STANDARD PLAN 619.10.
UNLESS REQUIRED BY STANDARD PLAN 619.10, BUMP SIGN AT CONTRACTOR'S EXPENSE, NO DIRECT PAY. SEE STANDARD SPECIFICATION 622.2.4.

GENERAL NOTES:

FOR DETAILS OF TEMPORARY PAVEMENT MARKING, SEE STD. 620.10, SHEET 1 OF 5.

SIGN (35) AND TEMPORARY PAVEMENT MARKING INSTALLED WHERE CENTERLINE STRIPING HAS BEEN COVERED OR REMOVED. SIGNS ARE TO REMAIN IN PLACE UNTIL THE PERMANENT CENTERLINE PAVEMENT MARKINGS ARE IN PLACE. SIGNS SHALL BE COVERED OR REMOVED WHEN PAVEMENT CENTERLINE MARKING HAS BEEN INSTALLED.

SIGN (35) IS PLACED AT APPROXIMATELY TWO-MILE INTERVALS AND AT STATE ROUTE JUNCTIONS. WHEN THE INSTALLATION AT A JUNCTION IS WITHIN ONE-EIGHTH MILE OF THE NORMAL MAINLINE SIGN (35) , THE LATTER MAY BE ELIMINATED.

ALL SIGNS SHALL BE POST MOUNTED AND IN ACCORDANCE WITH STANDARD PLAN 616.10 AND 903.03.

WHEN SHOULDER DROP-OFF SIGNS ARE IN PLACE FOR GREATER THAN THREE DAYS, THE SHOULDER DROP-OFF PLAQUE SHOULD BE USED IN ADDITION WITH THE SHOULDER DROP-OFF SIGN.

FOR BRIDGE EXCEPTIONS AND COLDMILLED AREAS, LOCATION OF SIGN (50) TO BE APPROVED BY THE ENGINEER. UNLESS REQUIRED BY STANDARD PLAN 619.10, SIGN (50) AT CONTRACTOR'S EXPENSE, NO DIRECT PAY. SEE STANDARD SPECIFICATION 622.2.4.

NOT TO SCALE

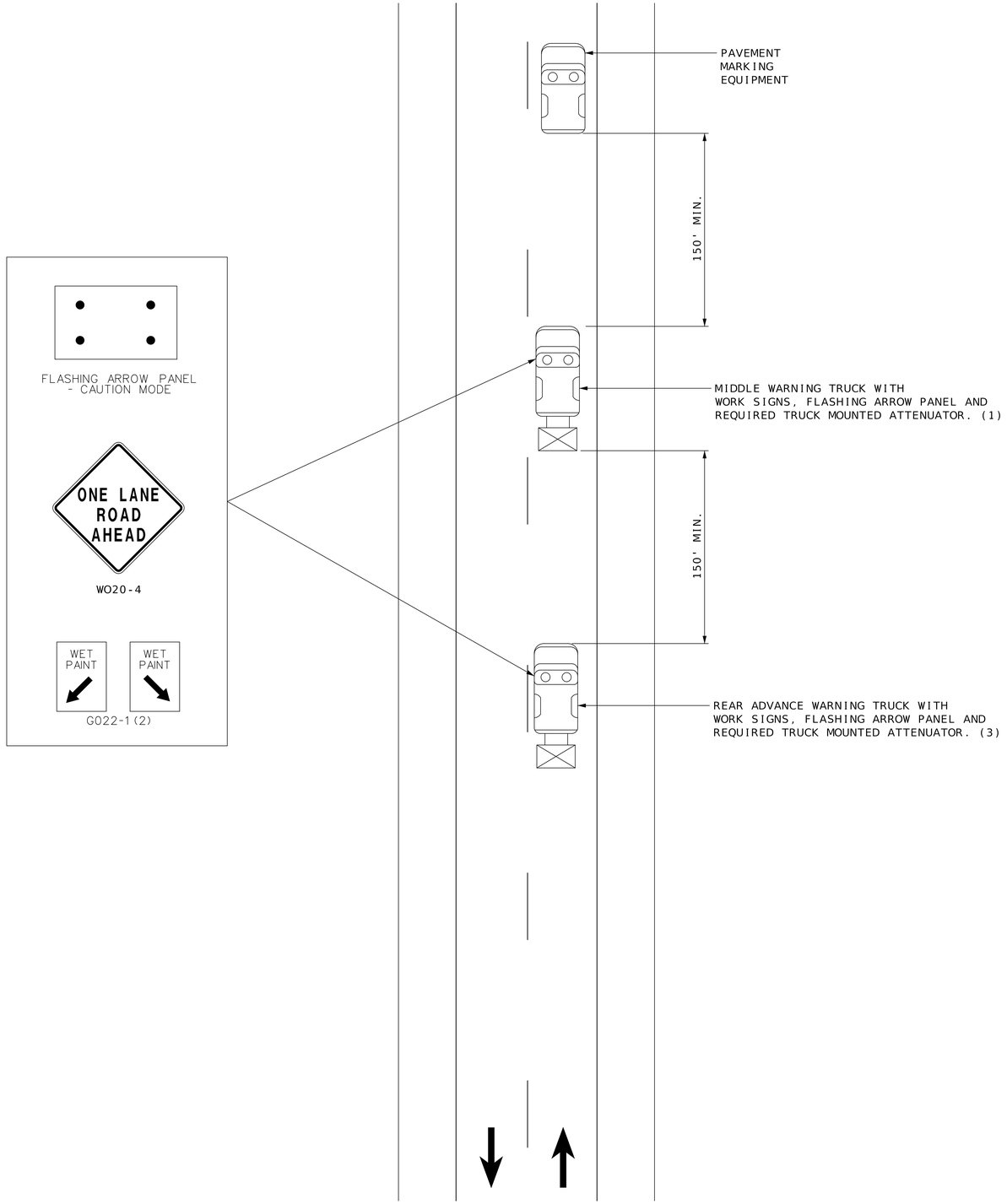
TRAFFIC CONTROL
SHEET 4 OF 7

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 9/28/2026
ROUTE 18 | STATE MO
DISTRICT SW | SHEET NO. 14
COUNTY BATES
JOB NO. JSR0308
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

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



PAVEMENT MARKING ON TWO-LANE HIGHWAY

NOTES:

UPON APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY PROVIDE ADDITIONAL PROTECTIVE TRUCKS EQUIPPED WITH PROPER WARNING DEVICES.

PROTECTIVE TRUCKS AND WORK VEHICLES SHALL DISPLAY HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS.

VEHICLE HAZARD WARNING SIGNALS SHALL NOT BE USED INSTEAD OF THE VEHICLE'S HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS.

VEHICLE-MOUNTED SIGNS SHALL BE MOUNTED IN A MANNER SUCH THAT THEY ARE NOT OBSCURED BY EQUIPMENT OR SUPPLIES. SIGN LEGENDS ON VEHICLE-MOUNTED SIGNS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS.

FLASHING ARROW PANELS SHALL BE INCIDENTAL TO TRUCK MOUNTED ATTENUATORS, WHEREVER USED. NO ADDITIONAL PAYMENT WILL BE MADE.

(1) TRUCK IS OPTIONAL ON TWO-LANE UNDIVIDED HIGHWAYS IF SIGNING AND ARROW BOARD ARE MOUNTED ON THE PAVEMENT MARKING EQUIPMENT.

(2) WET PAINT SIGNS ARE INSTALLED TO INDICATE THE SIDE IN WHICH THE PAVEMENT MARKING MATERIAL IS BEING APPLIED. AT THE CONTRACTOR'S OPTION, A FRONT FACING WET PAINT SIGN MAY BE INSTALLED ON THE LEFT SIDE OF THE PAVEMENT MARKING EQUIPMENT.

(3) REAR WARNING TRUCK IS POSITIONED AT THE NO TRACK POINT OF THE PAVEMENT MARKING MATERIAL, OR VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE, OR SPACING SHOWN, WHICHEVER IS GREATER.

NOT TO SCALE

TRAFFIC CONTROL
SHEET 5 OF 7

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 9/28/2026

ROUTE	STATE
18	MO
DISTRICT	SHEET NO.
SW	15

COUNTY: BATEs

JOB NO.: JSR0308

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)

SPEED	SIGN SPACING (FT)	MINIMUM TAPER LENGTH (L) FOR LANE WIDTHS (W)			OPTIONAL	CHANNELIZER SPACING (FT)	
NORMAL POSTED (MPH)	UNDIVIDED (S)	10 FT	11 FT	12 FT	BUFFER LENGTH (FT) (B)	TAPERS	BUFFER/ WORK AREAS
0-35	200	205	225	245	250	35	40
40-45	350	450	495	540	360	40	80
50-55	500	550	605	660	495	50	80
60-70	1000	700	770	840	730	60	120

NOTES:

(1) NEXT XX MILES SIGN NOT REQUIRED FOR NARROW LANE SECTIONS LESS THAN ONE MILE.



WO20-1

(2)



WO21-5

(21)



WO5-1



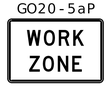
(1)

WO7-3a

(43) *

*OMIT SIGN 43 FOR NO TRAVELWAY ENCROACHMENT.

GO20-5aP





R2-1

(54)
(4)



R2-1

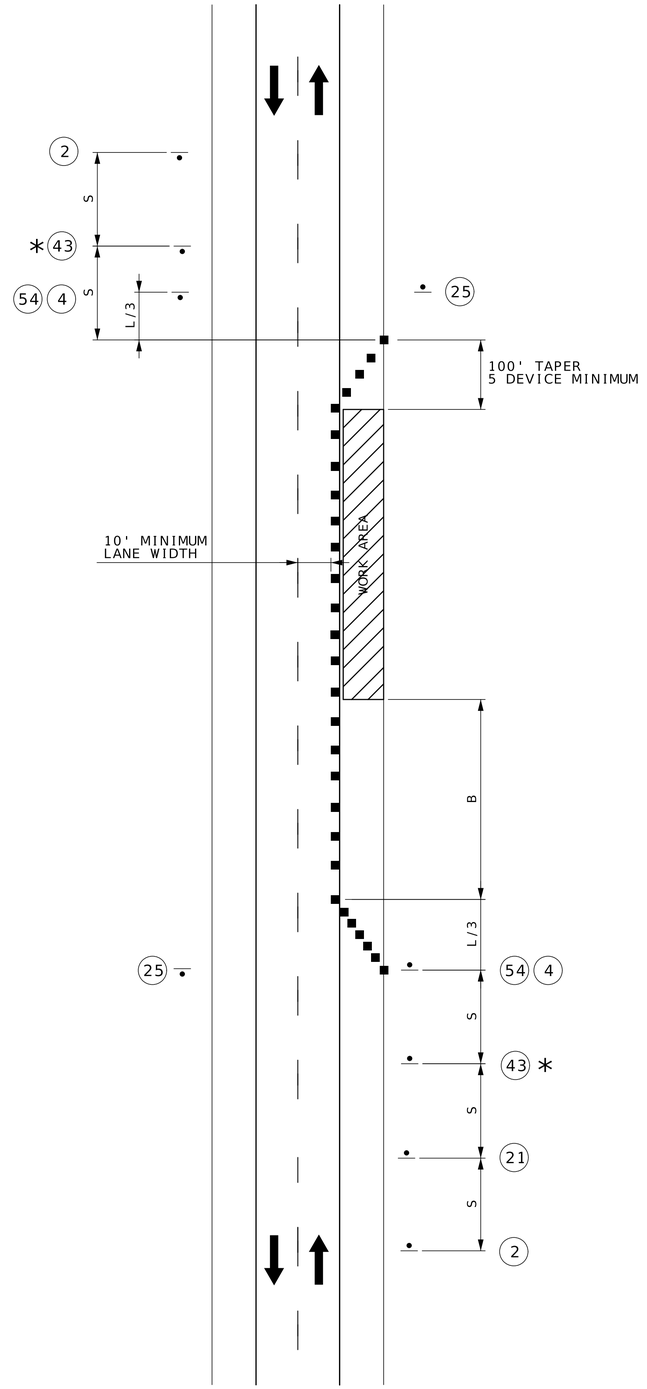
(25)

(NORMAL SPEED)

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZER

SHOULDER WORK WITH MINOR TRAVELWAY ENCROACHMENT OR NO ENCROACHMENT (UNDIVIDED HIGHWAY)



NOT TO SCALE

TRAFFIC CONTROL
SHEET 6 OF 7

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE 18 | STATE MO

DISTRICT SW | SHEET NO. 16

COUNTY
BATES

JOB NO.
JSR0308

CONTRACT ID.

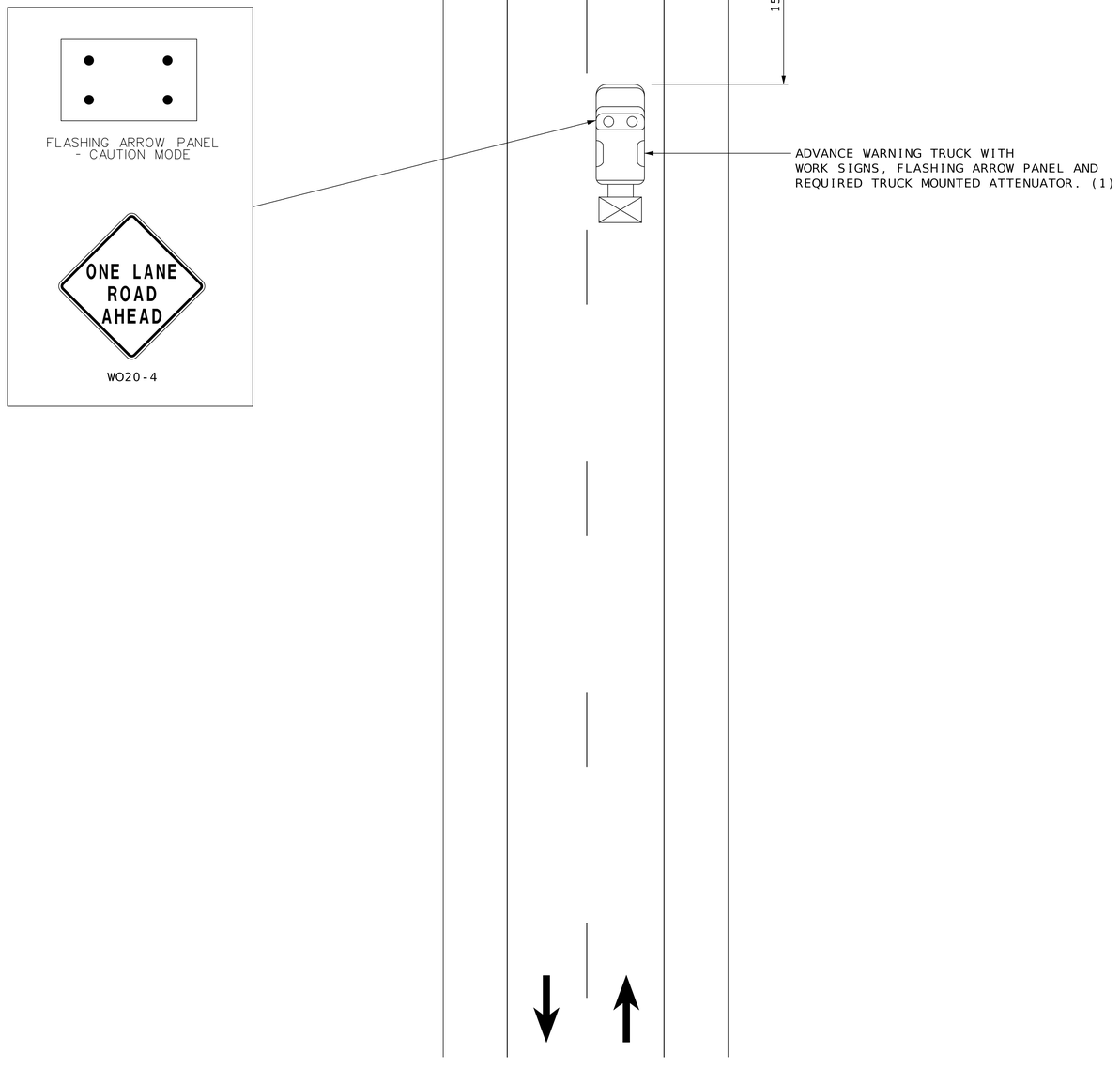
PROJECT NO.

BRIDGE NO.

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



MOBILE OPERATION ON TWO-LANE HIGHWAY

NOTES:

UPON APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY PROVIDE ADDITIONAL PROTECTIVE TRUCKS EQUIPPED WITH PROPER WARNING DEVICES.

PROTECTIVE TRUCKS AND WORK VEHICLES SHALL DISPLAY HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS.

VEHICLE HAZARD WARNING SIGNALS SHALL NOT BE USED INSTEAD OF THE VEHICLE'S HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS.

VEHICLE-MOUNTED SIGNS SHALL BE MOUNTED IN A MANNER SUCH THAT THEY ARE NOT OBSCURED BY EQUIPMENT OR SUPPLIES. SIGN LEGENDS ON VEHICLE-MOUNTED SIGNS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS.

FLASHING ARROW PANELS AND SIGNS SHALL BE INCIDENTAL TO TRUCK MOUNTED ATTENUATORS, WHEREVER USED. NO ADDITIONAL PAYMENT WILL BE MADE.

(1) ADVANCE WARNING TRUCK IS POSITIONED AT VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE OR SPACING SHOWN, WHICHEVER IS GREATER.

NOT TO SCALE

TRAFFIC CONTROL
SHEET 7 OF 7

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
18	MO
DISTRICT	SHEET NO.
SW	17

COUNTY
BATES

JOB NO.
JSR0308

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)

DESIGN DESIGNATION

A.A.D.T. - 2024 = 6585

T = 11.1%

V = 35 M.P.H. / 55 M.P.H.

FUNCTIONAL CLASSIFICATION - MAJOR COLLECTOR

NO NEW R/W REQUIRED

CONVENTIONAL SYMBOLS

(USED IN PLANS)

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

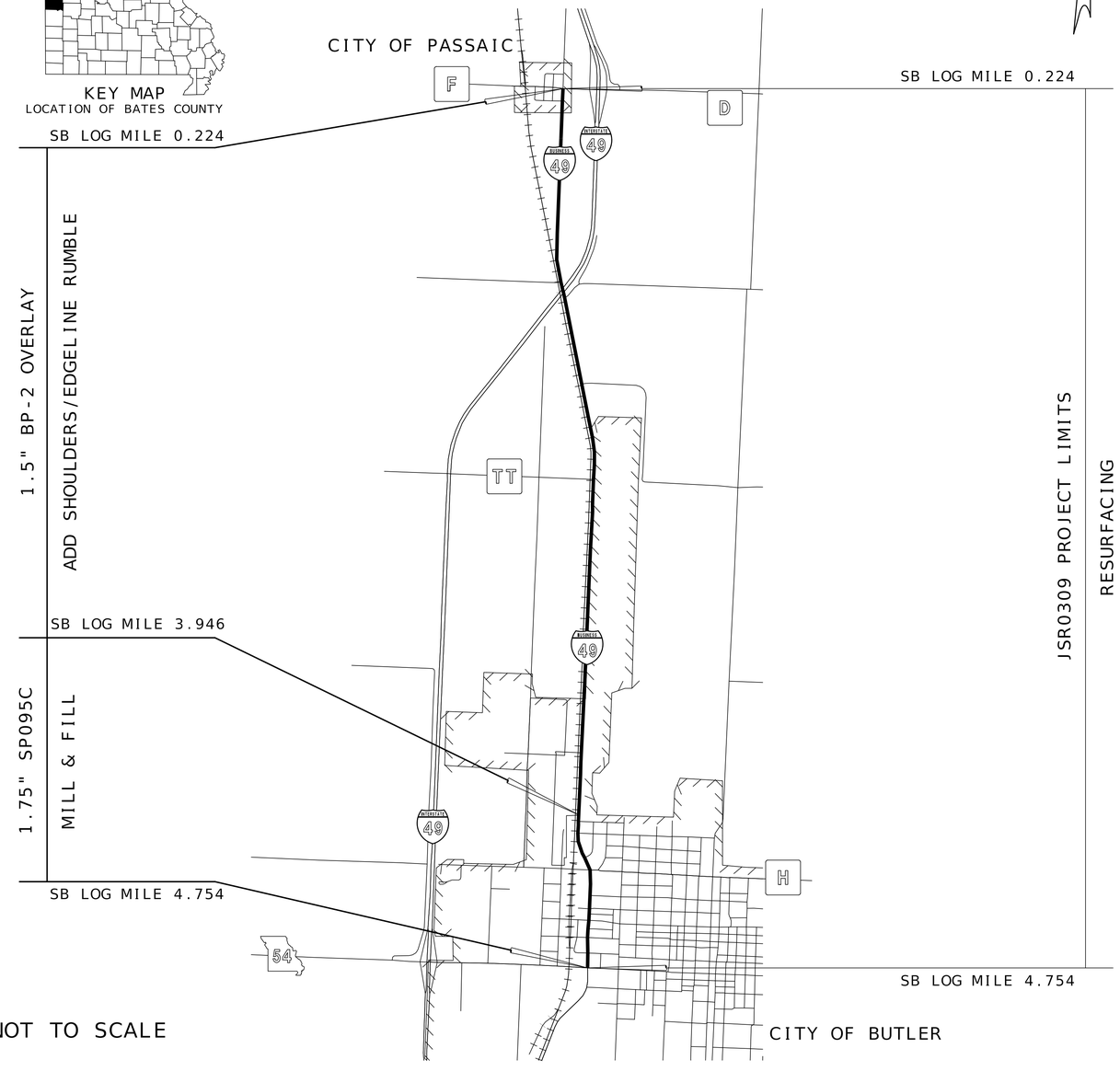
NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

PLANS FOR PROPOSED STATE HIGHWAY BATES COUNTY



KEY MAP
LOCATION OF BATES COUNTY



NOT TO SCALE

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

INDEX OF SHEETS

DESCRIPTION	SHEET NUMBER
TITLE SHEET	1
TYPICAL SECTIONS (TS) (7 SHEETS)	2
QUANTITIES (QU) (3 SHEETS)	3
TRAFFIC CONTROL SHEETS (TC)	4-14

LENGTH OF PROJECT

BEGINNING OF PROJECT	LOG MILE	0.224
END OF PROJECT	LOG MILE	4.754
APPARENT LENGTH		23918.40 FEET
EQUATIONS AND EXCEPTIONS:		
TOTAL CORRECTIONS		0.00 FEET
NET LENGTH OF PROJECT		23918.40 FEET
STATE LENGTH		4.53 MILES
FOR INFORMATION ONLY ESTIMATED DISTURBED ACRES		1.80 ACRES

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 9/28/2026

ROUTE	STATE
LP 49	MO

DISTRICT	SHEET NO.
SW	1

COUNTY BATES

JOB NO. JSR0309

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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

NOTES: AS APPROVED BY THE ENGINEER, THE 2' MODIFIED A3 SHOULDER MAY BE REDUCED TO 1' MINIMUM WIDTH IN SPECIFIC AREAS BASED ON EXISTING FIELD CONDITIONS. THE MODIFIED TYPE A3 SHOULDER SHALL NOT BE BUILT IN AREAS WHERE THE EXISTING SLOPE, GUARDRAIL, OR CULVERT HEADWALLS DO NOT PERMIT. SEE JOB SPECIAL PROVISIONS.

IF THE CONTRACTOR ELECTS TO USE CONCRETE FOR THE SHOULDERS, THE QUANTITY OF ASPHALT AND TACK SHALL BE ADJUSTED IN ACCORDANCE WITH THE JOB SPECIAL PROVISION-OPTIONAL SHOULDER.

LINEAR GRADING CLASS 2 FOR SHOULDERS CONFINED TO FORESLOPE.

LANE WIDTH NOTED IS TYPICAL LANE WIDTH.
ADJUST PAVING WIDTHS TO EXISTING FIELD CONDITIONS.

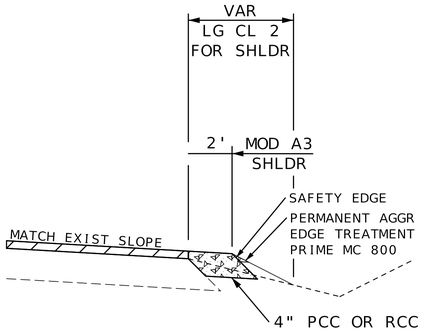
SURFACE PLACEMENT - ONE PASS PER LANE

NO S.E. CORRECTION

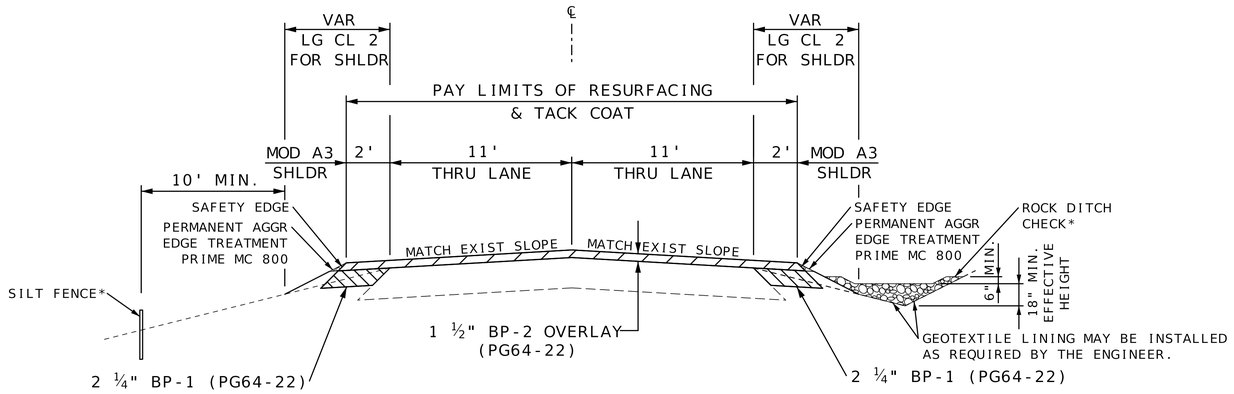
REVISED: 8/26/2024

ASPHALT FACTORS	
	COMBINED FACTOR
BP-1 (PG64-22)	2.005 TONS/CY
BP-2 (PG64-22)	1.959 TONS/CY
TACK COAT	
OVERLAY	0.08 GAL/SY
PRIME LIQUID ASPHALT MC 800	
PERMANENT AGGREGATE EDGE TREATMENT	0.25 GAL/SY

IRREGULARITIES: 75 TONS/MI



CONCRETE SHOULDERS



ROUTE LP 49

LOG MILE 0.224 TO LOG MILE 3.946

* AT LOCATIONS SHOWN ON THE QUANTITY SHEETS, ALL DEVICES WILL BE INSTALLED AS NECESSARY AT THE DISCRETION OF THE ENGINEER.

TYPICAL SECTIONS
SHEET 1 OF 7

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 9/28/2026

ROUTE	STATE
LP 49	MO
DISTRICT	SHEET NO.
SW	2

COUNTY: BATES
JOB NO.: JSR0309
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION	DATE

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

NOTES: LANE WIDTH NOTED IS TYPICAL LANE WIDTH.
ADJUST PAVING WIDTHS TO EXISTING FIELD CONDITIONS.

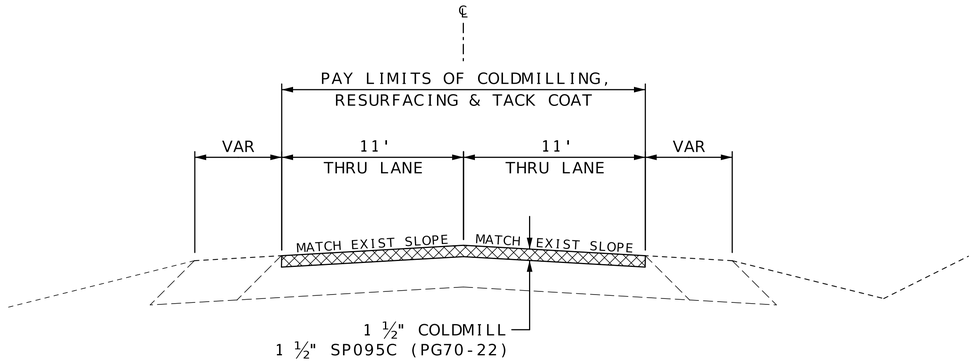
NO ADDITIONAL PAYMENT WILL BE MADE FOR ADDITIONAL COLDMILLING (UP TO 3") REQUIRED TO REMOVE ENTIRE TOP LIFT DUE TO DELAMINATION. THIS APPLIES TO ENTIRE PROJECT LIMITS.

SURFACE PLACEMENT - ONE PASS PER LANE

NO S.E. CORRECTION

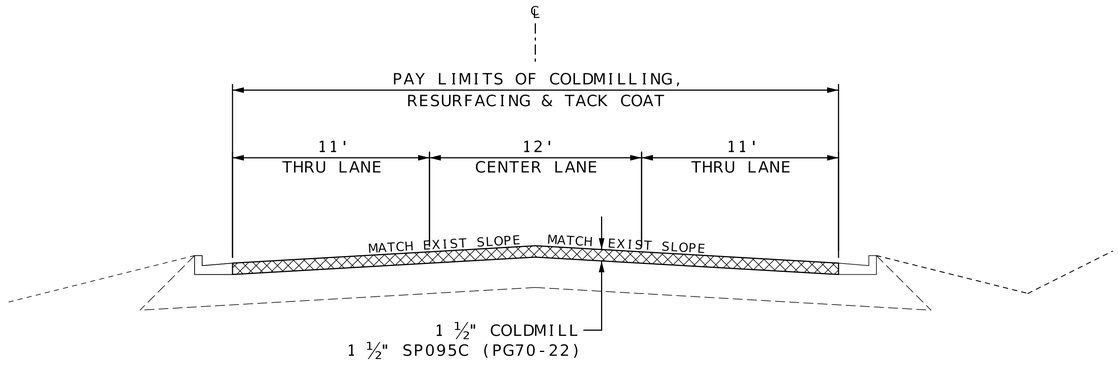
REVISED: 8/26/2024

ASPHALT FACTORS	
	COMBINED FACTOR
SP095C (PG70-22)	1.973 TONS/CY
TACK COAT	
MILLING	0.10 GAL/SY
IRREGULARITIES: 75 TONS/MI	



ROUTE LP 49

LOG MILE 3.946 TO LOG MILE 4.254



ROUTE LP 49

LOG MILE 4.254 TO LOG MILE 4.754

TYPICAL SECTIONS
SHEET 2 OF 7

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 9/28/2026

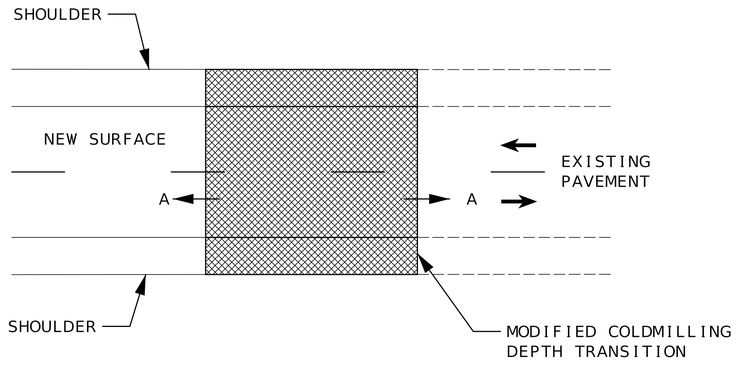
ROUTE	STATE
LP 49	MO
DISTRICT	SHEET NO.
SW	2

COUNTY: BATES
JOB NO.: JSR0309
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

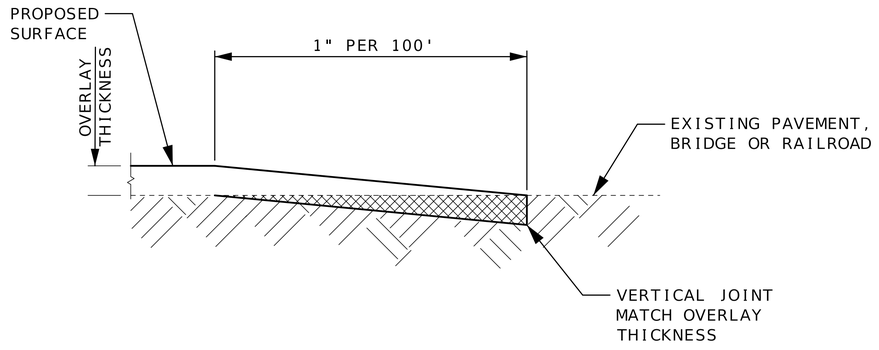
DESCRIPTION	DATE

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

REVISED: 3/7/2023



MAINLINE, BRIDGE, AND RAILROAD PLAN



SECTION A-A

TRANSVERSE JOINT TRANSITION FOR SINGLE LIFT
PROJECT BEGINNING, END, BRIDGE, OR RAILROAD

NOTE: MILL EXISTING CONCRETE 1" MAXIMUM.

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
LP 49	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
BATES

JOB NO.
JSR0309

CONTRACT ID.

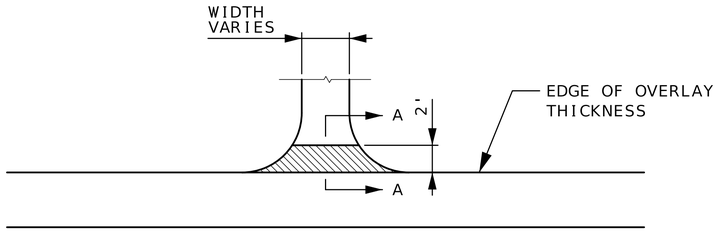
PROJECT NO.

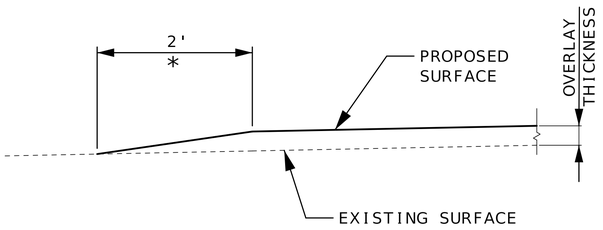
BRIDGE NO.

DESCRIPTION	DATE

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

REVISED: 3/7/2023



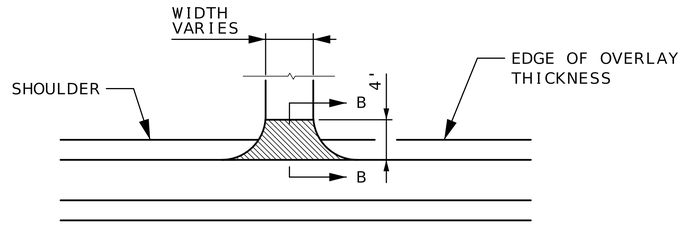


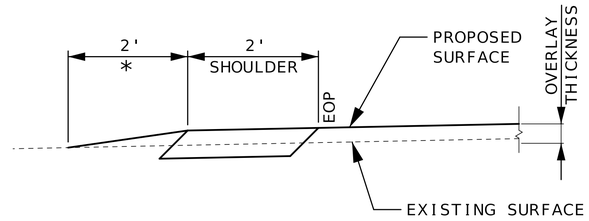
SECTION A-A

TYPICAL ENTRANCE - NO SHOULDER
(FIELD, PRIVATE OR COUNTY ROAD)
*TAPER AT 1:1 FOR FIELD ENTRANCE

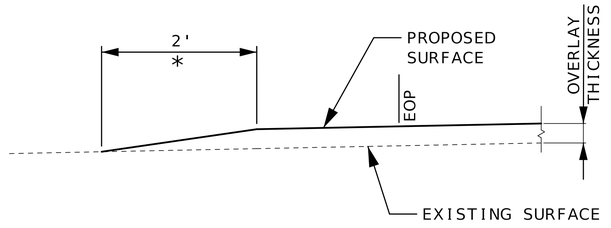
NOTE: 4 TONS GRAVEL A OR CRUSHED STONE
CALCULATED PER ENTRANCE.

6 TONS CALCULATED PER COUNTY ROAD.





AGGREGATE & EARTH ENTRANCES



ASPHALT & CONCRETE ENTRANCES

SECTION B-B

TYPICAL ENTRANCE - EXIST/NEW SHOULDER
(FIELD, PRIVATE OR COUNTY ROAD)
*TAPER AT 1:1 FOR FIELD ENTRANCE

NOTES: DO NOT BUILD 2' MODIFIED A3 SHOULDERS
ACROSS CONCRETE OR ASPHALT ENTRANCES,
STREETS OR ROADS.

4 TONS GRAVEL A OR CRUSHED STONE B
CALCULATED PER ENTRANCE.

6 TONS CALCULATED PER COUNTY ROAD.

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
LP 49	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
BATES

JOB NO.
JSR0309

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

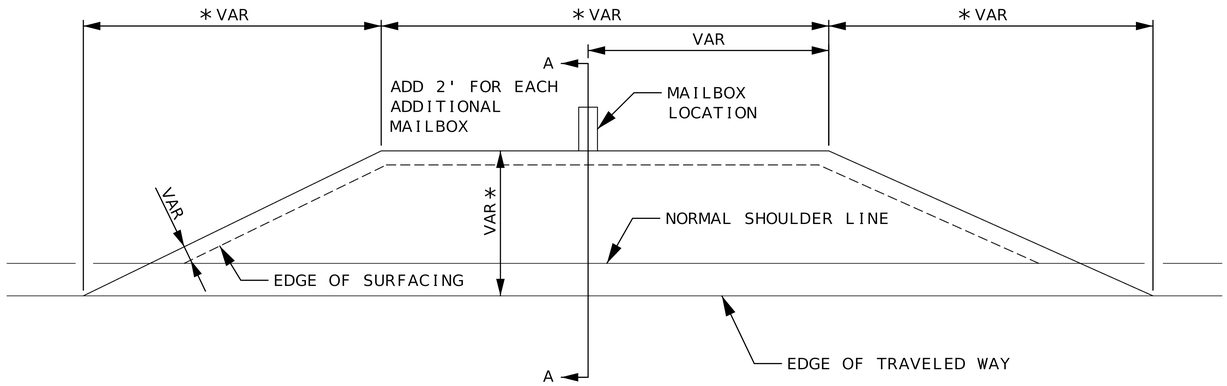
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

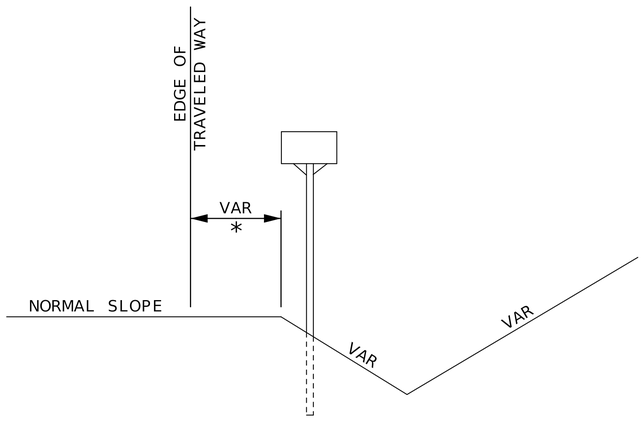
REVISED: 6/26/2025

NOTE: MAILBOX TURNOUT QUANTITIES BASED ON 2' WIDTH AND
15' LENGTH. ADD 2' IN LENGTH PER ADDITIONAL
MAILBOX AT SAME LOCATION, AS APPROVED BY THE ENGINEER.

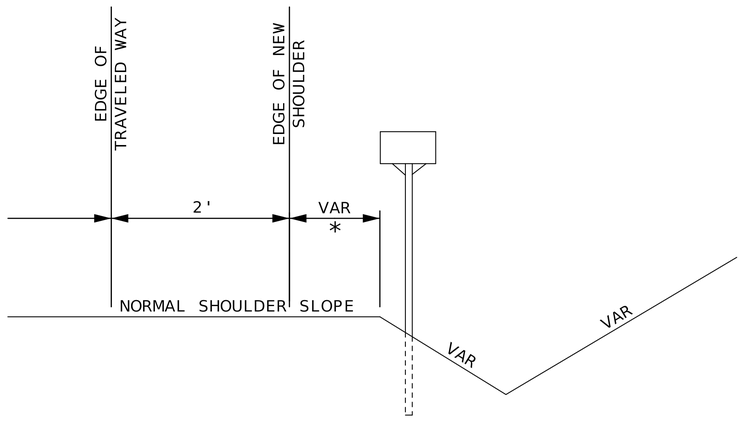
TYPICAL MAILBOX TURNOUT

*AS APPROVED BY THE ENGINEER





SECTION A-A
NO SHOULDER



SECTION A-A
SHOULDER

TYPICAL SECTIONS
SHEET 5 OF 7

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
LP 49	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
BATES

JOB NO.
JSR0309

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

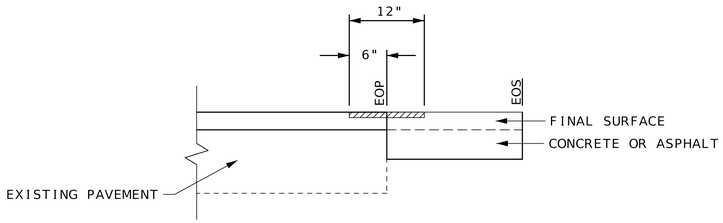
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

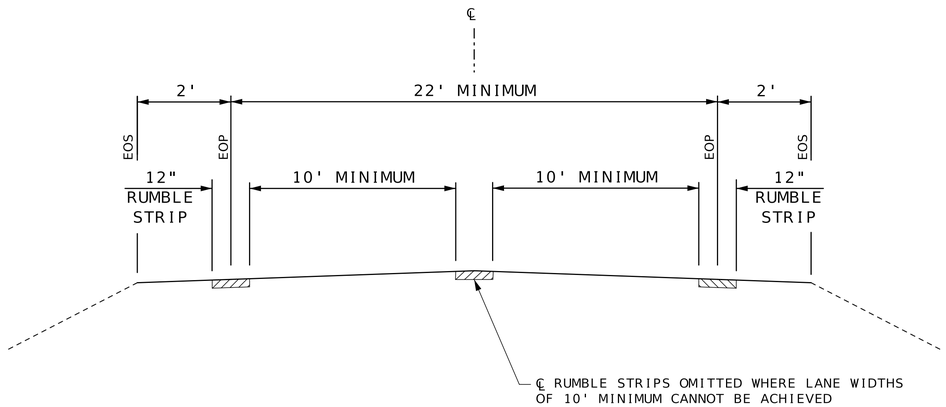
REVISED: 4/24/2025

RUMBLE STRIPS FOR 2' MODIFIED A3 SHOULDERS

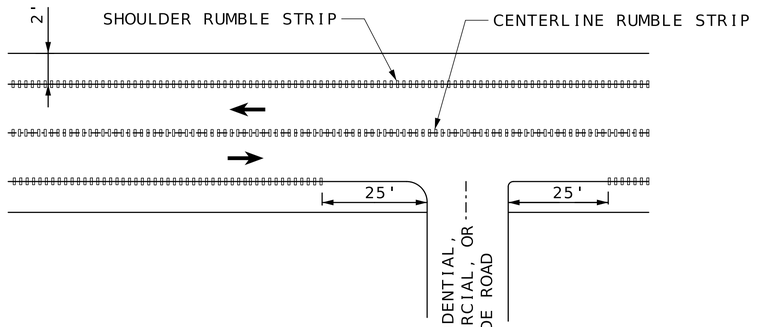
AS APPROVED BY THE ENGINEER, A 6" MINI RUMBLE STRIP
MAY BE USED WHERE A 12" RUMBLE STRIP DOES NOT FIT.

RUMBLE STRIP DETAILS





INTERSECTION RUMBLE STRIP LAYOUT



TYPICAL SECTIONS
SHEET 6 OF 7

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
LP 49	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
BATES

JOB NO.
JSR0309

CONTRACT ID.

PROJECT NO.

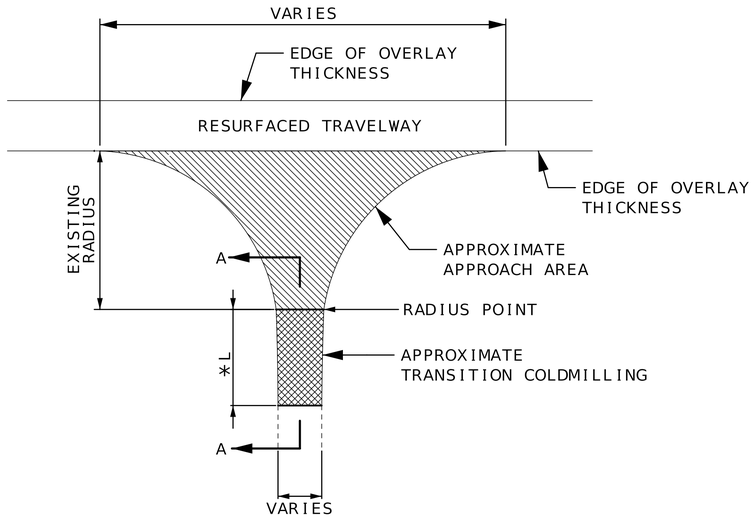
BRIDGE NO.

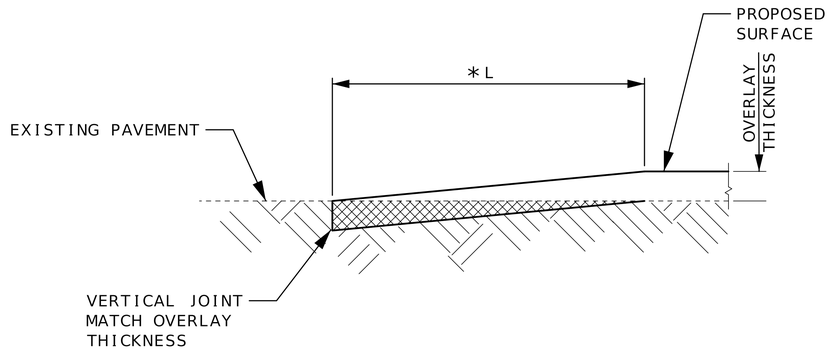
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

REVISED: 8/26/2024



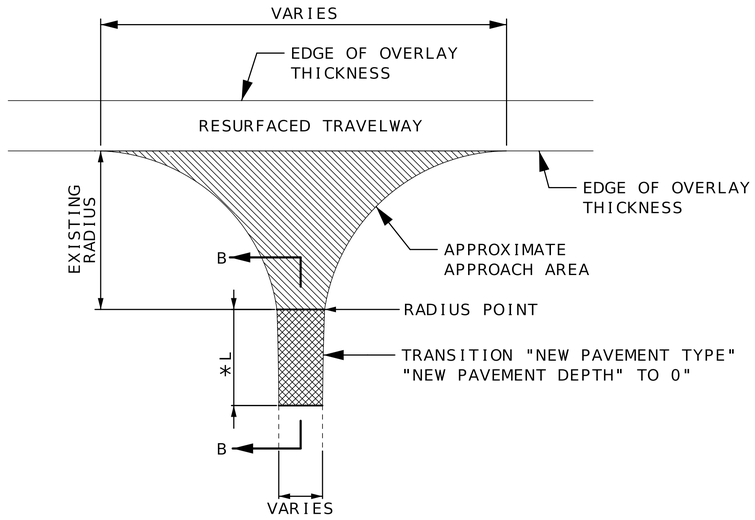


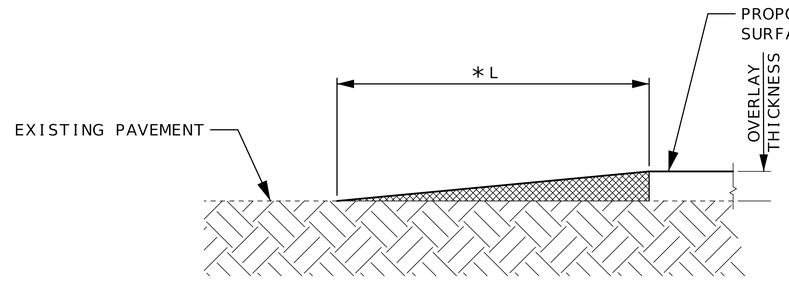
SECTION A-A

SURFACING REQUIREMENTS FOR
OVERLAYS AT STATE ROUTES.
SEE QUANTITY SHEETS FOR LOCATIONS.

*TRANSITION LENGTHS

OVERLAY THICKNESS	DEPTH TRANS. LENGTH (L)
1"	20.0'
1 ½"	40.0'
1 ¾"	50.0'
2"	60.0'





SECTION B-B

SURFACING REQUIREMENTS FOR OVERLAYS
AT EXISTING COLD MIX STATE ROUTES.
SEE QUANTITY SHEETS FOR LOCATIONS.

*TRANSITION LENGTHS

OVERLAY THICKNESS	DEPTH TRANS. LENGTH (L)
1"	20.0'
1 ½"	40.0'
1 ¾"	50.0'
2"	60.0'

TYPICAL SECTIONS
SHEET 7 OF 7

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
LP 49	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
BATES

JOB NO.
JSR0309

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)

COLDMILLING

ROUTE	LOG MILE	LOG MILE	NET LENGTH LF	AVERAGE WIDTH LF	MEASURED AREA SF	MODIFIED DEPTH TRANSITION SY	FULL DEPTH COLDMILL 3" OR LESS SY	REMARKS
LP 49	0.234	0.262	147.8	25.0		410.6		DEPTH TRANSITION
LP 49	3.918	3.946	147.8	25.0		410.6		DEPTH TRANSITION
LP 49	3.946	4.252	1615.7	25.0			4488.1	MILL/FILL
LP 49	4.252	4.751	2634.7	40.0			11709.8	MILL/FILL
					TOTAL	821.2	16197.9	
					USE	822	16198	

CONTRACTOR FURNISHED SURVEYING & STAKING
1 LUMP SUM

MOBILIZATION
1 LUMP SUM

ASPHALT & TACK

LT/RT OFFSET	BEGIN LOG MILE	END LOG MILE	NET LENGTH LF	AVG. WIDTH LF	MEASURED AREA SF	SP095C 1.75" 1.973 TONS/CY TONS	BP-2 1.50" 1.959 TONS/CY TONS	BP-1 2.25" 2.005 TONS/CY TONS	TYPE 5 AGG FOR BASE 4.0" SY	TACK 0.08 GAL	TACK 0.10 GAL	REMARKS
LT/RT	0.234	0.348	601.9	24.0			131.0		29.0	128.4		BEGIN PROJ TO PASSAIC CITY LIMITS
LT/RT	0.348	3.946	18997.4	28.0			4824.3	1058.0	939.0	4728.2		PASSAIC CITY LIMITS TO BUTLER CITY LIMITS, ADD 2' SHOULDER
RT	2.241				4036.5		36.6				44.9	RTE TT ENTRANCE
LT/RT	3.946	4.252	1615.7	25.0		430.4					448.8	MILL/FILL
LT/RT	4.252	4.751	2634.7	40.0		1123.1					1171.0	MILL/FILL
LT/RT	0.224	4.754		-	-	60.6	279.2			-	-	IRREGULARITIES 75 TONS/MILE
LT/RT	0.224	4.754	23918.4	-	-		47.3			-	-	SAFETY EDGE
					TOTAL	1614.1	5318.4	1058.0	968.0	4856.6	1664.7	
					USE	1614.1	5318.4	1058.0	968.0	6521		

ANY AND ALL IRREGULARITIES MAY BE UNDERRUN AND NO ADJUSTMENT TO ANY UNIT BID COST WILL BE MADE

PERMANENT AGGREGATE EDGE TREATMENT

ROUTE	LOG MILE	TO	LOG MILE	LENGTH MILES	AGGREGATE 200 TON/MILE* TON	PRIME MC 800 590 GAL/MILE* GAL	REMARKS
LP 49	0.234	-	4.252	4.018	803.6	2371	
				TOTALS	803.6	2371	*INCLUDES 2' WIDTH BOTH SIDES OF ROADWAY

BITUMINOUS SHOULDER RUMBLE STRIP

LOG MILE	LOG MILE	LENGTH FT	LOCATION	RUMBLE STRIP STA	REMARKS
0.348	3.946	18997.4	LT EOP	190.0	LT EOP
0.348	3.946	18997.4	RT EOP	190.0	RT EOP
		-	LT/RT	-74.2	SUBTRACT ENT'S/SIDEROADS & BEFORE/AFTER THEM
			TOTAL	305.8	
			USE	305.8	

GRAVEL (A) OR CRUSHED STONE (B)
270 TONS

SUMMARY OF QUANTITIES
SHEET 1 OF 3

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 9/28/2026
ROUTE LP 49 | STATE MO
DISTRICT SW | SHEET NO. 3
COUNTY BATES
JOB NO. JSR0309
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

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

PAVEMENT MARKING

BEGIN LOG	END LOG	LT/RT LOCATION	WATERBORNE PAINT, CLASS 1 BEADS			THERMOPLASTIC				REMARKS
			4" SOLID WHITE	4" INT YELLOW	4" SOLID YELLOW	24" MIDBLOCK	24" WHITE	24" YELLOW	LEFT/RIGHT ARROW	
			LF	LF	LF	LF	LF	LF	EACH	
0.224	4.199	LT/RT	41980.0		41980.0					
4.199	4.754	LT/RT	5860.0	1470.0	5860.0				11.0	
4.218		LT/RT						25.0		
4.607		LT/RT				42.0				CROSSWALK
4.741		LT/RT					26.0			STOP BARS
		TOTAL	47840	1470	47840	42	26	25	11	
		USE	47840	49310		68		25	11	

REMOVAL OF IMPROVEMENTS

BEGIN LOG MILE	END LOG MILE	RT/LT OFFSET	UNIT	TOTAL	DESCRIPTION	REMARKS
1.227	1.287	LT	FT	316.8	GUARDRAIL	BENEATH IS 49 OVERPASS
TOTAL = 1 LUMP SUM						

GUARDRAIL

BEGIN LOG MILE	END LOG MILE	LOCATION	MGS GUARDRAIL	MASH CRASHWORTHY END TERMINAL	SHAPING SLOPES CLASS III	REMARKS
			FT	EA	100FT	
1.227	1.287	BENEATH IS 49 OVERPASS	217.0	2	1.0	
		TOTAL	217.0	2	1.0	ALL GUARDRAIL LENGTH IS ROUNDED UP TO THE NEAREST 12.5'
		USE	225	2	1	

SHOULDER GRADING, SEEDING & MULCHING, EROSION CONTROL

LT/RT OFFSET	BEGIN LOG MILE	END LOG MILE	NET LENGTH	AVG. WIDTH	LINEAR GRADING CLASS 2 FOR SHOULDERS	COOL SEASON SEEEDING	MULCHING	ROCK DITCH CHECK	SEDIMENT REMOVAL	SILT FENCE	REMARKS
			LF	LF	100FT	ACRE	ACRE	LF	CY	LF	
LT/RT	0.348	3.946	18997.4	4.0	360.8	2.20	2.20	110.0	19.0	482.0	2 FT SHOULDER
				TOTAL	360.8	2.20	2.20	110.0	19.0	482.0	
				USE	361	2.2	2.2	110	19	482	

SUMMARY OF QUANTITIES
SHEET 2 OF 3

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 9/28/2026
ROUTE LP 49 | STATE MO
DISTRICT SW | SHEET NO. 3
COUNTY BATES
JOB NO. JSR0309
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION	DATE

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

SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL AREA SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NO.	DESCRIPTION
WARNING SIGNS								
WO1-1L	48X48	16.00						TURN (SYMBOL LEFT)
WO1-1R	48X48	16.00						TURN (SYMBOL RIGHT)
WO1-2L	48X48	16.00						CURVE (SYMBOL LEFT)
WO1-2R	48X48	16.00						CURVE (SYMBOL RIGHT)
WO1-3L	48X48	16.00						REVERSE TURN (SYMBOL LEFT)
WO1-3R	48X48	16.00						REVERSE TURN (SYMBOL RIGHT)
WO1-4L	48X48	16.00						REVERSE CURVE (SYMBOL LEFT)
WO1-4R	48X48	16.00						REVERSE CURVE (SYMBOL RIGHT)
WO1-4bL	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL LEFT)
WO1-4bR	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL RIGHT)
WO1-4cL	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL LEFT)
WO1-4cR	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL RIGHT)
WO1-6	60X30	12.50						HORIZONTAL ARROW (SYMBOL)
WO1-6a	72X36	18.00						HORIZ. ARROW (SYMBOL ON PERMANENT BARRICADE)
WO1-7	60X30	12.50						DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)
WO1-7a	72X36	18.00						DOUBLE HEAD HORIZ. ARROW (SYMBOL ON PERM. BARR.)
WO1-8	18X24	3.00						CHEVRON (SYMBOL)
WO1-8a	30X36	7.50						CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)
WO3-1	48X48	16.00						STOP AHEAD (SYMBOL)
WO3-2	48X48	16.00						YIELD AHEAD (SYMBOL)
WO3-3	48X48	16.00						SIGNAL AHEAD (SYMBOL)
WO3-4	48X48	16.00						BE PREPARED TO STOP
WO3-5	48X48	16.00						SPEED LIMIT AHEAD
WO4-1L	48X48	16.00						MERGE (SYMBOL FROM LEFT)
WO4-1R	48X48	16.00						MERGE (SYMBOL FROM RIGHT)
WO4-1aL	48X48	16.00						MERGE (LEFT)
WO4-1aR	48X48	16.00						MERGE (RIGHT)
WO5-1	48X48	16.00						ROAD/BRIDGE/RAMP NARROWS
WO5-3	48X48	16.00						ONE LANE BRIDGE
WO5-5	48X48	16.00						NARROW LANES
WO6-1	48X48	16.00						DIVIDED HIGHWAY (SYMBOL)
WO6-2	48X48	16.00						DIVIDED HIGHWAY END (SYMBOL)
WO6-3	48X48	16.00						TWO WAY TRAFFIC (SYMBOL)
WO7-3a	30X24	5.00						NEXT XX MILES (PLAQUE)
WO8-1	48X48	16.00						BUMP
WO8-2	48X48	16.00						DIP
WO8-3	48X48	16.00						PAVEMENT ENDS
WO8-4	48X48	16.00						SOFT SHOULDER
WO8-5	48X48	16.00						SLIPPERY WHEN WET (SYMBOL)
WO8-6	48X48	16.00						TRUCK CROSSING
WO8-6c	48X48	16.00						TRUCK ENTRANCE
WO8-7	36X36	9.00						LOOSE GRAVEL
WO8-7a	36X36	9.00						FRESH OIL / LOOSE GRAVEL
WO8-9	48X48	16.00						LOW SHOULDER
WO8-11	48X48	16.00	10	160.00				UNEVEN LANES
WO8-12	48X48	16.00	6	96.00				NO CENTER LINE
WO8-15	48X48	16.00						GROOVED PAVEMENT
WO8-15P	30X24	5.00						MOTORCYCLE (PLAQUE)
WO8-17L	48X48	16.00						SHOULDER DROP-OFF (SYMBOL LEFT)
WO8-17R	48X48	16.00						SHOULDER DROP-OFF (SYMBOL RIGHT)
WO8-17P	30X24	5.00						SHOULDER DROP-OFF (PLAQUE)
W10-1	42RND.	9.62						RAILROAD CROSSING
WO12-1	24X24	4.00	1	4.00				DOUBLE DOWN ARROW (SYMBOL)
WO12-2	48X48	16.00						LOW CLEARANCE (SYMBOL)
WO12-2x	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	29	464.00				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	21	336.00				ONE LANE ROAD AHEAD
WO20-5	48X48	16.00	2	32.00				RIGHT/CENTER/LEFT LANE CLOSED AHEAD
WO20-5a	48X48	16.00						2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD
WO20-6a	48X48	16.00	2	32.00				RIGHT/CENTER/LEFT LANE CLOSED
WO20-7a	48X48	16.00	21	336.00				FLAGGER (SYMBOL)
WO21-2	36X36	9.00						FRESH OIL
WO21-5	48X48	16.00						SHOULDER WORK / SHOULDER WORK AHEAD
WO22-1	48X48	16.00						BLASTING ZONE AHEAD
WO22-2	42X36	10.50						TURN OFF 2-WAY RADIO AND PHONE
WO22-3	42X36	10.50						END BLASTING ZONE
GO22-1	21X15	2.19						WET PAINT (ARROW PIVOTS)

SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NO.	DESCRIPTION
GUIDE SIGNS								
E05-1	36X48	12.00						GORE EXIT
E05-2	48X36	12.00						EXIT OPEN
E05-2a	48X36	12.00						EXIT CLOSED
GO20-1	60X24	10.00	2	20.00				ROAD WORK NEXT 5 MILES
GO20-2	48X24	8.00	2	16.00				END ROAD WORK
GO20-4	36X18	4.50	2	9.00				PILOT CAR FOLLOW ME
GO20-4a	42X30	8.75	3	26.25				PILOT CAR IN USE WAIT & FOLLOW
GO20-4a	18X12	1.50	14	21.00				PILOT CAR IN USE WAIT & FOLLOW
GO20-5aP	36X24	6.00	2	12.00				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	2	24.00				SPEED LIMIT 35
R2-1	36X48	12.00	2	24.00				SPEED LIMIT 45
R2-1	36X48	12.00	2	24.00				SPEED LIMIT 55
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	1	6.25				LEFT LANE MUST TURN LEFT
R3-7R	30X30	6.25	1	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	2	24.00				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	2	64.00				POINT OF PRESENCE
CONST-8	48X36	12.00	2	24.00				WORK ZONE NO PHONE ZONE

616-10.05 CONSTRUCTION SIGNS	TOTAL
	1761

616-10.10 RELOCATED SIGNS	TOTAL

EFFECTIVE: 07-01-2025

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)
6122040		WORK ZONE CRASH CUSHION (NARROW)
6122041		WORK ZONE CRASH CUSHION (RELOCATION)
6123001		TRUCK MOUNTED ATTENUATOR (TMA)
6161012		BUOYS (BOATS KEEP OUT)
6161013		BUOYS (NO WAKE)
6161014		SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)
6161020		CHANNELIZER (DRUM-LIKE)
6161022		CHANNELIZER (CONE)
6161025	500	CHANNELIZER (TRIM-LINE)
6161026		CHANNELIZER (VERTICAL PANEL)
6161030		TYPE 3 MOVEABLE BARRICADE
6161033		DIRECTION INDICATOR BARRICADE
6161040	2	FLASHING ARROW PANEL
6161047		TYPE 3 OBJECT MARKER
6161055		SEQUENTIAL FLASHING WARNING LIGHT
6161070		TUBULAR MARKER
6161095		RADAR SPEED ADVISORY SYSTEM
6161096		CHANGEABLE MESSAGE SIGN, COMMISSION FURNISHED/RETAINED
6161098A		CHANGEABLE MESSAGE SIGN WITHOUT COMM. INTERFACE, CONTRACTOR FURNISHED/RETAINED
6161099	2	CHANGEABLE MESSAGE SIGN WITH COMM. INTERFACE, CONTRACTOR FURNISHED/RETAINED
6162000A		WORK ZONE TRAFFIC SIGNAL SYSTEM
6162002		TEMPORARY LONG-TERM RUMBLE STRIPS
6173600D		TEMPORARY TRAFFIC BARRIER, CONTRACTOR FURNISHED/RETAINED
6173700B		TEMP. TRAFFIC BARRIER ANCHORED, CONTRACTOR FURNISHED/RETAINED
6173706		TEMP. TRAFFIC BARRIER STIFFNESS TRANSITION CONTRACTOR FURNISHED/RETAINED
6174000A		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION, CONTRACTOR FURNISHED/RETAINED
6175010A		RELOCATING TEMPORARY TRAFFIC BARRIER
6175011B		RELOCATING TEMP. TRAFFIC BARRIER ANCHORED
6175013		RELOCATING TEMP. TRAFFIC BARRIER STIFFNESS
6175020A		RELOCATING TEMP. TRAFFIC BARRIER HEIGHT
6208064A		TEMPORARY RAISED PAVEMENT MARKER
9029400		TEMPORARY TRAFFIC SIGNALS
9029401		TEMPORARY TRAFFIC SIGNALS AND LIGHTING

SUMMARY OF QUANTITIES
SHEET 3 OF 3

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 9/28/2026
ROUTE: LP 49 | STATE: MO
DISTRICT: SW | SHEET NO.: 3
COUNTY: BATES
JOB NO.: JSR0309
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

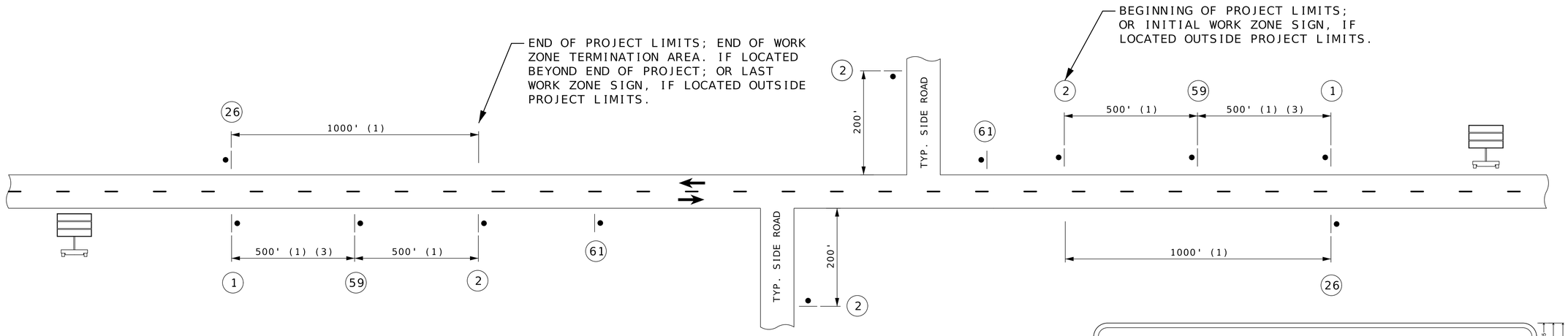
DESCRIPTION | DATE

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

GENERAL NOTES:

REVISED: 2/19/2026

1. ANY EXISTING SIGNS THAT CONFLICT WITH THE TRAFFIC CONTROL SIGNING SHALL BE COMPLETELY COVERED OR REMOVED.
2. TEMPORARY SIGNING SHOWN IS FOR WORK ON ONE SIDE OF THE ROAD. FOR WORK ON THE OTHER SIDE, REVERSE ORDER OF THE SIGNS AND CHANNELIZERS.
3. SIGNING SHOWN SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE.
4. ALTERNATE TRAFFIC CONTROL MAY BE USED AS NEEDED AT THE APPROVAL OF THE ENGINEER.
5. REFER TO STANDARD DRAWING 616.10, 619.10, AND 620.10 FOR ADDITIONAL DETAILS AND 903.03 FOR SIGN AND SIGN MOUNTING REQUIREMENTS.
6. SPEED LIMIT SIGNS INDICATING THE NORMAL SPEED LIMIT SHALL BE INSTALLED AT THE END OF THE WORK ZONE, PROVIDED NO FURTHER WORK ZONES WILL BE ENCOUNTERED WITHIN THE NEXT 1/2 MILE.
7. TEMPORARY SPEED LIMIT SIGNS SHALL BE COVERED OR REMOVED WHEN THE CONDITIONS REQUIRING REDUCED SPEEDS DO NOT EXIST.
8. NO DIRECT PAYMENT WILL BE MADE FOR THE RELOCATION OF CHANNELIZERS, CONSTRUCTION SIGNS, OR FLASHING ARROW PANEL.
9. ALL SIGNS SHALL BE PORTABLE MOUNT AND ARE TO BE MOVED AS WORK PROGRESSES, UNLESS OTHERWISE NOTED. ALL TRAFFIC CONTROL ITEMS SHALL BE REMOVED FROM THE ROADWAY DURING NON-WORKING HOURS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING PROPER TRAFFIC CONTROL SETUPS THROUGHOUT CONSTRUCTION AS DESCRIBED IN THESE PLANS OR AS APPROVED BY THE ENGINEER.
11. WHERE MINIMUM LANE WIDTHS CANNOT BE ACHIEVED ON THE SIDE STREETS, THE CONTRACTOR SHALL CLOSE HALF OF THE APPROACH AND POSITION A FLAGGER AT EACH END OF THE WORK AREA. LOCATION TO BE DETERMINED BY THE ENGINEER. ADVANCE FLAGGER SIGNING SHALL BE INSTALLED AS OUTLINED IN THE MUTCD.
12. THE CONTRACTOR SHALL MAINTAIN PUBLIC ACCESS TO ALL BUSINESSES AND STREETS. NO STREET OR ENTRANCE SHALL BE COMPLETELY BLOCKED.
13. SPACING & DISTANCES OF TRAFFIC CONTROL DEVICES ARE APPROXIMATE. THE EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD & APPROVED BY THE ENGINEER.
14. TRAFFIC CONTROL SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
15. ADJUST ADVANCE WARNING SIGN SPACING TO AVOID SIGN PLACEMENT WITHIN THE LIMITS OF THE RAILROAD RIGHT OF WAY.



TYPICAL BEGINNING AND END OF PROJECT

(UNDIVIDED HIGHWAY)

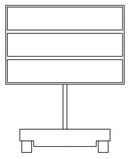
(1) DISTANCE MAY BE ADJUSTED ACCORDING TO FIELD CONDITIONS. WHERE TRAFFIC BACKUPS ARE EXPECTED BEYOND THE ADVANCE WARNING AREA, ADDITIONAL SIGNING MAY BE NEEDED.

(2) CONST-5-96 SIGN IS PLACED IN A VISIBLE AREA WITHIN THE PROJECT LIMITS PROVIDED ITS PLACEMENT DOES NOT DISRUPT A SEQUENCE OF SIGNS. IF A VISIBLE LOCATION WITHIN THE PROJECT IS NOT AVAILABLE, THE SIGN MAY BE PLACED 500 FEET BEFORE SIGN CONST-7-72.

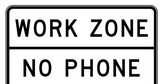
(3) THE "WORK ZONE NO PHONE ZONE" SIGN IS PLACED A MINIMUM OF 500 FEET BEFORE THE ROAD WORK AHEAD SIGN.

(4) CMS PLACEMENT SHALL BE APPROVED BY THE ENGINEER.

(5) GO20-1 IS NOT USED WHEN WORK AREA IS LESS THAN 2 MILES. GO20-2 IS OPTIONAL WHEN GO20-1 IS NOT USED

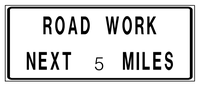


(4)



CONST-8

59 (3)



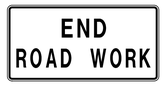
GO20-1

1 (5)



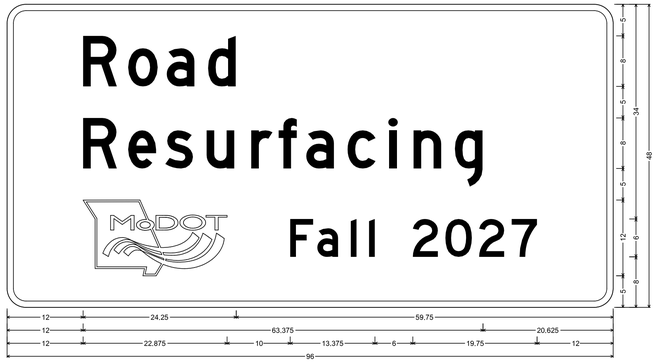
WO20-1

2



GO20-2

26 (5)



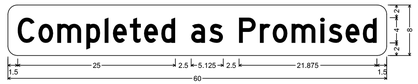
CONST-5 SH-FLAT SHEET;
3.000" Radius, 1.000" Border, White on, Green;
"Road", D; "Resurfacing", D; "Fall 2027", D;
Table of letter and object lefts

R 12.000	o 19.125	a 25.250	d 31.875

F 12.000	o 19.125	r 25.000	e 31.625	s 38.625	u 43.000	a 47.375	c 53.875	i 60.500	n 64.375	g 70.875	
F 12.000	a 44.875	l 49.125	l 54.500	l 57.375	2 64.250	0 69.375	2 74.750	7 79.875			

CONST-5-96

61 (2)



CONST-5P-60 SHF-FLAT SHEET FLUORESCENT;
1.500" Radius, No border, Yellow;
"Completed as Promised" Black, D 65% spacing;
Table of letter and object lefts

C 1.500	o 4.875	m 7.875	p 12.375	l 15.375	e 16.625	t 19.375	e 21.500	d 24.250	a 29.000	s 31.875	
P 36.625	r 39.875	o 41.875	m 44.875	l 49.500	s 50.750	e 53.500	d 56.250				

NOT TO SCALE

TRAFFIC CONTROL SHEET 1 OF 11

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 9/28/2026

ROUTE	STATE
LP 49	MO
DISTRICT	SHEET NO.
SW	4

COUNTY: BATES

JOB NO.: JSR0309

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)

REVISED: 2/19/2026



WO20-1

(2)



WO20-4

(7)



WO20-7a

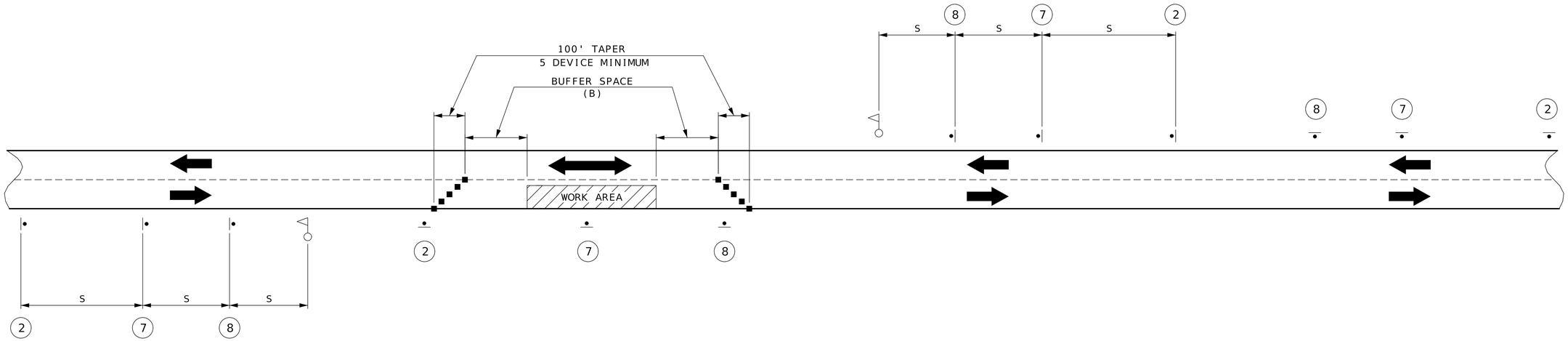
(8)



GO20-4

(53)

SIGN 53, "PILOT CAR FOLLOW ME" SHALL BE IN CONTRACTOR'S RESPONSIBILITY WHEN IN USE DURING OPERATION.



SET 1
ACTIVE

SET 2
INACTIVE

SET 3
ACTIVE

SET 4
INACTIVE

NOTES:
THIS PLAN IS FOR DAYLIGHT FLAGGING OPERATIONS ONLY. WHEN NIGHT WORK IS REQUIRED, OR OTHERWISE ALLOWED BY THE ENGINEER, WORK ZONE LIGHTING SHALL BE PROVIDED IN ACCORDANCE WITH SEC 616.5.2.

CHANNELIZING DEVICES LOCATED DOWNSTREAM OF THE ONE-LANE, TWO-WAY TAPER ARE OPTIONAL. THESE DEVICES SHOULD BE ELIMINATED WHEN THEIR USE WILL REDUCE THE USABLE LANE WIDTH, INCLUDING ANY ACCEPTABLE SHOULDERS, TO LESS THAN 10' OR WILL SIGNIFICANTLY AFFECT THE RESURFACING OPERATION.

SIGN SETS 1 AND 3 ARE ACTIVE AND (I.E., SIGNS FACE ONCOMING TRAFFIC). SIGN SETS 2 AND 4 ARE INACTIVE (I.E., SIGNS DO NOT FACE EITHER DIRECTION OF TRAFFIC) WHEN THE RESURFACING OPERATION IS LOCATED BETWEEN SIGN SETS 1 AND 3.

WHEN SIGN SETS 2 AND 4 ARE ACTIVE, SIGN SETS 1 AND 3 BECOME INACTIVE AND ARE ADVANCED TO BECOME SETS 2 AND 4 WITH SIGN LEGENDS TURNED AWAY FROM BOTH DIRECTIONS OF TRAFFIC. WHEN THE RESURFACING OPERATION ADVANCES TO BETWEEN SIGN SETS 2 AND 4, SIGN SETS 2 AND 4 BECOME ACTIVE (I.E., NEW SIGN SETS 1 AND 3) AND SIGN SETS 1 AND 3 ADVANCED IN THE DIRECTION OF THE OPERATION (I.E., NEW SIGN SETS 2 AND 4).

- SIGN (SINGLE SIDED)
- FLAGGER
- CHANNELIZER

SPEED	SIGN SPACING (FT) (1)	BUFFER SPACE
PERMANENT POSTED (MPH)	NON-DIVIDED HIGHWAYS (S)	LENGTH (FT) (B)
0-35	200	250
40-45	350	360
50-55	500	495
60-70	1000	730

SPACING NOTES:

(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, AS APPROVED BY ENGINEER.

MOVING FLAGGER OPERATION
(UNDIVIDED HIGHWAY)

NOT TO SCALE

TRAFFIC CONTROL
SHEET 2 OF 11

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
LP 49	MO
DISTRICT	SHEET NO.
SW	5

COUNTY
BATES

JOB NO.
JSR0309

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)

REVISED: 2/19/2026



WO20-1

(2)



WO20-4

(7)



WO20-7a

(8)

GO20-5aP



R2-1

(54)
(4)



R2-1

(25)

(NORMAL SPEED)

GO20-5aP



R2-1

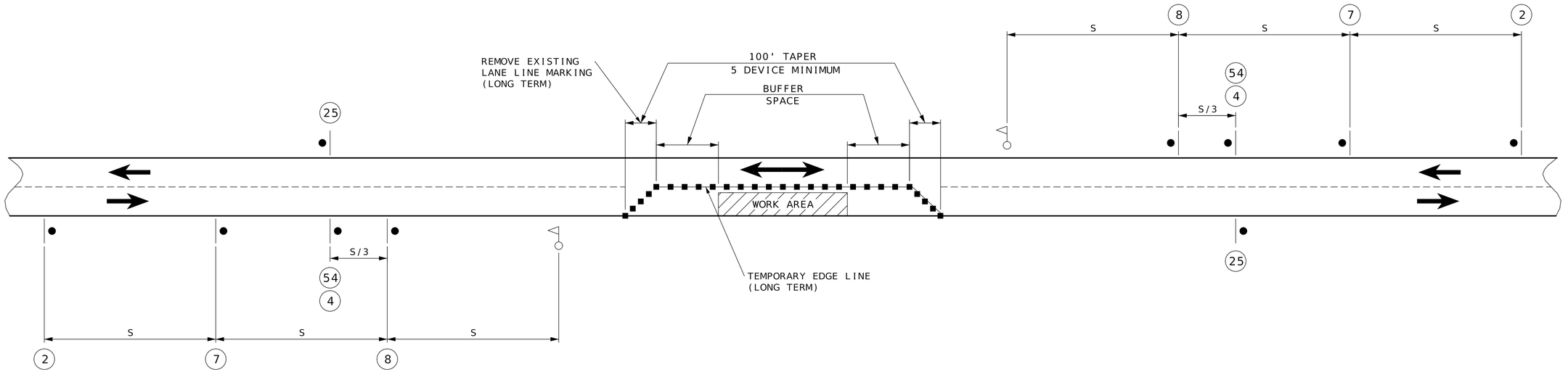
(54)
(4)



R2-1

(25)

(NORMAL SPEED)



NOTES:
THIS PLAN IS FOR DAYLIGHT FLAGGING OPERATIONS ONLY. WHEN NIGHT WORK IS REQUIRED, OR OTHERWISE ALLOWED BY THE ENGINEER, WORK ZONE LIGHTING SHALL BE PROVIDED IN ACCORDANCE WITH SEC 616.5.2.

CHANNELIZING DEVICES LOCATED DOWNSTREAM OF THE ONE-LANE, TWO-WAY TAPER ARE OPTIONAL.
THESE DEVICES SHOULD BE ELIMINATED WHEN THEIR USE WILL REDUCE THE USABLE LANE WIDTH, INCLUDING ANY ACCEPTABLE SHOULDERS, TO LESS THAN 10' OR WILL SIGNIFICANTLY AFFECT THE RESURFACING OPERATION.

FLAG ASSEMBLIES FOR SIGN W020-7a ARE SUBSIDIARY TO THE SIGN.

TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM CLOSURE. NO DIRECT PAY.

SPEED	SIGN SPACING (FT) (1)	CHANNELIZER SPACING (FT)	OPTIONAL
PERMANENT POSTED (MPH)	UNDIVIDED HIGHWAYS (S)	BUFFER/ WORK AREAS	BUFFER LENGTH (FT)
0-35	200	40	250
40-45	350	80	360
50-55	500	80	495
60-70	1000	120	730

SPACING NOTES:

(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, AS APPROVED BY ENGINEER.

• SIGN (SINGLE SIDED)

FLAGGER

■ CHANNELIZER

LANE CLOSURE USING FLAGGERS
(UNDIVIDED HIGHWAY)

NOT TO SCALE

TRAFFIC CONTROL
SHEET 3 OF 11

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
LP 49	MO
DISTRICT	SHEET NO.
SW	6

COUNTY
BATES

JOB NO.
JSR0309

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

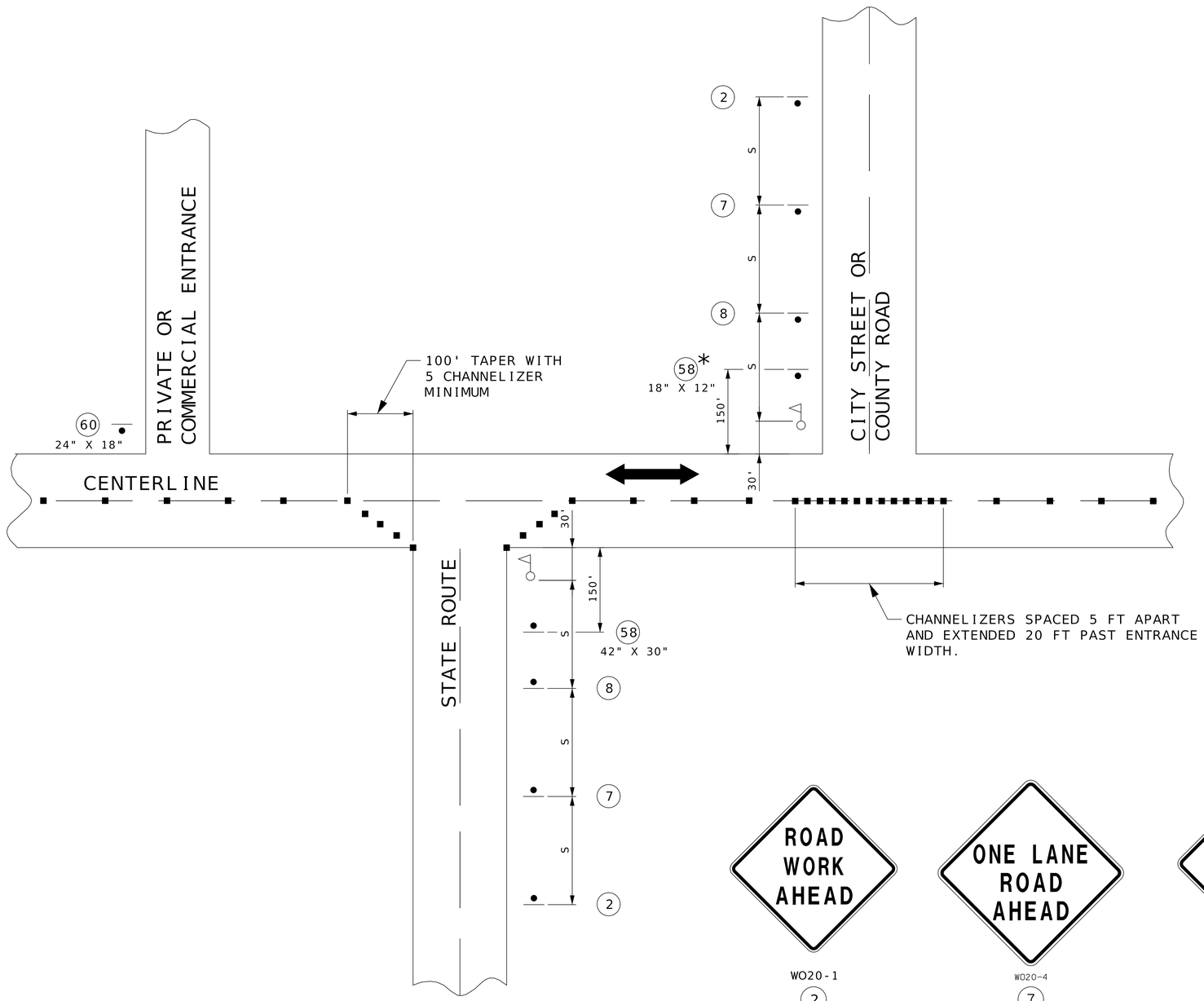
DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

REVISED: 2/19/2026

SIDE ROADS ENTERING WORK ZONES



SPEED	SIGN SPACING (FT.)	CHANNELIZER SPACING (FT)
PERMANENT POSTED (MPH)	NON-DIVIDED HIGHWAYS (S)	BUFFER WORK AREA
0-35	200	40
40-45	350	80
50-55	500	80
60-70	1000	120

DISTANCE MAY BE ADJUSTED ACCORDING TO FIELD CONDITIONS.

NOTES:
WARNING SIGNS SHALL BE ERECTED AT EACH INTERSECTION WITH ANOTHER STATE HIGHWAY WITHIN THE WORK ZONE.

ADDITIONAL WARNING SIGNS SHALL BE ERECTED AT OTHER INTERSECTIONS WITHIN THE WORK ZONE, AS DIRECTED BY THE ENGINEER.

- SIGN (SINGLE SIDED)
- FLAGGER
- CHANNELIZER

IF USED AT NIGHT, THE FLAGGER STATIONS SHALL BE ILLUMINATED WITH AN AVERAGE MAINTAINED INTENSITY OF 0.6 FOOTCANDLES (6.5 LUX).



GO20-4a

58

SHALL BE USED ON ALL INTERSECTIONS.

* THE SMALLER 18" X 12" SIGN 58 IS USED ON ALL OTHER NON-STATE ROUTES (CITY STREETS, COUNTY ROADS, ETC.).



24" X 18"

60

SHALL ONLY BE USED AT PRIVATE AND COMMERCIAL ENTRANCES. SEE STD PLAN 616.10 FOR SIGN DETAILS.

WO20-1

2

WO20-4

7



WO20-7a

8

NOT TO SCALE

TRAFFIC CONTROL
SHEET 4 OF 11

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
LP 49	MO
DISTRICT	SHEET NO.
SW	7

COUNTY
BATES

JOB NO.
JSR0309

CONTRACT ID.

PROJECT NO.

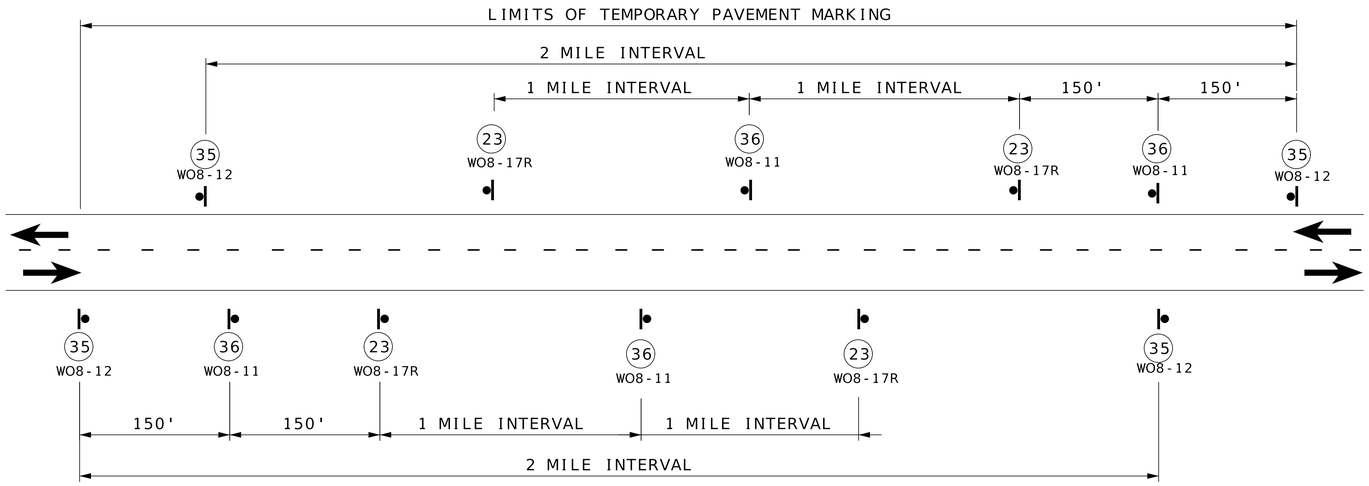
BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

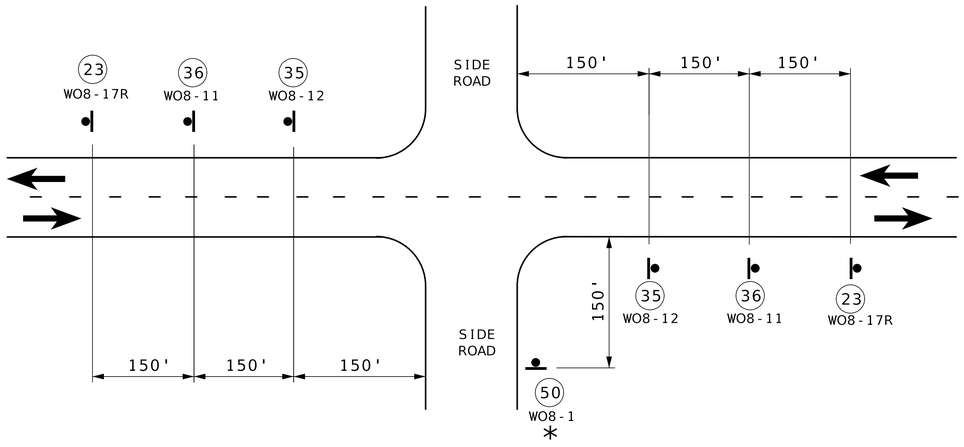
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

REVISED: 2/19/2026



SIGN SPACING FOR MAINLINE

(DETAIL SHOWN IS BASED ON A PROJECT MEETING ALL CONDITIONS: NO CENTER STRIPE, UNEVEN LANES, SHOULDER DROP-OFF AND BUMP.)
WHEN BOTH UNEVEN LANES AND SHOULDER DROP-OFF SIGNS ARE USED, BOTH SIGHS SHALL STAY IN PLACE UNTIL BOTH CONDITIONS NO LONGER EXIST.
IF ONLY ONE CONDITION EXISTS (UNEVEN LANES OR SHOULDER DROP-OFF). THE SIGN SPACING SHALL BE AT 1 MILE INTERVALS.



SIGN SPACING AT STATE ROUTE INTERSECTIONS

* BUMP SIGN SHOULD BE IN ACCORDANCE WITH STANDARD PLAN 619.10.
UNLESS REQUIRED BY STANDARD PLAN 619.10, BUMP SIGN AT CONTRACTOR'S EXPENSE, NO DIRECT PAY. SEE STANDARD SPECIFICATION 622.2.4.



WO8-17R
WO8-17p
(23)



WO8-1
(50) *



WO8-11
(36)



WO8-12
(35)

GENERAL NOTES:

FOR DETAILS OF TEMPORARY PAVEMENT MARKING, SEE STD. 620.10, SHEET 1 OF 5.

SIGN (35) AND TEMPORARY PAVEMENT MARKING INSTALLED WHERE CENTERLINE STRIPING HAS BEEN COVERED OR REMOVED. SIGNS ARE TO REMAIN IN PLACE UNTIL THE PERMANENT CENTERLINE PAVEMENT MARKINGS ARE IN PLACE. SIGNS SHALL BE COVERED OR REMOVED WHEN PAVEMENT CENTERLINE MARKING HAS BEEN INSTALLED.

SIGN (35) IS PLACED AT APPROXIMATELY TWO-MILE INTERVALS AND AT STATE ROUTE JUNCTIONS. WHEN THE INSTALLATION AT A JUNCTION IS WITHIN ONE-EIGHTH MILE OF THE NORMAL MAINLINE SIGN (35) , THE LATTER MAY BE ELIMINATED.

ALL SIGNS SHALL BE POST MOUNTED AND IN ACCORDANCE WITH STANDARD PLAN 616.10 AND 903.03.

WHEN SHOULDER DROP-OFF SIGNS ARE IN PLACE FOR GREATER THAN THREE DAYS, THE SHOULDER DROP-OFF PLAQUE SHOULD BE USED IN ADDITION WITH THE SHOULDER DROP-OFF SIGN.

FOR BRIDGE EXCEPTIONS AND COLDMILLED AREAS, LOCATION OF SIGN (50) TO BE APPROVED BY THE ENGINEER. UNLESS REQUIRED BY STANDARD PLAN 619.10, SIGN (50) AT CONTRACTOR'S EXPENSE, NO DIRECT PAY. SEE STANDARD SPECIFICATION 622.2.4.

NOT TO SCALE

TRAFFIC CONTROL
SHEET 5 OF 11

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

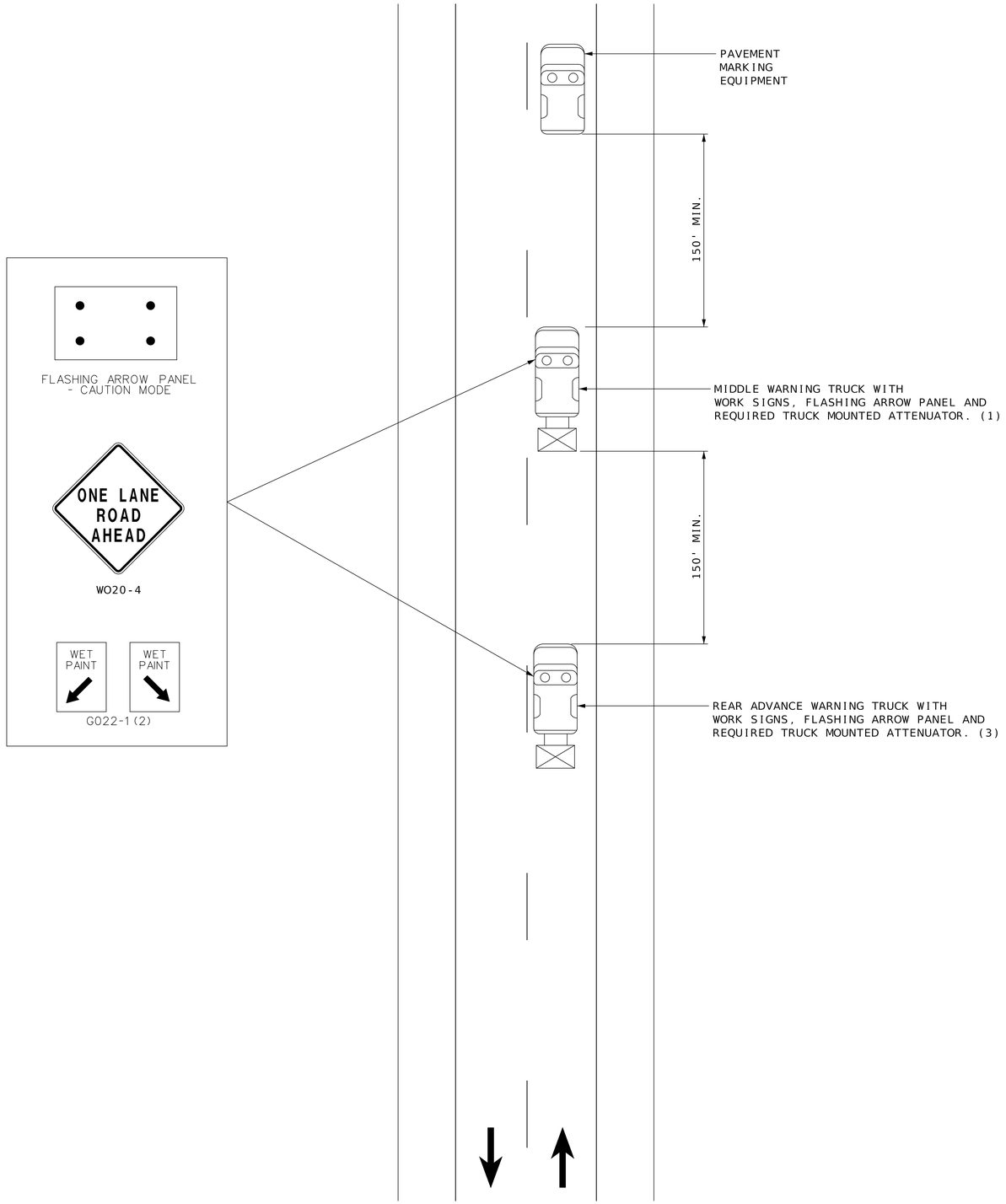
DATE PREPARED	
9/28/2026	
ROUTE	STATE
LP 49	MO
DISTRICT	SHEET NO.
SW	8
COUNTY	
BATES	
JOB NO.	
JSR0309	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

REVISED: 2/19/2026



PAVEMENT MARKING ON TWO-LANE HIGHWAY

NOTES:

UPON APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY PROVIDE ADDITIONAL PROTECTIVE TRUCKS EQUIPPED WITH PROPER WARNING DEVICES.

PROTECTIVE TRUCKS AND WORK VEHICLES SHALL DISPLAY HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS.

VEHICLE HAZARD WARNING SIGNALS SHALL NOT BE USED INSTEAD OF THE VEHICLE'S HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS.

VEHICLE-MOUNTED SIGNS SHALL BE MOUNTED IN A MANNER SUCH THAT THEY ARE NOT OBSCURED BY EQUIPMENT OR SUPPLIES. SIGN LEGENDS ON VEHICLE-MOUNTED SIGNS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS.

FLASHING ARROW PANELS SHALL BE INCIDENTAL TO TRUCK MOUNTED ATTENUATORS, WHEREVER USED. NO ADDITIONAL PAYMENT WILL BE MADE.

(1) TRUCK IS OPTIONAL ON TWO-LANE UNDIVIDED HIGHWAYS IF SIGNING AND ARROW BOARD ARE MOUNTED ON THE PAVEMENT MARKING EQUIPMENT.

(2) WET PAINT SIGNS ARE INSTALLED TO INDICATE THE SIDE IN WHICH THE PAVEMENT MARKING MATERIAL IS BEING APPLIED. AT THE CONTRACTOR'S OPTION, A FRONT FACING WET PAINT SIGN MAY BE INSTALLED ON THE LEFT SIDE OF THE PAVEMENT MARKING EQUIPMENT.

(3) REAR WARNING TRUCK IS POSITIONED AT THE NO TRACK POINT OF THE PAVEMENT MARKING MATERIAL, OR VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE, OR SPACING SHOWN, WHICHEVER IS GREATER.

NOT TO SCALE

TRAFFIC CONTROL
SHEET 6 OF 11

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
LP 49	MO
DISTRICT	SHEET NO.
SW	9

COUNTY
BATES

JOB NO.
JSR0309

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

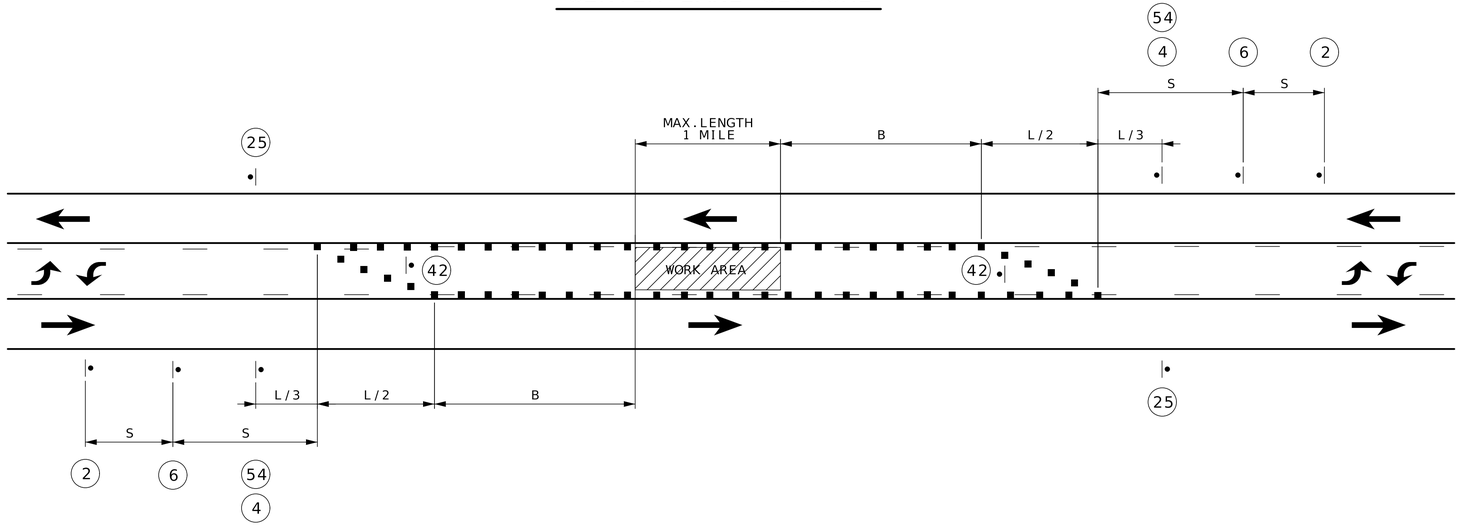
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

REVISED: 5/6/2026

CENTER LANE CLOSURE



SPEED	SIGN SPACING (FT)	MINIMUM TAPER LENGTH (L) FOR LANE WIDTHS (W)			OPTIONAL	CHANNELIZER SPACING (FT)	
NORMAL POSTED (MPH)	UNDIVIDED (S)	10 FT	11 FT	12 FT	BUFFER LENGTH (FT) (B)	TAPERS	BUFFER/ WORK AREAS
0-35	200	205	225	245	250	35	40
40-45	350	450	495	540	360	40	80
50-55	500	550	605	660	495	50	80
60-70	1000	700	770	840	730	60	120

NOTES:

SEE BEGIN/END OF PROJECT SIGNING SHEET FOR ADDITIONAL SIGNS.

IN TAPER SECTIONS, QUANTITY OF CHANNELIZERS IS DOUBLED WHEN COMPARED TO MAXIMUM CHANNELIZER SPACING IN CHART.

TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM CLOSURE, NO DIRECT PAY.

NO DIRECT PAYMENT WILL BE MADE FOR RELOCATION OF CHANNELIZERS, SIGNS, AND FLASHING ARROW PANEL.

FOR SHORT TERM OPERATIONS WHERE IT IS NOT FEASIBLE TO MODIFY PAVEMENT MARKING, DEVICE SPACING IS ONE-HALF SPACING SHOWN IN TABLE.

SPEED LIMIT SIGNS INDICATING NORMAL SPEED LIMIT SHALL BE INSTALLED AT END OF THE WORK ZONE, PROVIDED NO FURTHER WORK ZONES WILL BE ENCOUNTERED WITHIN THE NEXT 1/2 MILE.

ALL SIGNS, EXCEPT "NO PHONE ZONE" AND "POINT OF PRESENCE" SHALL BE PORTABLE MOUNT AND ARE TO BE MOVED AS WORK PROGRESSES, UNLESS OTHERWISE NOTED. ALL TRAFFIC CONTROL ITEMS SHALL BE REMOVED FROM THE ROADWAY DURING NON-WORKING HOURS. SEE JOB SPECIAL PROVISIONS.

WORK WILL REQUIRE LANE CLOSURES UNLESS OTHERWISE APPROVED BY THE ENGINEER.

SEE STANDARD DRAWING 616.10 FOR ADDITIONAL DETAILS.



WO20-1

(2)



WO20-6a

(6)



R4-7a

(42)

GO20-5aP



R2-1

(54)
(4)



R2-1

(25)

(NORMAL SPEED)

NOT TO SCALE

TRAFFIC CONTROL
SHEET 7 OF 11

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
LP 49	MO
DISTRICT	SHEET NO.
SW	10

COUNTY
BATES

JOB NO.
JSR0309

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

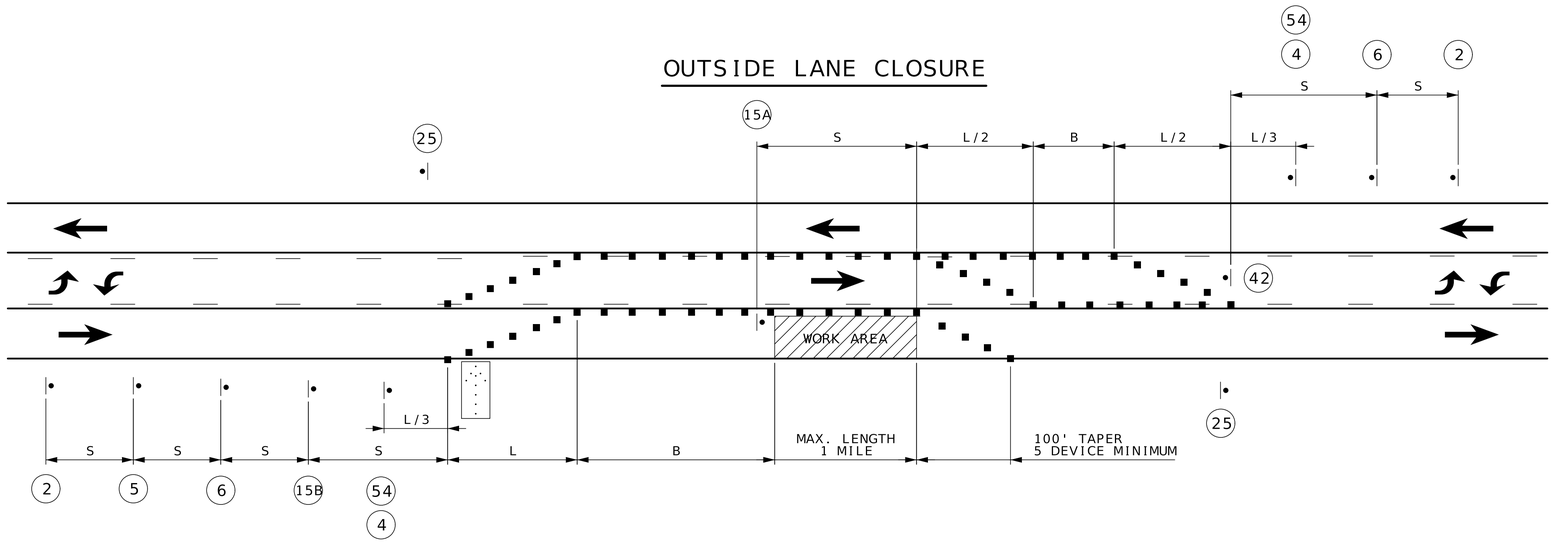
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

REVISED: 5/6/2026

OUTSIDE LANE CLOSURE



SPEED	SIGN SPACING (FT)	MINIMUM TAPER LENGTH (L) FOR LANE WIDTHS (W)			OPTIONAL	CHANNELIZER SPACING (FT)	
NORMAL POSTED (MPH)	UNDIVIDED (S)	10 FT	11 FT	12 FT	BUFFER LENGTH (FT) (B)	TAPERS	BUFFER/ WORK AREAS
0-35	200	205	225	245	250	35	40
40-45	350	450	495	540	360	40	80
50-55	500	550	605	660	495	50	80
60-70	1000	700	770	840	730	60	120

NOTES:

SEE BEGIN/END OF PROJECT SIGNING SHEET FOR ADDITIONAL SIGNS.

IN TAPER SECTIONS, QUANTITY OF CHANNELIZERS IS DOUBLED WHEN COMPARED TO MAXIMUM CHANNELIZER SPACING IN CHART.

TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM CLOSURE, NO DIRECT PAY.

NO DIRECT PAYMENT WILL BE MADE FOR RELOCATION OF CHANNELIZERS, SIGNS, AND FLASHING ARROW PANEL.

FOR SHORT TERM OPERATIONS WHERE IT IS NOT FEASIBLE TO MODIFY PAVEMENT MARKING, DEVICE SPACING IS ONE-HALF SPACING SHOWN IN TABLE.

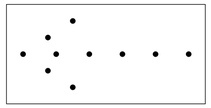
SPEED LIMIT SIGNS INDICATING NORMAL SPEED LIMIT SHALL BE INSTALLED AT END OF THE WORK ZONE, PROVIDED NO FURTHER WORK ZONES WILL BE ENCOUNTERED WITHIN THE NEXT 1/2 MILE.

ALL SIGNS, EXCEPT "NO PHONE ZONE" AND "POINT OF PRESENCE" SHALL BE PORTABLE MOUNT AND ARE TO BE MOVED AS WORK PROGRESSES, UNLESS OTHERWISE NOTED. ALL TRAFFIC CONTROL ITEMS SHALL BE REMOVED FROM THE ROADWAY DURING NON-WORKING HOURS. SEE JOB SPECIAL PROVISIONS.

WORK WILL REQUIRE LANE CLOSURES UNLESS OTHERWISE APPROVED BY THE ENGINEER.

SEE STANDARD DRAWING 616.10 FOR ADDITIONAL DETAILS.

(1) WO13-1 PLAQUE IS OPTIONAL.



FLASHING ARROW BOARD



WO20-6a

6

CENTER



R4-7a

42

GO20-5aP



R2-1

54

4



R2-1

25

(NORMAL SPEED)



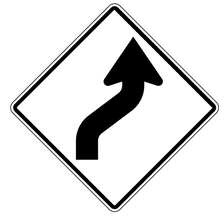
WO20-1

2



WO20-5

5



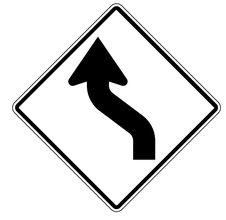
WO1-4R



(1)

WO13-1

15A



WO1-4L



(1)

WO13-1

15B

NOT TO SCALE

TRAFFIC CONTROL
SHEET 8 OF 11

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
LP 49	MO
DISTRICT	SHEET NO.
SW	11

COUNTY
BATES

JOB NO.
JSR0309

CONTRACT ID.

PROJECT NO.

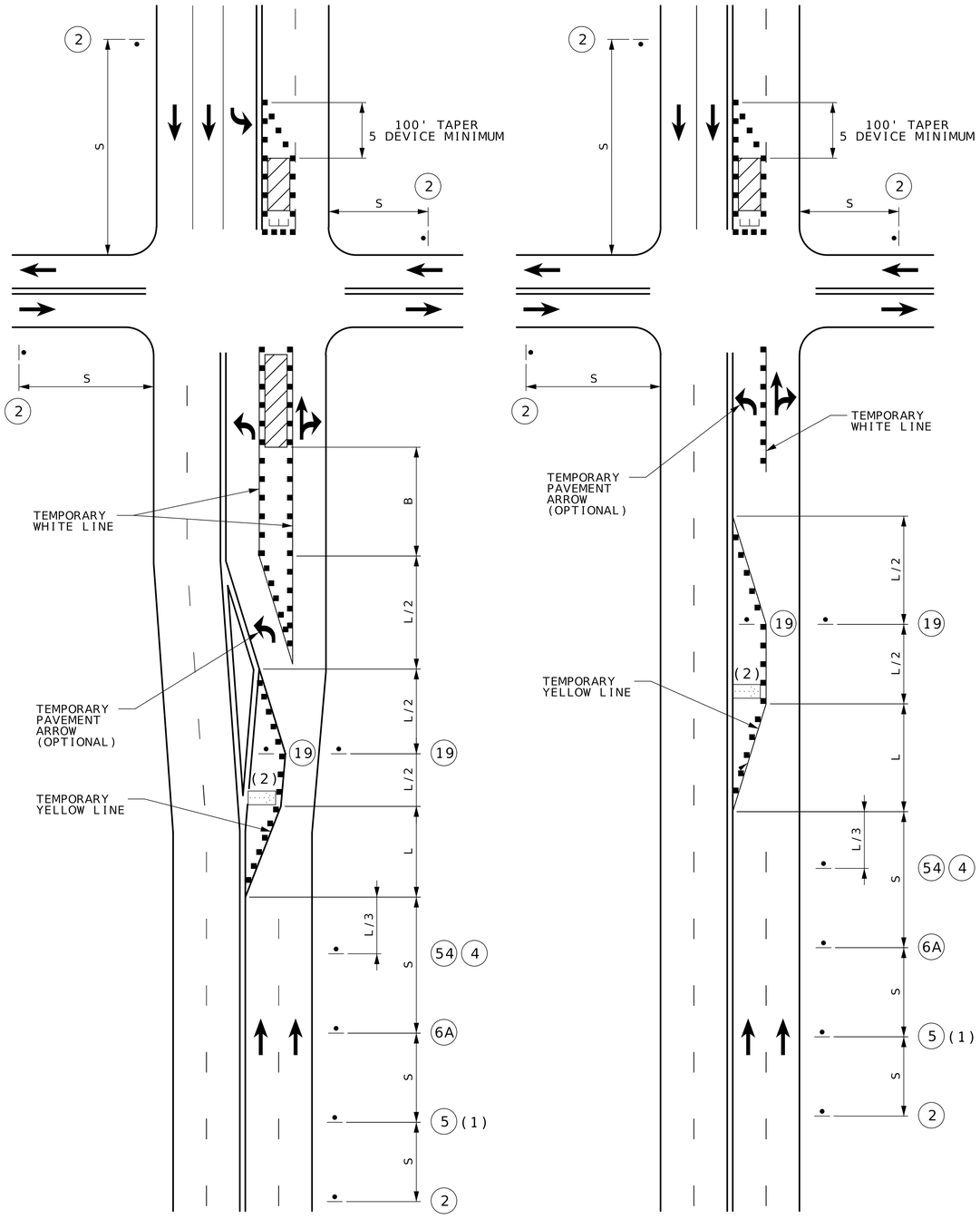
BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

REVISED: 2/19/2026



WORK ON NEAR OR FAR SIDE

WORK ON FAR SIDE ONLY

LEFT LANE CLOSURE AT INTERSECTION

SPEED	SIGN SPACING (FT)		MINIMUM TAPER LENGTH (L) FOR LANE WIDTHS (W)			OPTIONAL	CHANNELIZER SPACING (FT)	
NORMAL POSTED (MPH)	UNDIVIDED HIGHWAYS (S)	DIVIDED (S)	10 FT	11 FT	12 FT	BUFFER LENGTH (FT) (B)	TAPERS	BUFFER/ WORK AREAS
0-35	200	200	205	225	245	250	35	40
40-45	350	500	450	495	540	360	40	80
50-55	500	1000	550	605	660	495	50	80
60-70	1000	SA - 1000 SB - 1500 SC - 2640	700	770	840	730	60	120

NOTES:

FOR SIGNALIZED INTERSECTIONS, ADJUSTMENTS MAY NEED TO BE MADE TO SIGNAL PHASING, TIMING, INDICATIONS OR DETECTOR SETTINGS.

REMOVE AND/OR MODIFY EXISTING PAVEMENT MARKING AS NEEDED.

PAVEMENT MARKING AND BARRICADES OPTIONAL FOR SHORT TERM OPERATIONS.

TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM LANE CLOSURES.

FOR SHORT TERM OPERATION, WHERE IT IS NOT FEASIBLE TO MODIFY PAVEMENT MARKING, A 10-FEET DEVICE SPACING IS USED WHERE TRAFFIC IS GUIDED ACROSS DOUBLE YELLOW LINES OR OTHER CONFLICTING PAVEMENT MARKING. ALL OTHER SPACINGS ARE ONE-HALF OF THE SPACING.

(1) LEFT LANE CLOSED AHEAD SIGN MAY BE OMITTED IN LOW SPEED URBAN AREAS WHERE THERE IS NOT SUFFICIENT SPACE FOR THE FULL SIGN SERIES.

(2) FLASHING ARROW BOARD SHOULD BE LOCATED AT THE BEGINNING OF THE MERGING TAPER WHEN MEDIAN WIDTH ALLOWS THIS PLACEMENT.

TRAFFIC CONTROL LEGEND

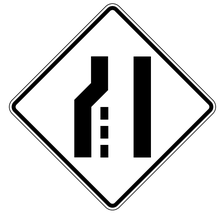
- SIGN (SINGLE SIDED)
- CHANNELIZER
- BARRICADE
- FLASHING ARROW PANEL



WO20-1
(2)



WO20-5
(5)



WO4-2L
(6A)



R3-7L
(19)



GO20-5aP



R2-1
(54)
(4)



R2-1
(25)
(NORMAL SPEED)

NOT TO SCALE

TRAFFIC CONTROL
SHEET 9 OF 11

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 9/28/2026

ROUTE LP 49 | STATE MO

DISTRICT SW | SHEET NO. 12

COUNTY BATES

JOB NO. JSR0309

CONTRACT ID.

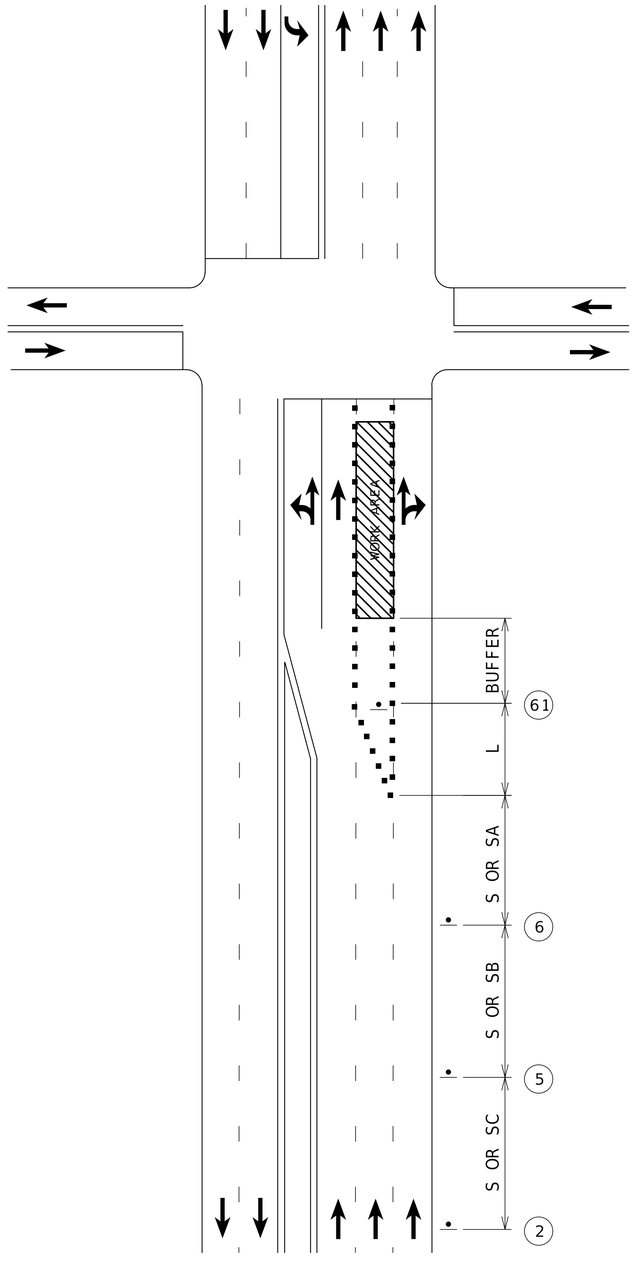
PROJECT NO.

BRIDGE NO.

DESCRIPTION | DATE

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

REVISED: 2/19/2026



LANE CLOSURE ON
NEAR SIDE OF INTERSECTION

SPEED	SIGN SPACING (FT)		MINIMUM TAPER LENGTH (L) FOR LANE WIDTHS (W)			OPTIONAL	CHANNELIZER SPACING (FT)	
NORMAL POSTED (MPH)	UNDIVIDED HIGHWAYS (S)	DIVIDED (S)	10 FT	11 FT	12 FT	BUFFER LENGTH (FT) (B)	TAPERS	BUFFER/ WORK AREAS
0-35	200	200	205	225	245	250	35	40
40-45	350	500	450	495	540	360	40	80
50-55	500	1000	550	605	660	495	50	80
60-70	1000	SA - 1000 SB - 1500 SC - 2640	700	770	840	730	60	120

NOTES:

FOR SIGNALIZED INTERSECTIONS, ADJUSTMENTS MAY NEED TO BE MADE TO SIGNAL PHASING, TIMING, INDICATIONS OR DETECTOR SETTINGS.

REMOVE AND/OR MODIFY EXISTING PAVEMENT MARKING AS NEEDED.

PAVEMENT MARKING OPTIONAL FOR SHORT TERM OPERATIONS.

TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM LANE CLOSURES.

FOR SHORT TERM OPERATION, WHERE IT IS NOT FEASIBLE TO MODIFY PAVEMENT MARKING, A 10-FEET DEVICE SPACING IS USED WHERE TRAFFIC IS GUIDED ACROSS DOUBLE YELLOW LINES OR OTHER CONFLICTING PAVEMENT MARKING. ALL OTHER SPACINGS ARE ONE-HALF OF THE SPACING.

(1) RIGHT LANE CLOSED AHEAD SIGN MAY BE OMITTED IN LOW SPEED URBAN AREAS WHERE THERE IS NOT SUFFICIENT SPACE FOR THE FULL SIGN SERIES.

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZER



WO20-1

2



WO20-5

5

CENTER OR LEFT



WO20-6a

6

CENTER OR LEFT



WO12-1

61

NOT TO SCALE

TRAFFIC CONTROL
SHEET 10 OF 11

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE LP 49 | STATE MO

DISTRICT SW | SHEET NO. 13

COUNTY
BATES

JOB NO.
JSR0309

CONTRACT ID.

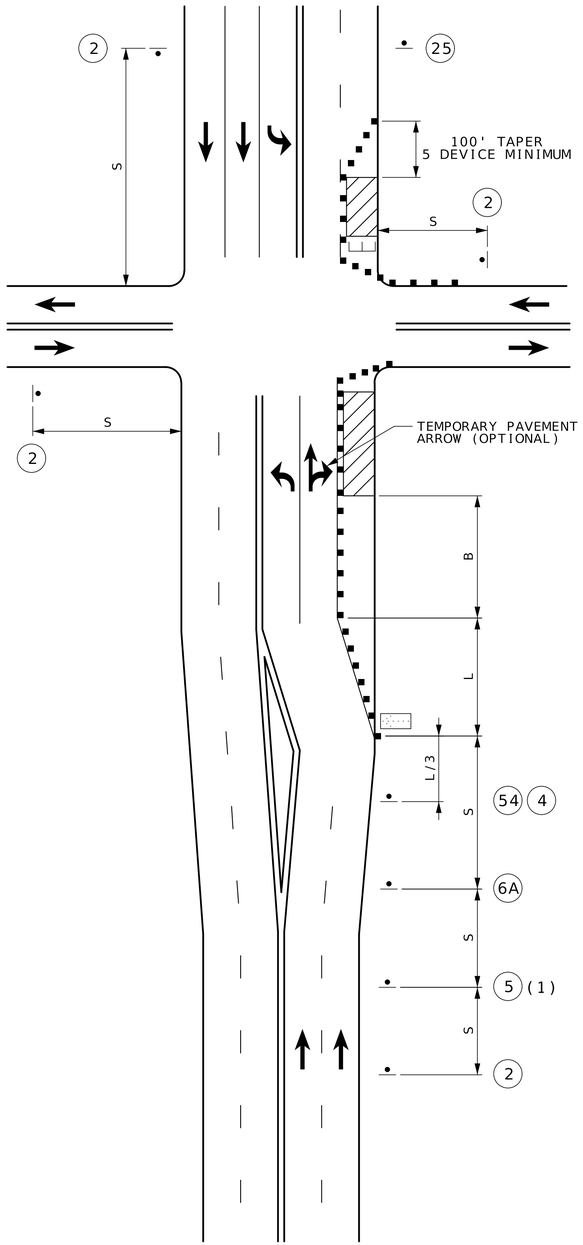
PROJECT NO.

BRIDGE NO.

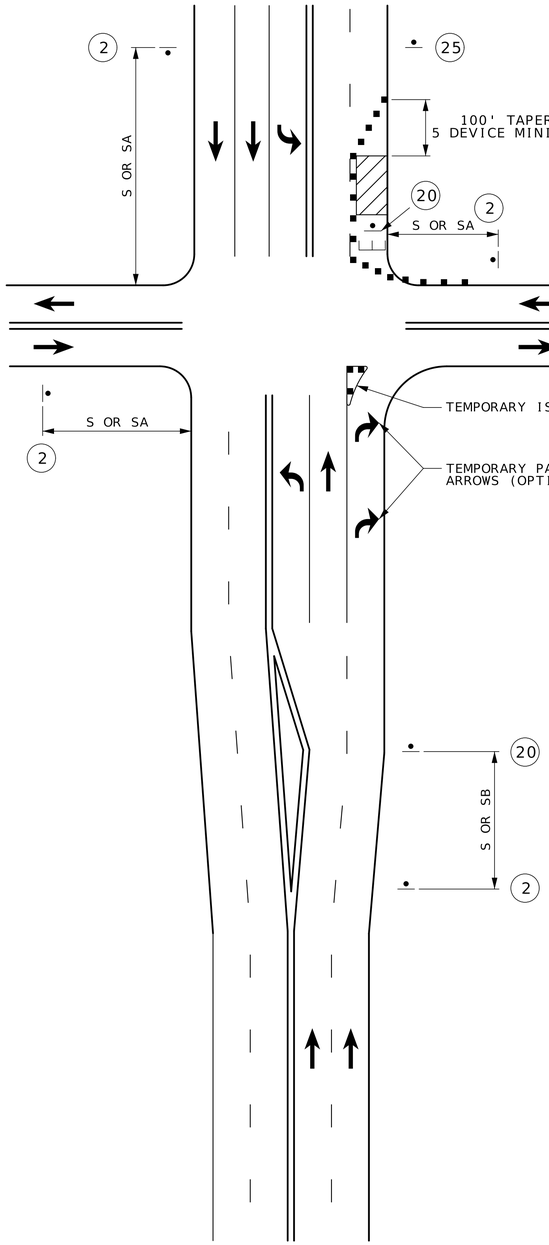
DESCRIPTION | DATE

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

REVISED: 2/19/2026



WORK ON NEAR OR FAR SIDE



WORK ON FAR SIDE ONLY (2)

RIGHT LANE CLOSURE AT INTERSECTION

SPEED	SIGN SPACING (FT)		MINIMUM TAPER LENGTH (L) FOR LANE WIDTHS (W)			OPTIONAL	CHANNELIZER SPACING (FT)	
NORMAL POSTED (MPH)	UNDIVIDED HIGHWAYS (S)	DIVIDED (S)	10 FT	11 FT	12 FT	BUFFER LENGTH (FT) (B)	TAPERS	BUFFER/ WORK AREAS
0-35	200	200	205	225	245	250	35	40
40-45	350	500	450	495	540	360	40	80
50-55	500	1000	550	605	660	495	50	80
60-70	1000	SA - 1000 SB - 1500 SC - 2640	700	770	840	730	60	120

NOTES:
FOR SIGNALIZED INTERSECTIONS, ADJUSTMENTS MAY NEED TO BE MADE TO SIGNAL PHASING, TIMING, INDICATIONS OR DETECTOR SETTINGS.

REMOVE AND/OR MODIFY EXISTING PAVEMENT MARKING AS NEEDED.

PAVEMENT MARKING AND BARRICADES OPTIONAL FOR SHORT TERM OPERATIONS.

TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM LANE CLOSURES.

FOR SHORT TERM OPERATION, WHERE IT IS NOT FEASIBLE TO MODIFY PAVEMENT MARKING, A 10-FEET DEVICE SPACING IS USED WHERE TRAFFIC IS GUIDED ACROSS DOUBLE YELLOW LINES OR OTHER CONFLICTING PAVEMENT MARKING. ALL OTHER SPACINGS ARE ONE-HALF OF THE SPACING.

(1) RIGHT LANE CLOSED AHEAD SIGN MAY BE OMITTED IN LOW SPEED URBAN AREAS WHERE THERE IS NOT SUFFICIENT SPACE FOR THE FULL SIGN SERIES.

(2) TYPICAL APPLICATION ONLY APPLIES WHERE A SIGNIFICANT PERCENTAGE OF THE APPROACH TRAFFIC TURNS RIGHT.

(3) TEMPORARY ISLAND MAY BE USED TO EMPHASIZE THE MANDATORY RIGHT TURN MOVEMENT WHERE THERE IS A SUFFICIENT RIGHT TURN RADIUS.

TRAFFIC CONTROL LEGEND

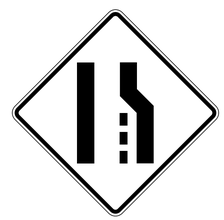
- SIGN (SINGLE SIDED)
- CHANNELIZER
- BARRICADE
- FLASHING ARROW PANEL



WO20-1
2



WO20-5
5



WO4-2R
6A



R3-7R
20

GO20-5aP





R2-1
54
4



R2-1
25
(NORMAL SPEED)

NOT TO SCALE

TRAFFIC CONTROL
SHEET 11 OF 11

STATE OF MISSOURI
SHANNON M. KELLNER
NUMBER PE-2011015763
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/28/2026

ROUTE	STATE
LP 49	MO
DISTRICT	SHEET NO.
SW	14

COUNTY
BATES

JOB NO.
JSR0309

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)