

DESIGN DESIGNATION
A.A.D.T - NOR 44 (1) = 5000
V = 45 M.P.H.
A.A.D.T - SOR 44 = 1748
V = 45 M.P.H.
A.A.D.T - RUDDER RD = 9726
V = 30 M.P.H.
A.A.D.T - MO 47 = 14431
V = 45 M.P.H.
A.A.D.T - I-255 = 102692
V = 60 M.P.H.
A.A.D.T - I-55 = 153270
V = 60 M.P.H.
A.A.D.T - MO 340 = 42422
V = 40 M.P.H.
A.A.D.T - NOR 44 (2) = 6991
V = 40 M.P.H.
A.A.D.T - MO 100 EB = 7602
V = 55 M.P.H.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION PLANS FOR PROPOSED STATE HIGHWAY FRANKLIN & ST. LOUIS COUNTIES PAVEMENT IMPROVEMENTS



NO NEW RIGHT OF WAY WILL BE
REQUIRED FOR THIS PROJECT

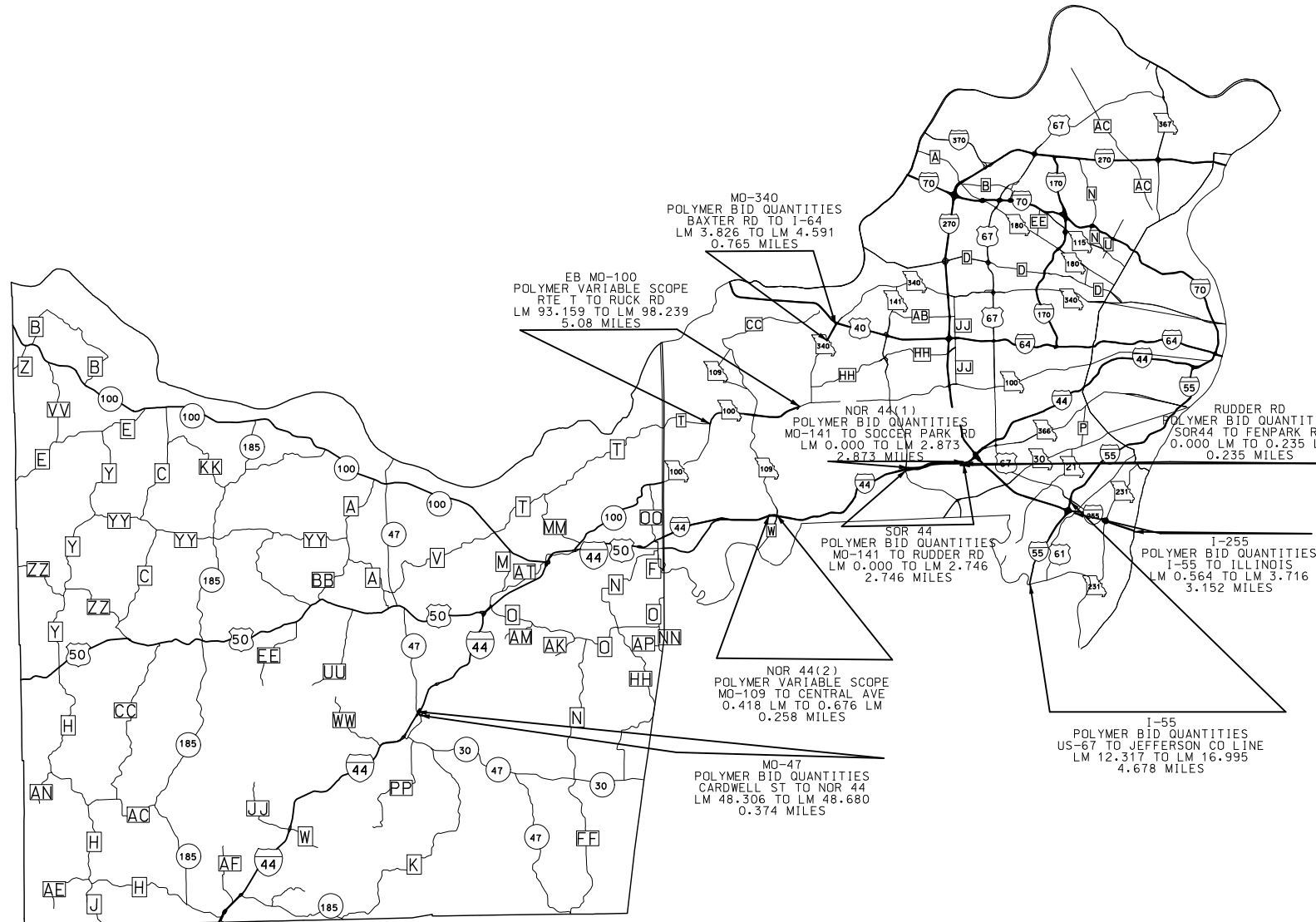
CONVENTIONAL SYMBOLS (USED IN PLANS)

	EXISTING	NEW
BUILDINGS AND STRUCTURES		
GUARD RAIL		
CONCRETE RIGHT-OF-WAY MARKER		
STEEL RIGHT-OF-WAY MARKER		
LOCATION SURVEY MARKER		
UTILITIES		
FIBER OPTICS		
OVERHEAD TELEPHONE		
UNDERGROUND TELEPHONE		
OVERHEAD POWER		
UNDERGROUND POWER		
GAS		
WATER		
MANHOLE		
FIRE HYDRANT		
WATER VALVE		
WATER METER		
DROP INLET		
DITCH BLOCK		
GROUND MOUNTED SIGN		
LIGHT POLE		
H-FRAME POWER POLE		
TELEPHONE PEDESTAL		
FENCE		
CHAIN LINK		
WOVEN WIRE		
GATE POST		
BENCHMARK		

NOTE: DASHED OR OPEN SYMBOLS INDICATE
EXISTING FEATURES

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

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL
SEAL APPEAR HEREON ASSUMES RESPONSIBILITY
ONLY FOR WHAT APPEARS ON THIS PAGE, AND
DISCLAIMS (PURSUANT TO SECTION 327.411 ASMO)
SPECIFICATION, ESTIMATES, REPORTS, OR OTHER
DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE
UNDERSIGNED PROFESSIONAL RELATING TO OR
INTENDED TO BE USED FOR ANY PART OR PARTS OF
THE PROJECT TO WHICH THIS PAGE REFERS.



INDEX OF SHEETS

DESCRIPTION	SHEET NUMBER
TITLE SHEET -----	1
QUANTITIES (QU) (2 SHEETS)-----	3
TRAFFIC CONTROL SHEETS (TC)-----	4-13

LENGTH OF PROJECT

APPARENT LENGTH	
NOR-44 (1)	2.873
SOR-44	2.746
RUDDER RD	0.235
MO-47	0.374
I-255	3.152
I-55	4.678
MO-340	0.765
TOTAL =	14.823 MILES

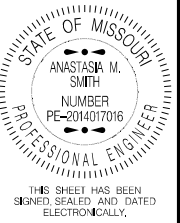
VARIABLE SCOPE

NOR-44 (2)	0.258
MO-100 EB	5.080

EXCEPTIONS

BID QUANTITIES	
MO-47 EXCLUDE BRIDGE A4313	198.1 FT
I-255 EXCLUDE BRIDGE A2590	189.9 FT
I-255 EXCLUDE BRIDGE A2590	189.9 FT
I-55 EXCLUDE BRIDGE A0609	1424.5 FT
I-55 EXCLUDE BRIDGE A5565	269.9 FT
I-55 EXCLUDE BRIDGE A5564	269.9 FT
MO-340 EXCLUDE BRIDGE A4658	172.9 FT
MO-340 EXCLUDE BRIDGE A4659	172.9 FT
VARIABLE SCOPE	
NO EXCEPTIONS	0.0 FT
TOTAL CORRECTIONS	2888.0 FT

NET LENGTH OF PROJECT	75,377.44 FEET
STATE LENGTH	14.276 MILES
FOR INFORMATION ONLY	
ESTIMATED DISTURBED ACRES	0.0 ACRES



DATE PREPARED
11/25/2024
ROUTE STATE
VAR MO
DISTRICT SHEET NO.
SL 1
COUNTY
FRANKLIN
ST. LOUIS
JOB NO.
JSL0206
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)



TITLE SHEET

BID QUANTITIES PARTIAL DEPTH POLYMER CONCRETE REPAIR						
LOG MILE	LOG MILE	ROADWAY	HOT POLYMER PATCHING (SY)	HOT POLYMER CONC. PATCHING (CF)	REMOVAL, FURNISHING AND PLACING HOT POLYMER CONCRETE PATCHING MATERIAL FOR CLASS A PARTIAL DEPTH REPAIR (LBS)	REMARKS
0.000	2.873	I-44 N OUTER ROAD	323.64	728.2	83743.00	FROM MO-141 TO SOCCER PARK RD
0.000	2.746	I-44 S OUTER ROAD	309.33	696.0	80040.00	FROM MO-141 TO RUDDER RD
0.000	0.235	RUDDER RD	26.47	59.6	6854.00	I-44 S OUTER ROAD TO FENPARK RD
48.306	48.680	MO-47	332.78	748.8	86112.00	FROM CARDWELL ST TO NOR 44
0.564	3.716	I-255	345.78	778.0	89470.00	FROM I-55 TO ILLINOIS STATE LINE
12.317	16.995	I-55	241.33	543.0	62445.00	FROM US-67 TO JEFFERSON CO LINE
3.826	4.591	MO-340	117.78	265.0	30475.00	FROM BAXTER RD TO I-64
TOTALS					439139.00	
PAY TOTALS					439139.00	

* ALL QUANTITIES ARE AN ESTIMATE AND MAY VARY. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
 * TYPICAL 3 INCH DEPTH USED. USE 115 LBS/CF
 * THE CONTRACTOR SHALL NOT MAKE REPAIRS WITHIN DETECTOR LOOPS WITHOUT PERMISSION OF THE ENGINEER
 * REPAIRS MAY BE A MINIMUM OF 6' WIDE AT DISCRETION OF THE ENGINEER

VARIABLE SCOPE PARTIAL DEPTH POLYMER CONCRETE REPAIR						
LOG MILE	LOG MILE	ROADWAY	HOT POLYMER PATCHING (SY)	HOT POLYMER CONC. PATCHING (CF)	REMOVAL, FURNISHING AND PLACING HOT POLYMER CONCRETE PATCHING MATERIAL FOR CLASS A PARTIAL DEPTH REPAIR (LBS)	REMARKS
0.418	0.676	NOR44	230.22	518.0	59570.00	FROM MO-109 TO CENTRAL AVE
93.159	98.239	EB MO-100	189.11	425.5	48932.50	FROM RTE T TO RUCK RD

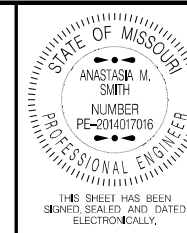
* ALL QUANTITIES ARE AN ESTIMATE AND MAY VARY. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
 * TYPICAL 3 INCH DEPTH USED. USE 115 LBS/CF
 * THE CONTRACTOR SHALL NOT MAKE REPAIRS WITHIN DETECTOR LOOPS WITHOUT PERMISSION OF THE ENGINEER
 * REPAIRS MAY BE A MINIMUM OF 6' WIDE AT DISCRETION OF THE ENGINEER

BID QUANTITIES LOOP DETECTOR				
LOCATION	ROADWAY	6' x 30'	6' x 15'	6' x 6'
		LOOP DETECTOR (EA)	LOOP DETECTOR (EA)	LOOP DETECTOR (EA)
VARIOUS	VARIOUS	3.00	3.00	3.00
	TOTALS	3.00	3.00	3.00
	PAY TOTALS	3	3	3

LOCATIONS TO BE DETERMINED BY THE ENGINEER AND MAY BE PLACED ON ANY ROUTE

DISCLAIMER
 THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

MOBILIZATION - TOTAL = 1.0 LUMP SUM



DATE PREPARED
11/25/2024

ROUTE STATE
VAR MO
DISTRICT SHEET NO.
SL 3

COUNTY
FRANKLIN
ST. LOUIS
JOB NO.

JSL0206

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
 105 WEST CAPITOL JEFFERSON CITY, MO 65102
 1-888-ASK-MODOT (1-888-273-6636)



SUMMARY OF QUANTITIES
 SHEET 1 OF 2

Table with columns: SIGN, SIZE IN., AREA SQ.FT., QTY EACH, TOTAL AREA SQ.FT., QTY RELOC EACH, TOTAL RELOC SQ.FT., SIGN NUM., DESCRIPTION

Table with columns: SIGN, SIZE IN., AREA SQ.FT., QTY EACH, TOTAL AREA SQ.FT., QTY RELOC EACH, TOTAL RELOC SQ.FT., SIGN NUM., DESCRIPTION

Table with columns: SIGN, SIZE IN., AREA SQ.FT., QTY EACH, TOTAL AREA SQ.FT., QTY RELOC EACH, TOTAL RELOC SQ.FT., SIGN NUM., DESCRIPTION

Table with columns: SIGN, SIZE IN., AREA SQ.FT., QTY EACH, TOTAL AREA SQ.FT., QTY RELOC EACH, TOTAL RELOC SQ.FT., SIGN NUM., DESCRIPTION

Table with columns: ITEM NUMBER, TOTAL QTY, DESCRIPTION

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 ASMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

* ITEM NOT INCLUDED IN LUMP SUM TEMPORARY TRAFFIC CONTROL

** NO DIRECT PAY WILL BE MADE FOR RELOCATING SIGNS

*** 4-55MPH, 8-50MPH, 2-45MPH, 4-40MPH, 10-35MPH, 2-20MPH

GENERAL NOTES:

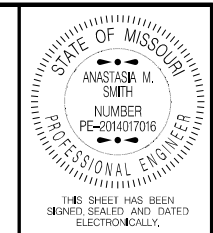
- SIGN AND DEVICE LOCATIONS SHALL BE FIELD VERIFIED AND APPROVED BY THE ENGINEER.

- CMS LOCATIONS TO BE DETERMINED BY THE ENGINEER.

NOTE:

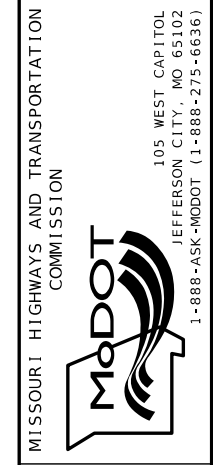
REFER TO STANDARD PLAN 616.10 AND 903.03 FOR SIGN AND SIGN MOUNTING REQUIREMENTS.

TEMPORARY TRAFFIC CONTROL = 1 LUMP SUM

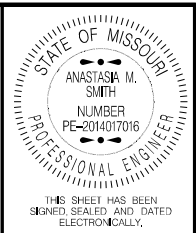


DATE PREPARED: 11/25/2024
ROUTE: VAR
STATE: MO
DISTRICT: SL
SHEET NO.: 3
COUNTY: FRANKLIN
CITY: ST. LOUIS
JOB NO.: JSL0206
CONTRACT ID.:

Table with columns: DATE, DESCRIPTION



SUMMARY OF QUANTITIES
SHEET 2 OF 2



DATE PREPARED
11/25/2024

ROUTE STATE
VAR MO

DISTRICT SHEET NO.
SL 4

COUNTY
FRANKLIN
ST. LOUIS

JOB NO.
JSL0206


CONTRACT ID.

PROJECT NO.

BRIDGE NO.

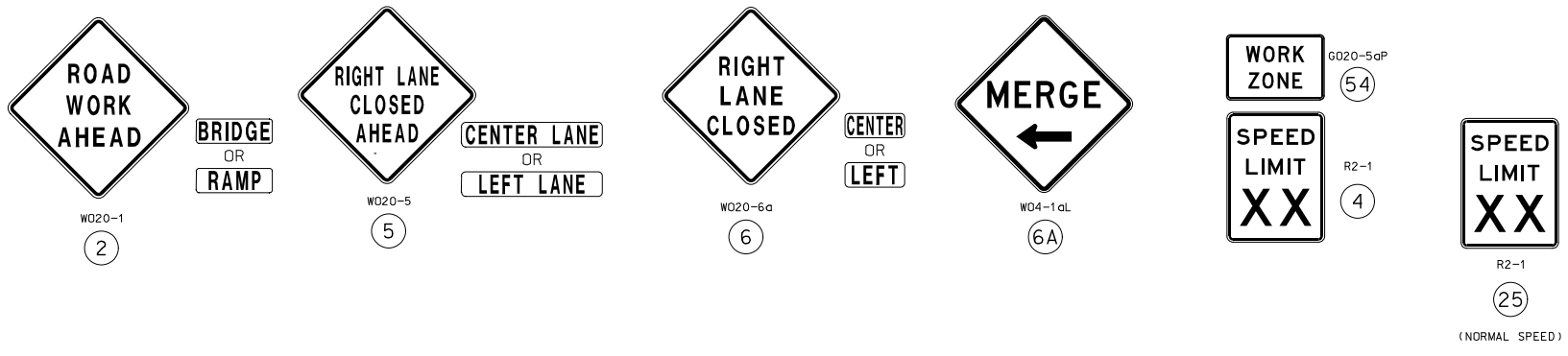
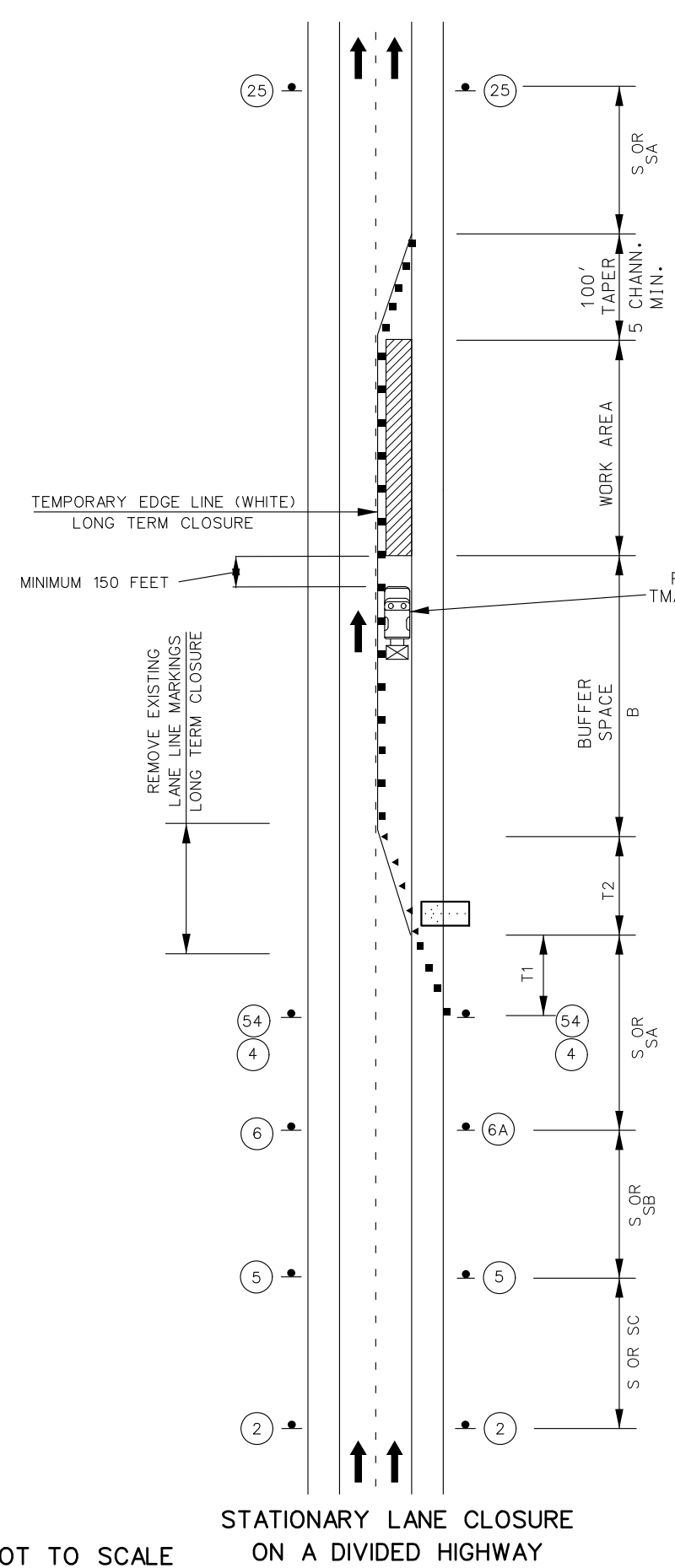
DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



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

TRAFFIC CONTROL SHEET
STATIONARY LANE CLOSURE
ON A DIVIDED HIGHWAY
SHEET 1 OF 10



NOTES:

- SEE EPG 616.12 WORK ZONE SPEED LIMITS FOR SPEED LIMIT GUIDELINES.
- TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM CLOSURES.
- REMOVE AND/OR MODIFY ANY EXISTING PAVEMENT MARKING AS NEEDED.
- THIS INFORMATION ALSO SHALL BE USED WHEN WORK IS BEING PERFORMED IN THE LANE ADJACENT TO THE MEDIAN ON A DIVIDED HIGHWAY. IN THIS CASE, THE LEFT LANE CLOSED SIGNS AND THE CORRESPONDING MERGE OR LANE ENDS SIGNS SHALL BE SUBSTITUTED.
- WHEN A SIDE ROAD INTERSECTS THE HIGHWAY WITHIN THE TTC ZONE, ADDITIONAL TTC DEVICES SHALL BE PLACED AS NEEDED.
- REVIEW EPG 616.6.83 WARNING LIGHTS WHEN SEQUENTIAL OR WARNING LIGHTS SHOULD BE USED ON NIGHTTIME OPERATIONS.
- IF RUMBLE STRIPS ARE USED, REVIEW EPG 616.6.87 RUMBLE STRIPS.
- FOR FLAGS AND ADVANCE WARNING RAIL SYSTEMS, REFER TO EPG 616.6.2.2 FLAGS AND ADVANCE WARNING RAIL SYSTEM.
- REVIEW EPG 616.6.63 CHANNELIZING DEVICES FOR DIFFERENT TYPES AND GUIDELINES FOR THE DEVICES.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

TRAFFIC CONTROL LEGEND

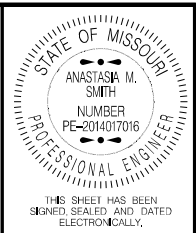
- SIGN (SINGLE SIDED)
- DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER (TRIM-LINE)
- WORK AREA
- FLASHING ARROW PANEL
- ADVANCE WARNING RAILS

SPEED	SIGN SPACING (ft.)		TAPER LENGTH (ft.)		OPTIONAL BUFFER LENGTH (ft.) (B)	CHANNELIZER SPACING (ft.)	
	UN-DIVIDED (S)	DIVIDED (S)	SHOULDER (1) (T1)	LANE (2) (T2)		TAPERS	BUFFER/WORK AREAS
0-35	-	200	70	245	280	35	40
40-45	-	500	150	540	400	40	80
50-55	-	1000	185	660	560	50	80
60-70	-	SA-1000 SB-1500 SC-2640	235	840	840	60	120

1 Shoulder taper length based on 10 ft. (standard shoulder width) offset.
2. Lane taper length based on 12 ft. (standard lane width) offset.

NOT TO SCALE

STATIONARY LANE CLOSURE ON A DIVIDED HIGHWAY



DATE PREPARED
11/25/2024

ROUTE STATE
VAR MO

DISTRICT SHEET NO.
SL 5

COUNTY
FRANKLIN
ST. LOUIS

JOB NO.
JSL0206

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

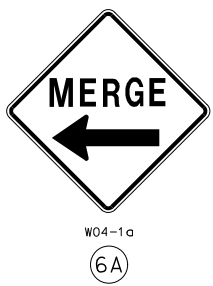
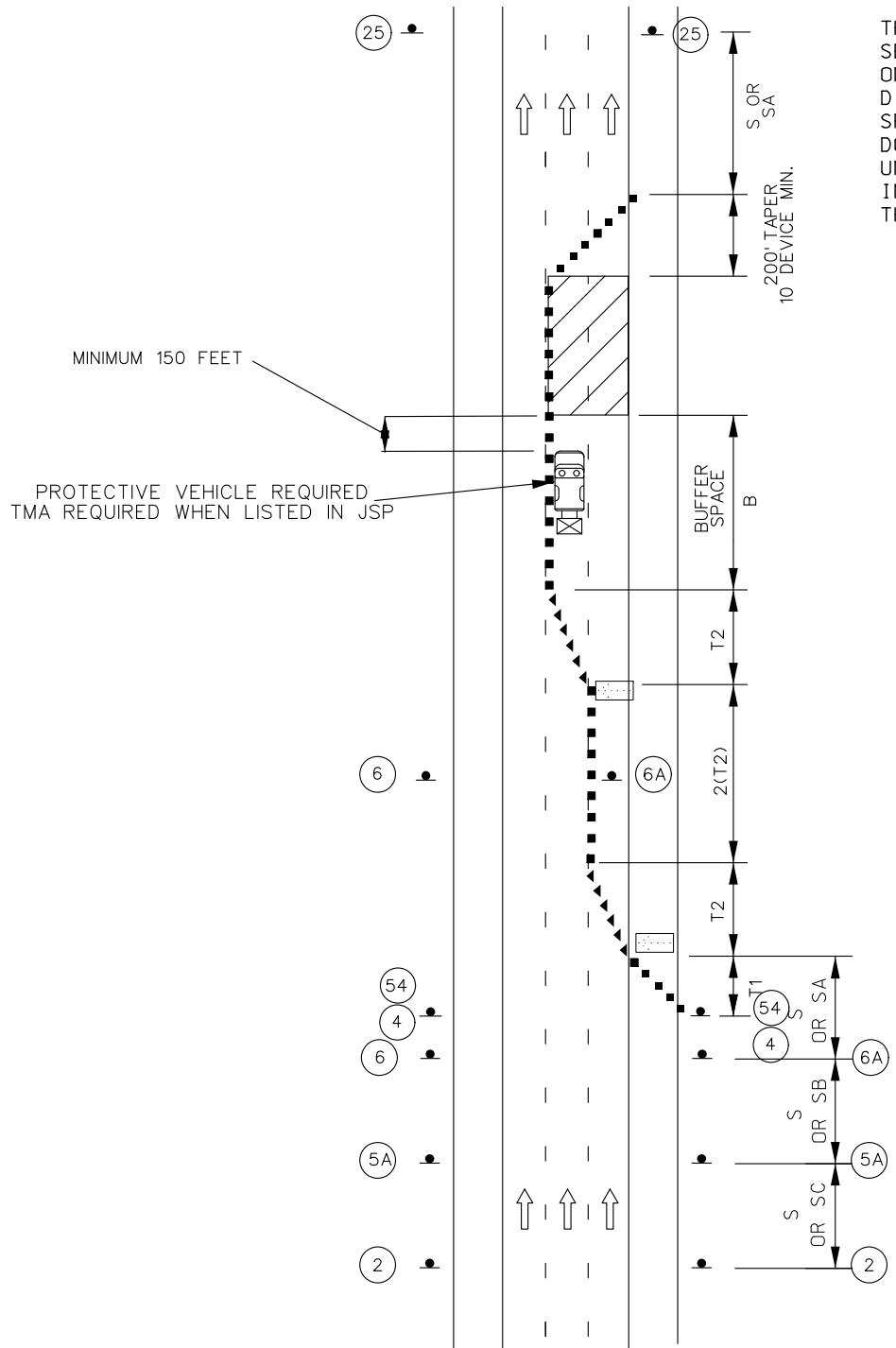
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

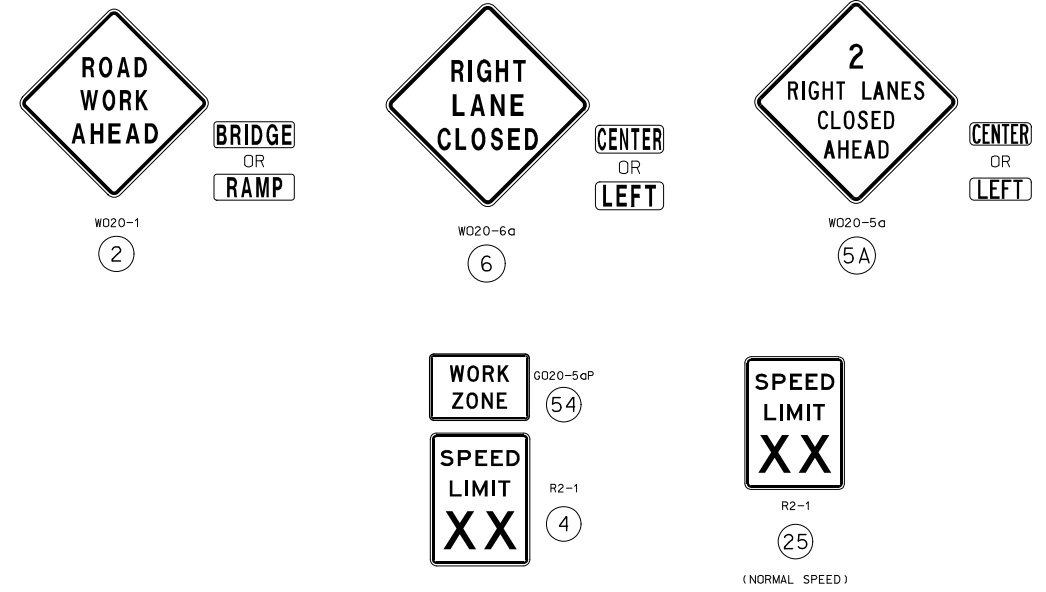
TRAFFIC CONTROL SHEET
DOUBLE LANE CLOSURE
SHEET 2 OF 10

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMD) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- ◀ DIRECTIONAL INDICATOR BARRICADE
- CHANNELIZER (TRIM-LINE)
- ▨ WORK AREA
- ◻ FLASHING ARROW PANEL



NOTES:

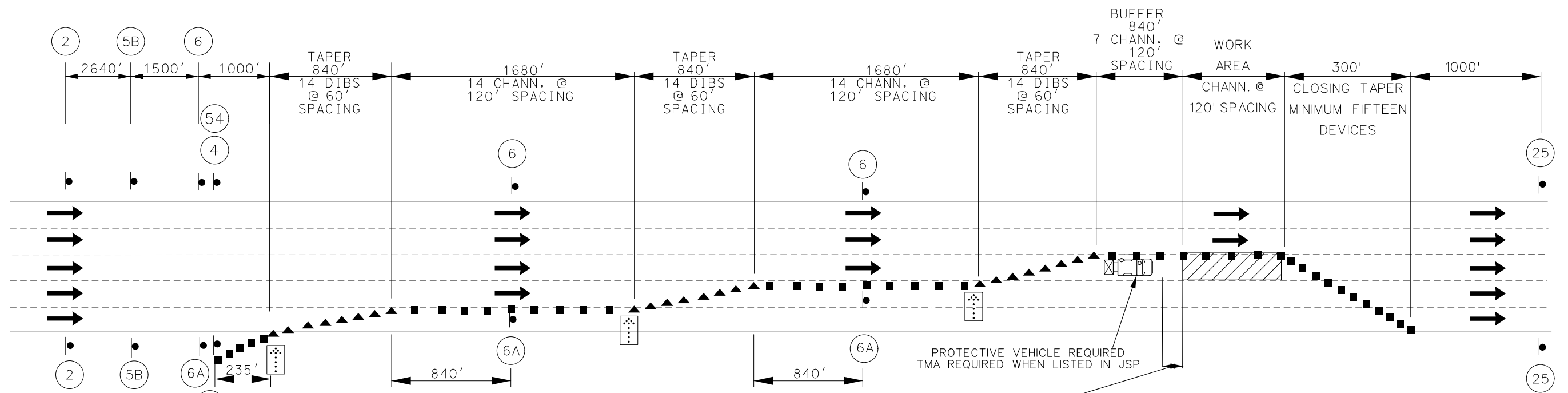
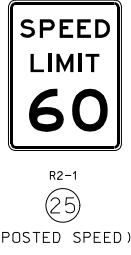
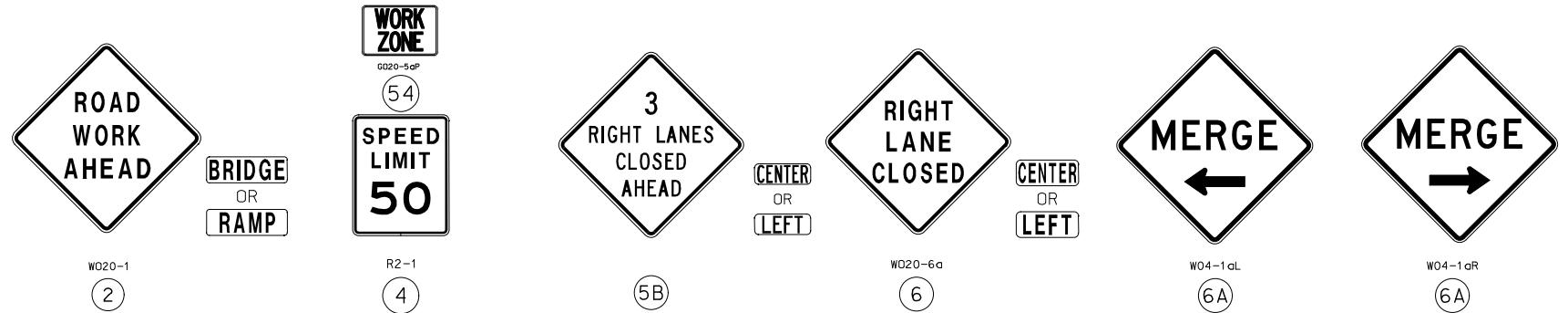
- SEE EPG 616.12 WORK ZONE SPEED LIMITS FOR SPEED LIMIT GUIDELINES.
- REMOVE AND/OR MODIFY ANY EXISTING PAVEMENT MARKING AS NEEDED.
- TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM LANE CLOSURES.
- ALTERNATIVE TEMPORARY TRAFFIC CONTROL SET-UPS SHOULD BE CONSIDERED WHEN REDUCTION IN CAPACITY CANNOT BE TOLERATED.
- FOR NIGHTTIME OPERATIONS, REVIEW EPG 616.6.83 WARNING LIGHTS FOR USE OF SEQUENTIAL LIGHTS.
- FOR FLAGS AND ADVANCE WARNING RAIL SYSTEM, REFER TO EPG 616.6.2.2 FLAGS AND ADVANCE WARNING RAIL SYSTEM.
- REVIEW EPG 616.6.63 CHANNELIZING DEVICES FOR DIFFERENT TYPES AND GUIDELINES FOR THE DEVICES.
- A FLASHING ARROW BOARD SHALL BE USED WHEN A FREEWAY LANE IS CLOSED. WHEN MORE THAN ONE FREEWAY LANE IS CLOSED, A SEPARATE FLASHING ARROW BOARD SHALL BE USED FOR EACH CLOSED LANE.

SPEED PERM. POSTED (MPH)	SIGN SPACING (ft.)		TAPER LENGTH (ft.)		OPTIONAL BUFFER LENGTH (ft.) (B)	CHANNELIZER SPACING (ft.)	
	UN-DIVIDED (S)	DIVIDED (S)	SHOULDER (1) (T1)	LANE (2) (T2)		TAPERS	BUFFER/ WORK AREAS
0-35	-	200	70	245	280	35	40
40-45	-	500	150	540	400	40	80
50-55	-	1000	185	660	560	50	80
60-70	-	SA-1000 SB-1500 SC-2640	235	840	840	60	120

1 Shoulder taper length based on 10 ft. (standard shoulder width) offset.
2. Lane taper length based on 12 ft. (standard lane width) offset.

NOT TO SCALE

**DOUBLE LANE CLOSURE
ON A DIVIDED HIGHWAY**



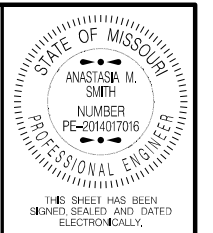
TRIPLE LANE CLOSURE IN A 60 MPH ZONE

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

NOT TO SCALE

TRAFFIC CONTROL LEGEND

- SIGN
- CHANNELIZER (TRIM-LINE)
- ▲ DIRECTIONAL INDICATOR BARRICADE (DIB)
- ☒ PROTECTIVE VEHICLE REQUIRED TRUCK MOUNTED ATTENUATORW/ FLASHING ARROW REQUIRED WHEN LISTED IN JSP
- ⋮ FLASHING ARROW PANEL
- E BARRICADE (TYPE III)



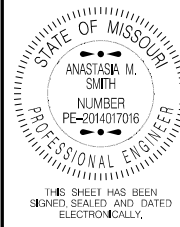
DATE PREPARED 11/25/2024	
ROUTE VAR	STATE MO
DISTRICT SL	SHEET NO. 6
COUNTY FRANKLIN ST. LOUIS JOB NO. JSL0206 CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

TRAFFIC CONTROL SHEET
TRIPLE LANE CLOSURE
IN A 60 MPH ZONE
SHEET 3 OF 10



DATE PREPARED
11/25/2024

ROUTE STATE
VAR MO
DISTRICT SHEET NO.
SL 7

COUNTY
FRANKLIN
ST. LOUIS
JOB NO.
JSL0206
CONTRACT ID.

PROJECT NO.

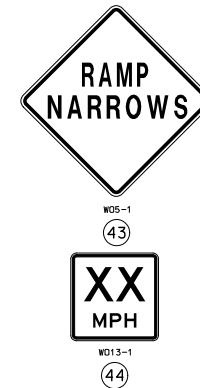
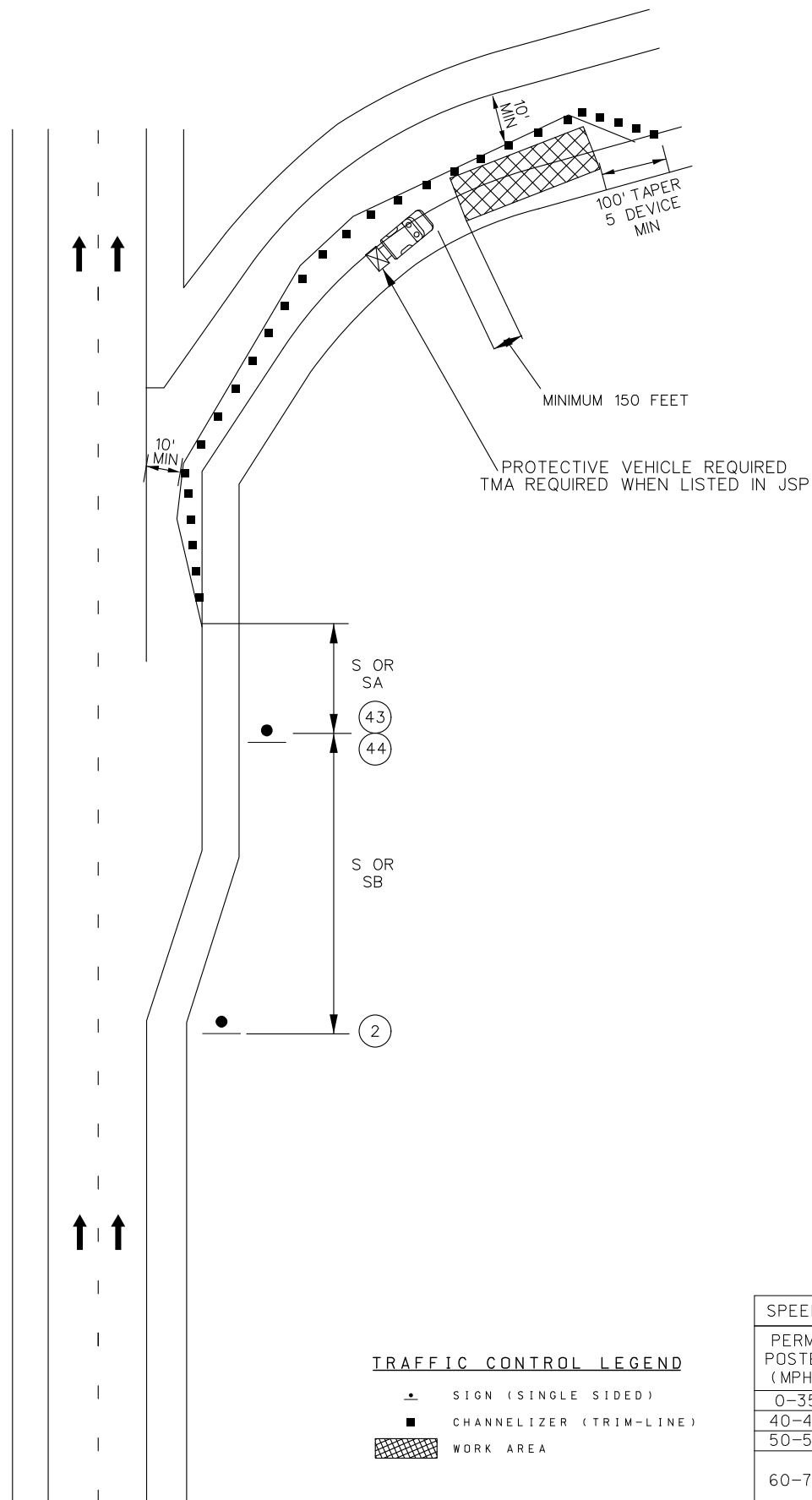
BRIDGE NO.

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

TRAFFIC CONTROL SHEET
PARTIAL EXIT RAMP CLOSURE
SHEET 4 OF 10



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

- NOTES:
- REMOVE AND/OR MODIFY ANY EXISTING PAVEMENT MARKING AS NEEDED.
 - TEMPORARY PAVEMENT MARKING OPTIONAL FOR SHORT TERM OPERATIONS.
 - RAMP NARROWS SIGN IS REQUIRED WHEN RAMP WIDTH IS REDUCED
 - IF RUMBLE STRIPS ARE USED, REVIEW EPG 616.6.87 RUMBLE STRIPS.
 - FOR FLAGS AND ADVANCE WARNING RAIL SYSTEM, REFER TO EPG 616.6.2.2 FLAGS AND ADVANCE WARNING RAIL SYSTEM.
 - REVIEW EPG 616.6.63 CHANNELIZING DEVICES FOR DIFFERENT TYPES AND GUIDELINES FOR THE DEVICES.

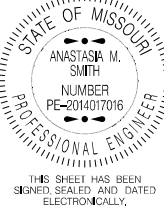
TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZER (TRIM-LINE)
- ▨ WORK AREA

SPEED PERM. POSTED (MPH)	SIGN SPACING (ft.)		TAPER LENGTH (ft.)		OPTIONAL BUFFER LENGTH (ft.) (B)	CHANNELIZER SPACING (ft.) TAPERS	BUFFER/ WORK AREAS
	UN-DIVIDED (S)	DIVIDED (S)	SHOULDER (1) (T1)	LANE (2) (T2)			
0-35	-	200	70	245	280	35	40
40-45	-	500	150	540	400	40	80
50-55	-	1000	185	660	560	50	80
60-70	-	SA-1000 SB-1500 SC-2640	235	840	840	60	120

1 Shoulder taper length based on 10 ft. (standard shoulder width) offset.
2. Lane taper length based on 12 ft. (standard lane width) offset.

NOT TO SCALE



DATE PREPARED
11/25/2024

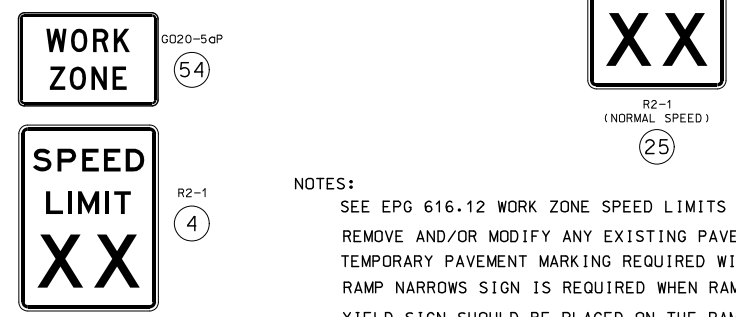
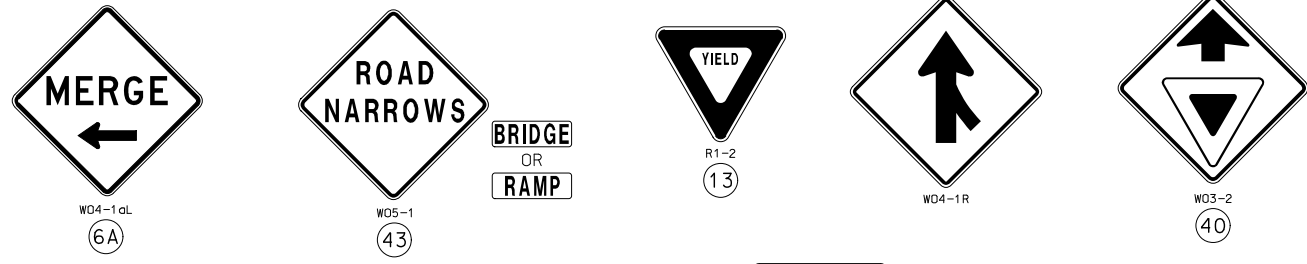
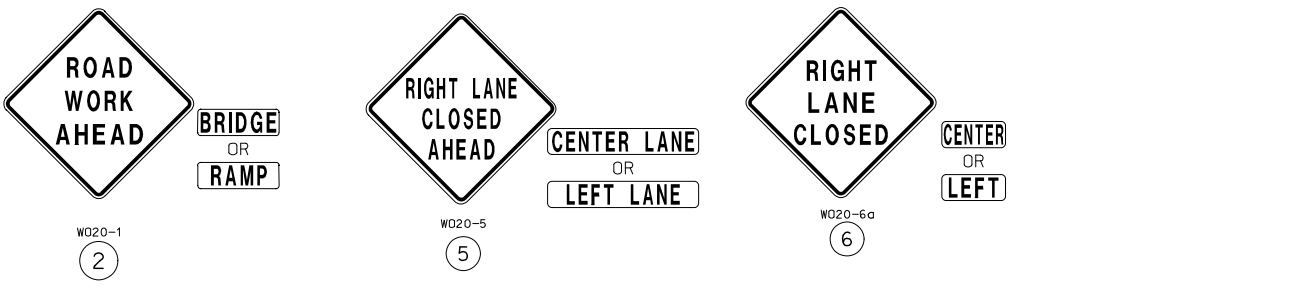
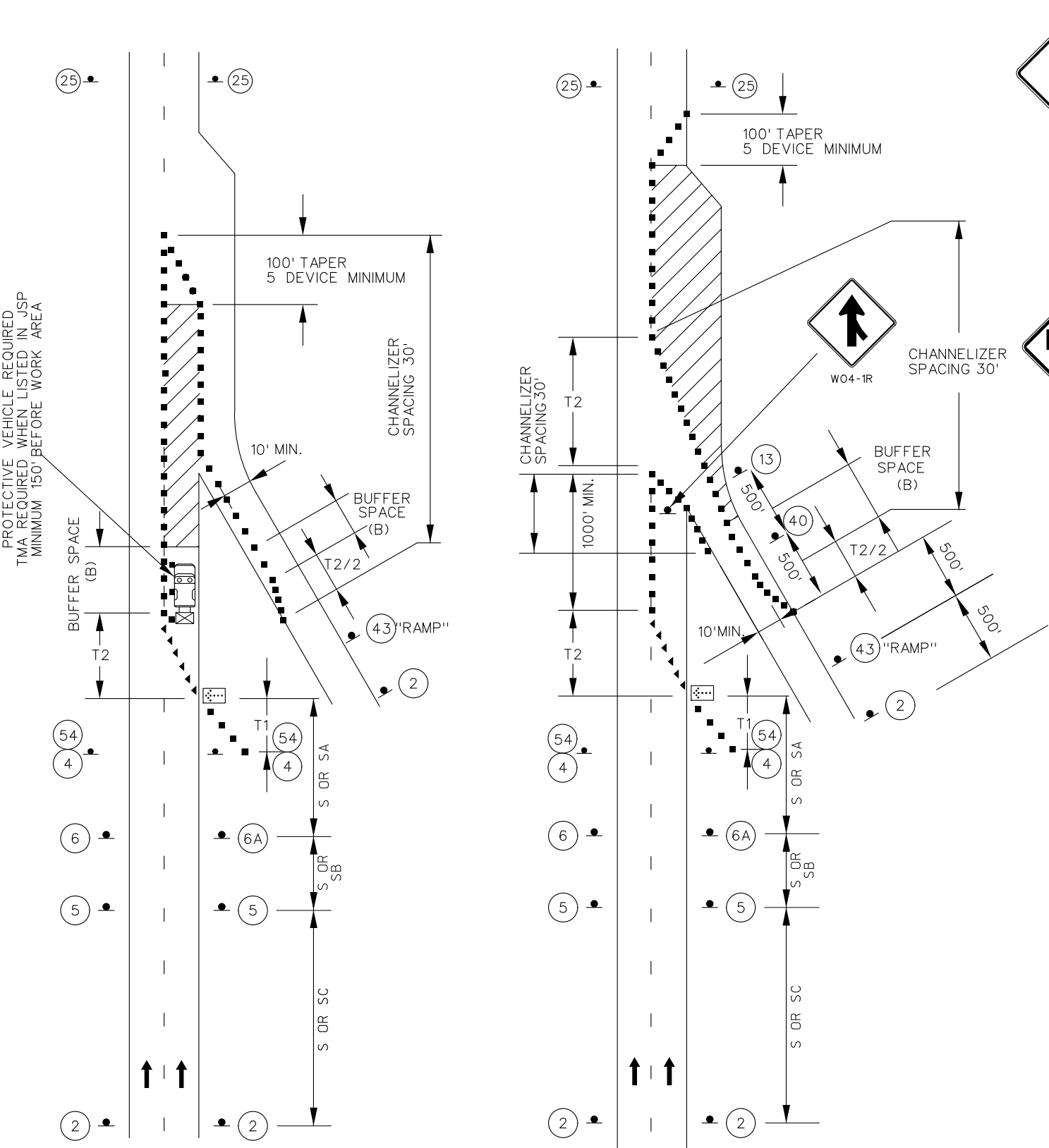
ROUTE VAR	STATE MO
DISTRICT SL	SHEET NO. 8

COUNTY
FRANKLIN
ST. LOUIS
JOB NO.
JSL0206
CONTRACT ID.

PROJECT NO.
BRIDGE NO.

DESCRIPTION	DATE

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



NOTES:

- SEE EPG 616.12 WORK ZONE SPEED LIMITS FOR SPEED LIMIT GUIDELINES.
- REMOVE AND/OR MODIFY ANY EXISTING PAVEMENT MARKING AS NEEDED.
- TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM LANE CLOSURES.
- RAMP NARROWS SIGN IS REQUIRED WHEN RAMP WIDTH IS REDUCED.
- YIELD SIGN SHOULD BE PLACED ON THE RAMP TO PROVIDE ADEQUATE VISIBILITY OF MAINLINE TRAFFIC. WHERE INADEQUATE ACCELERATION DISTANCE EXISTS FOR THE TEMPORARY ENTRANCE, THE YIELD SIGN SHALL BE REPLACED WITH STOP SIGNS (ONE ON EACH SIDE OF THE APPROACH).
- IF RUMBLE STRIPS ARE USED, REVIEW EPG 616.6.87 RUMBLE STRIPS.
- FOR NIGHTTIME OPERATIONS, REVIEW EPG 616.6.83 WARNING LIGHTS FOR USE OF SEQUENTIAL LIGHTS.
- FOR FLAGS AND ADVANCE WARNING RAIL SYSTEM, REFER TO EPG 616.6.2.2 FLAGS AND ADVANCE WARNING RAIL SYSTEM.
- REVIEW EPG 616.6.63 CHANNELIZING DEVICES FOR DIFFERENT TYPES AND GUIDELINES FOR THE DEVICES.
- FOR RAMPS WITH SHARP CURVES OR MULTIPLE LANES, RAMP SIGNS MAY BE PLACED ON BOTH SIDES OF THE RAMP.
- THE LOCATION OF THE SIGN SEQUENCE AND MERGE TAPER SHOULD BE ADJUSTED SO THAT THE ARROW PANEL LOCATION IS NOT CONFUSING TO MOTORISTS ON THE RAMP.

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZER (TRIM-LINE)
- ▨ WORK AREA
- ◻ FLASHING ARROW PANEL
- ◀ DIRECTIONAL INDICATOR BARRICADES

SPEED	SIGN SPACING (ft.)		TAPER LENGTH (ft.)		OPTIONAL BUFFER LENGTH (ft.) (B)	CHANNELIZER SPACING (ft.)	
	UN-DIVIDED (S)	DIVIDED (S)	SHOULDER (1) (T1)	LANE (2) (T2)		TAPERS	BUFFER/WORK AREAS
0-35	200	200	70	245	280	35	40
40-45	350	500	150	540	400	40	80
50-55	500	1000	185	660	560	50	80
60-70	1000	SA-1000 SB-1500 SC-2640	235	840	840	60	120

1 Shoulder taper length based on 10 ft. (standard shoulder width) offset.
2. Lane taper length based on 12 ft. (standard lane width) offset.

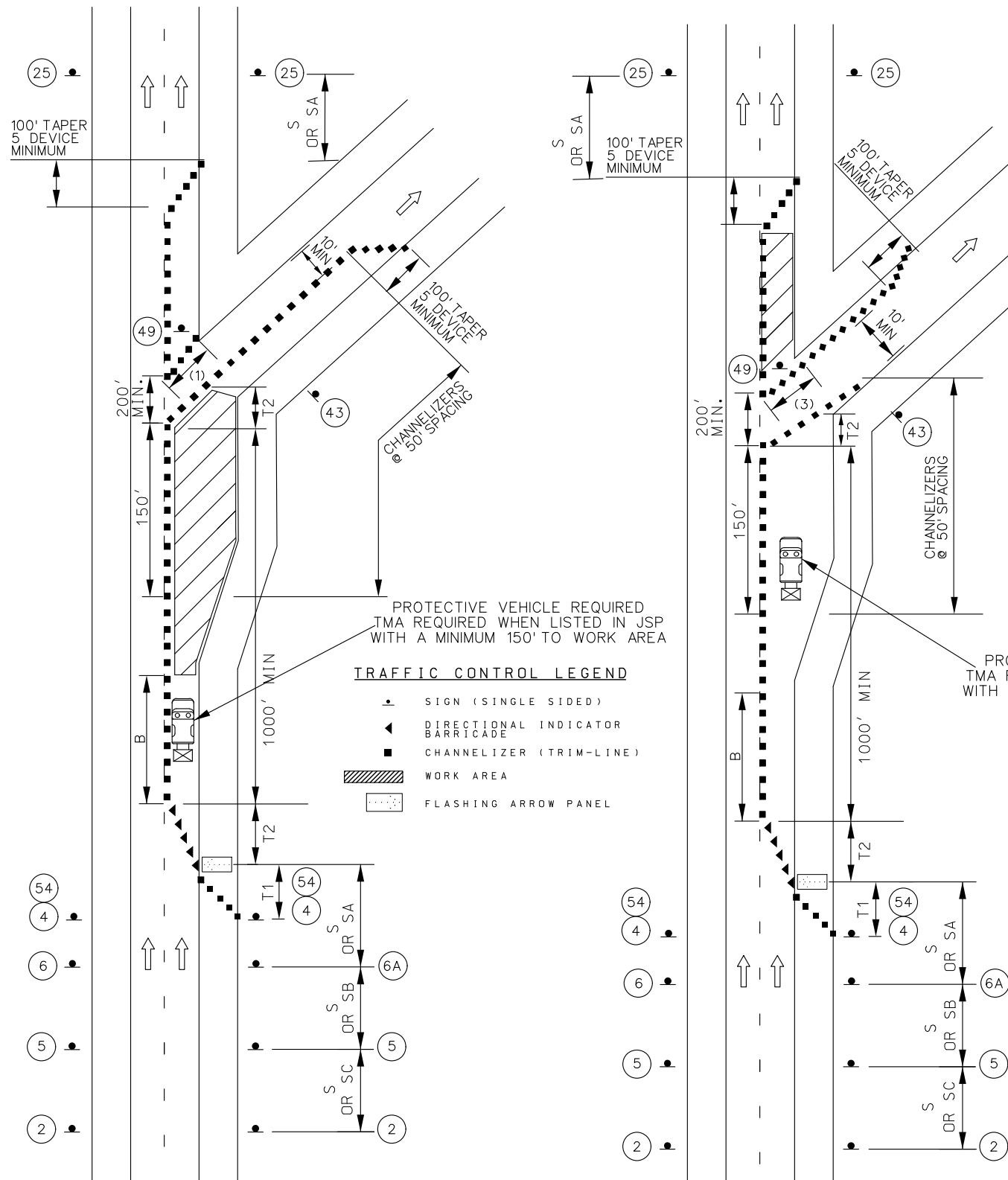
WORK IN THE VICINITY OF AN ENTRANCE RAMP

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

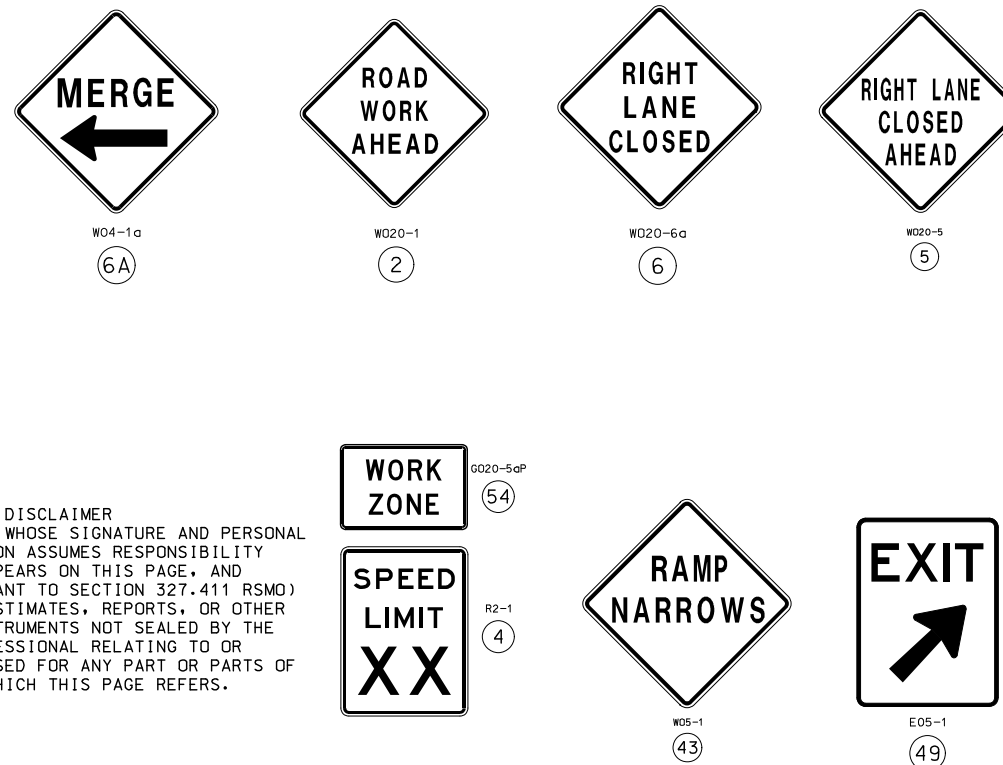
NOT TO SCALE

TRAFFIC CONTROL SHEET
WORK IN THE VICINITY OF AN EXIT RAMP
SHEET 5 OF 10

NOT TO SCALE



WORK IN THE VICINITY OF AN EXIT RAMP



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

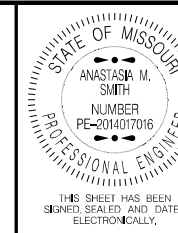
NOTES:

- SEE EPG 616.12 WORK ZONE SPEED LIMITS FOR SPEED LIMIT GUIDELINES.
- REMOVE AND/OR MODIFY ANY EXISTING PAVEMENT MARKING AS NEEDED.
- TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM LANE CLOSURES.
- RAMP NARROWS SIGN IS REQUIRED WHEN RAMP WIDTH IS REDUCED
- (3) 5 CHANNELIZER DEVICES MINIMUM
- IF RUMBLE STRIPS ARE USED, REVIEW EPG 616.6.87 RUMBLE STRIPS.
- FOR NIGHTTIME OPERATIONS, REVIEW EPG 616.6.83 WARNING LIGHTS FOR USE OF SEQUENTIAL LIGHTS.
- FOR FLAGS AND ADVANCE WARNING RAIL SYSTEM, REFER TO EPG 616.6.2.2 FLAGS AND ADVANCE WARNING RAIL SYSTEM.
- REVIEW EPG 616.6.63 CHANNELIZING DEVICES FOR DIFFERENT TYPES AND GUIDELINES FOR THE DEVICES.



SPEED	SIGN SPACING (ft.)		TAPER LENGTH (ft.)		OPTIONAL BUFFER LENGTH (ft.) (B)	CHANNELIZER SPACING (ft.)	
	UN -DIVIDED (S)	DIVIDED (S)	SHOULDER (1) (T1)	LANE (2) (T2)		TAPERS	BUFFER/ WORK AREAS
0-35	-	200	70	245	280	35	40
40-45	-	500	150	540	400	40	80
50-55	-	1000	185	660	560	50	80
60-70	-	SA-1000 SB-1500 SC-2640	235	840	840	60	120

1 Shoulder taper length based on 10 ft. (standard shoulder width) offset.
2. Lane taper length based on 12 ft. (standard lane width) offset.

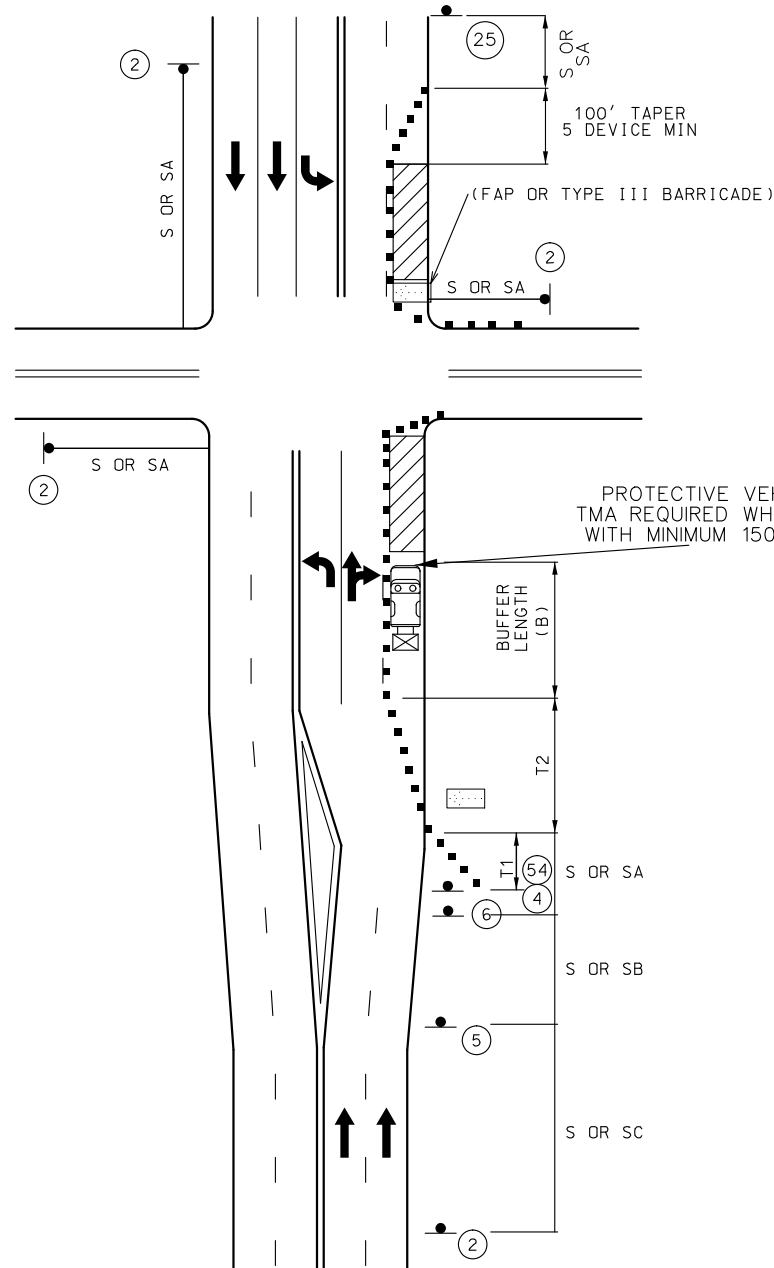


DATE PREPARED
11/25/2024
ROUTE STATE
VAR MO
DISTRICT SHEET NO.
SL 9
COUNTY
FRANKLIN
ST. LOUIS
JOB NO.
JSL0206
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

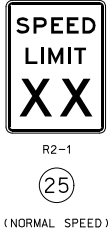
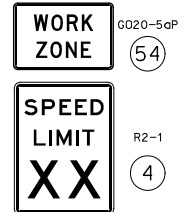
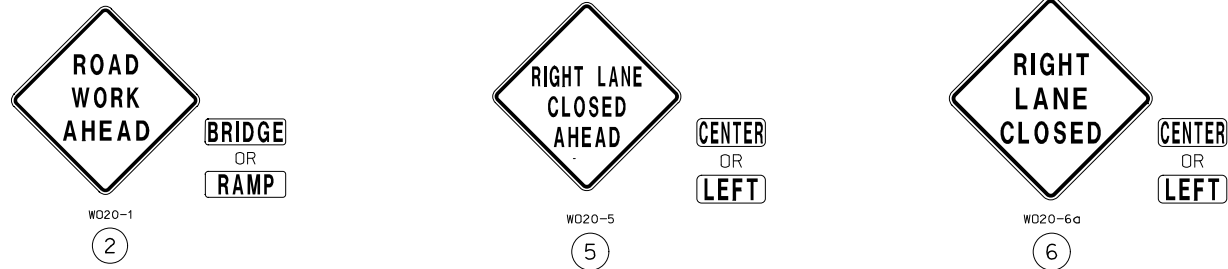
DATE	DESCRIPTION

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

TRAFFIC CONTROL SHEET
WORK IN THE VICINITY
OF AN EXIT RAMP
SHEET 6 OF 10



RIGHT LANE CLOSURE AT INTERSECTION
WORK ON NEAR OR FAR SIDE



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

NOTES:
 SEE EPG 616.12 WORK ZONE SPEED LIMITS FOR SPEED LIMIT GUIDELINES.
 REMOVE AND/OR MODIFY EXISTING PAVEMENT MARKING AS NEEDED.
 FOR SIGNALIZED INTERSECTIONS, ADJUSTMENTS MAY NEED TO BE MADE TO SIGNAL PHASING, TIMING, INDICATIONS OR DETECTOR SETTINGS.
 FOR SHORT TERM OPERATION, WHERE IT IS NOT FEASIBLE TO MODIFY PAVEMENT MARKING, A 10-FOOT DEVICE SPACING IS USED WHERE TRAFFIC IS GUIDED ACROSS DOUBLE YELLOW LINES OR OTHER CONFLICTING PAVEMENT MARKING. ALL OTHER SPACING ARE ONE-HALF OF THE SPACING.
 TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM LANE CLOSURES.
 PAVEMENT MARKING AND BARRICADES OPTIONAL FOR SHORT TERM OPERATIONS.
 RIGHT LANE CLOSED AHEAD SIGN MAY BE OMITTED IN LOW SPEED URBAN AREAS WHERE THERE IS NOT SUFFICIENT SPACE FOR HTE FULL SIGN SERIES.
 IF RUMBLE STRIPS ARE USED, REVIEW 616.6.87 RUMBLE STRIPS.
 FOR FLAGS AND ADVANCED WARNING RAIL SYSTEM, REFER TO EPG 616.6.2.2 FLAGS AND ADVANCE WARNING RAIL SYSTEM.

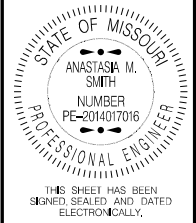
PROTECTIVE VEHICLE REQUIRED
TMA REQUIRED WHEN LISTED IN JSP
WITH MINIMUM 150' TO WORK AREA

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZER (TRIM-LINE)
- ▨ WORK AREA
- FLASHING ARROW PANEL

SPEED	SIGN SPACING (ft.)		TAPER LENGTH (ft.)		OPTIONAL BUFFER LENGTH (ft) (B)	CHANNELIZER SPACING (ft.)	
	UN-DIVIDED (S)	DIVIDED (S)	SHOULDER (1) (T1)	LANE (2) (T2)		TAPERS	BUFFER/WORK AREAS
0-35	200	200	70	245	280	35	40
40-45	350	500	150	540	400	40	80
50-55	500	1000	185	660	560	50	80
60-70	1000	SA-1000 SB-1500 SC-2640	235	840	840	60	120

1 Shoulder taper length based on 10 ft. (standard shoulder width) offset.
 2. Lane taper length based on 12 ft. (standard lane width) offset.



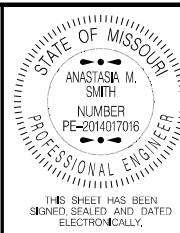
DATE PREPARED
11/25/2024
ROUTE STATE
VAR MO
DISTRICT SHEET NO.
SL 10
COUNTY FRANKLIN ST. LOUIS
JOB NO. JSL0206
CONTRACT ID.

DESCRIPTION	DATE

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

TRAFFIC CONTROL SHEET
RIGHT LANE OF INTERSECTION
SHEET 7 OF 10

NOT TO SCALE



DATE PREPARED
11/25/2024

ROUTE STATE
VAR MO

DISTRICT SHEET NO.
SL 11

COUNTY
FRANKLIN

ST. LOUIS

JOB NO.
JSL0206

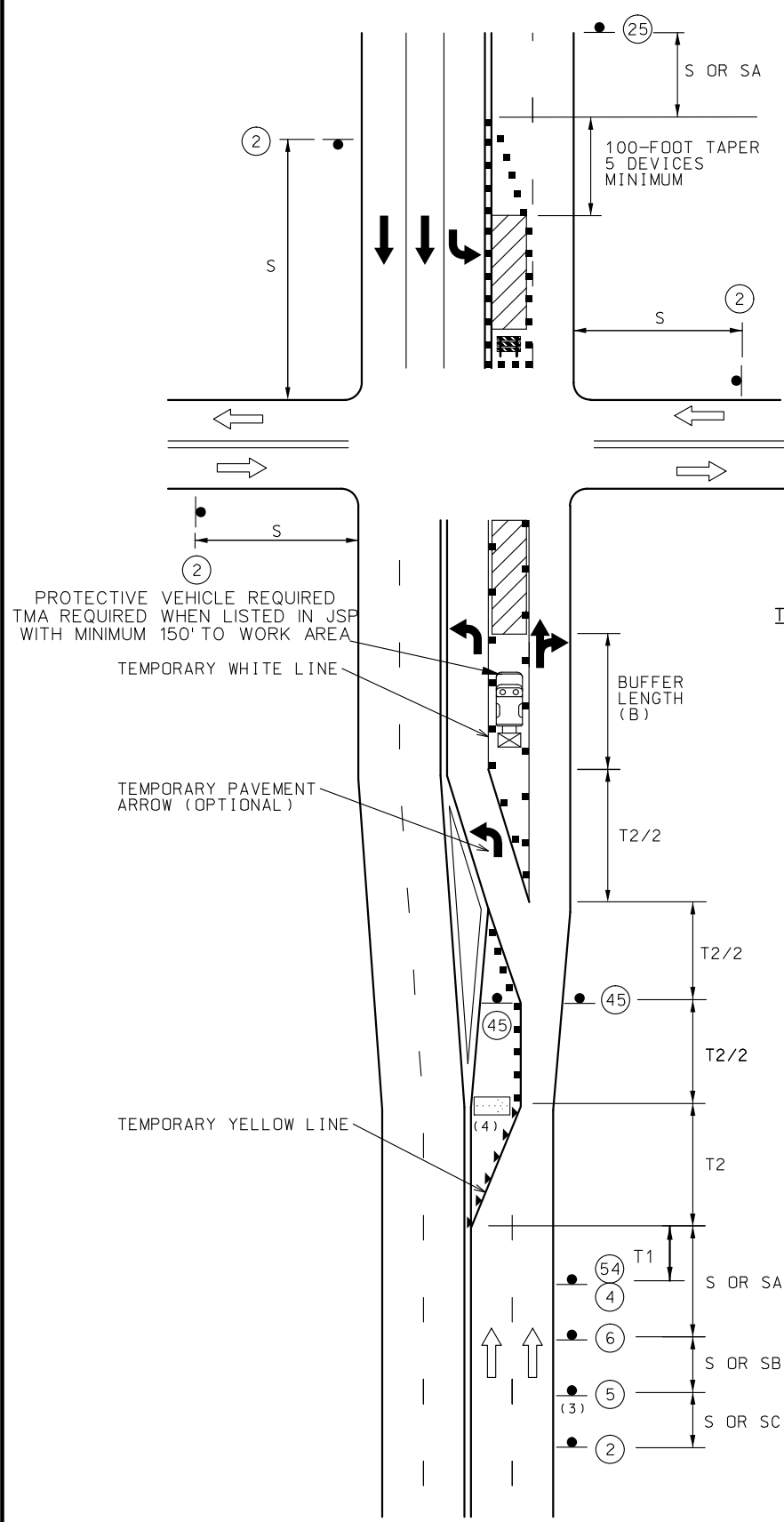
CONTRACT ID.

PROJECT NO.

BRIDGE NO.

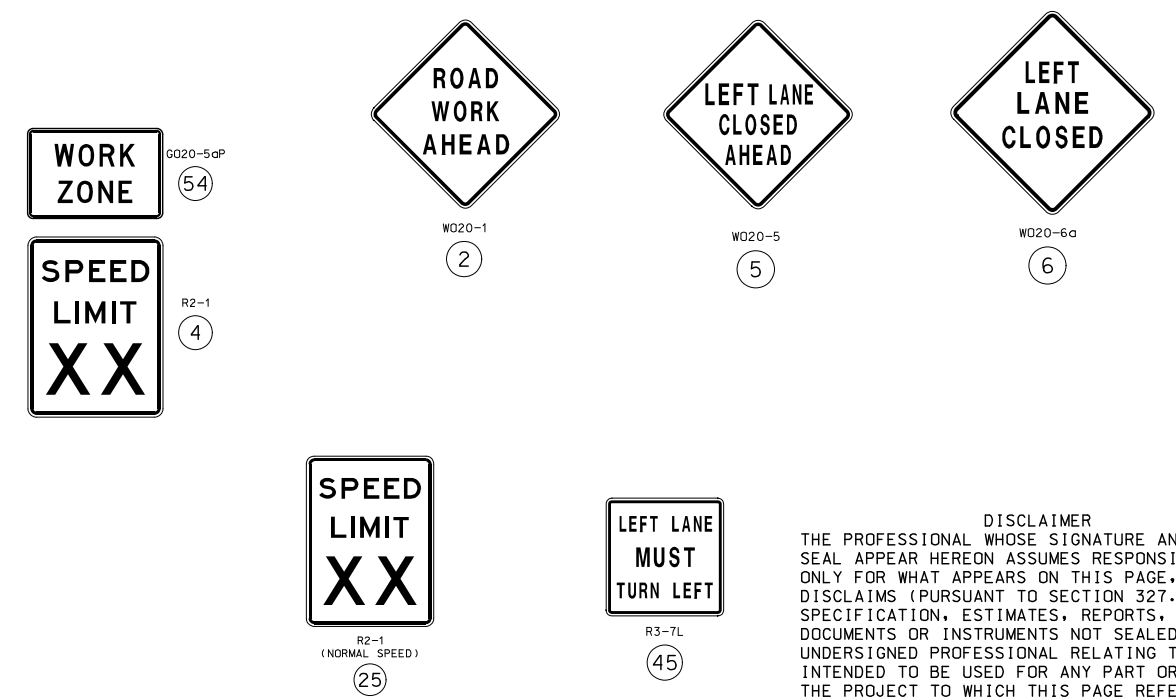
SPEED	SIGN SPACING (ft.)		TAPER LENGTH (ft.)		OPTIONAL	CHANNELIZER SPACING (ft.)	
	UN-DIVIDED (S)	DIVIDED (S)	SHOULDER (1) (T1)	LANE (2) (T2)	BUFFER LENGTH (ft) (B)	TAPERS	BUFFER/WORk AREAS
0-35	200	200	70	245	280	35	40
40-45	350	500	150	540	400	40	80
50-55	500	1000	185	660	560	50	80
60-70	1000	SA-1000 SB-1500 SC-2640	235	840	840	60	120

1 Shoulder taper length based on 10 ft. (standard shoulder width) offset.
2. Lane taper length based on 12 ft. (standard lane width) offset.



TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZER (TRIM-LINE)
- ▼ DIRECTIONAL INDICATOR BARRICADES (DIBS)
- ▨ WORK AREA
- ⬄ FLASHING ARROW PANEL
- ▩ TYPE 3 BARRICADE



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

NOTES:

- SEE EPG 616.12 WORK ZONE SPEED LIMITS FOR SPEED LIMIT GUIDELINES.
- REMOVE AND/OR MODIFY EXISTING PAVEMENT MARKING AS NEEDED.
- FOR SIGNALIZED INTERSECTIONS, ADJUSTMENTS MAY NEED TO BE MADE TO SIGNAL PHASING, TIMING, INDICATIONS OR DETECTOR SETTINGS.
- FOR SHORT TERM OPERATION, WHERE IT IS NOT FEASIBLE TO MODIFY PAVEMENT MARKING, A 10-FOOT DEVICE SPACING IS USED WHERE TRAFFIC IS GUIDED ACROSS DOUBLE YELLOW LINES OR OTHER CONFLICTING PAVEMENT MARKING. ALL OTHER SPACING ARE ONE-HALF OF THE SPACING.
- TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM LANE CLOSURES.
- PAVEMENT MARKING AND BARRICADES OPTIONAL FOR SHORT TERM OPERATIONS.
- IF RUMBLE STRIPS ARE USED, REVIEW 616.6.87 RUMBLE STRIPS.
- FOR FLAGS AND ADVANCED WARNING RAIL SYSTEM, REFER TO EPG 616.6.2.2 FLAGS AND ADVANCE WARNING RAIL SYSTEM.
- (3) LEFT LANE CLOSED AHEAD SIGN MAY BE OMITTED IN LOW SPEED URBAN AREAS WHERE THERE IS NOT SUFFICIENT SPACE FOR THE FULL SIGN SERIES.
- (4) THE FLASHING ARROW BOARD SHOULD BE LOCATED AT THE BEGINNING OF THE MERGING TAPER WHEN MEDIAN WIDTH ALLOWS THIS PLACEMENT.

LEFT LANE CLOSURE AT INTERSECTION
WORK ON NEAR OR FAR SIDE

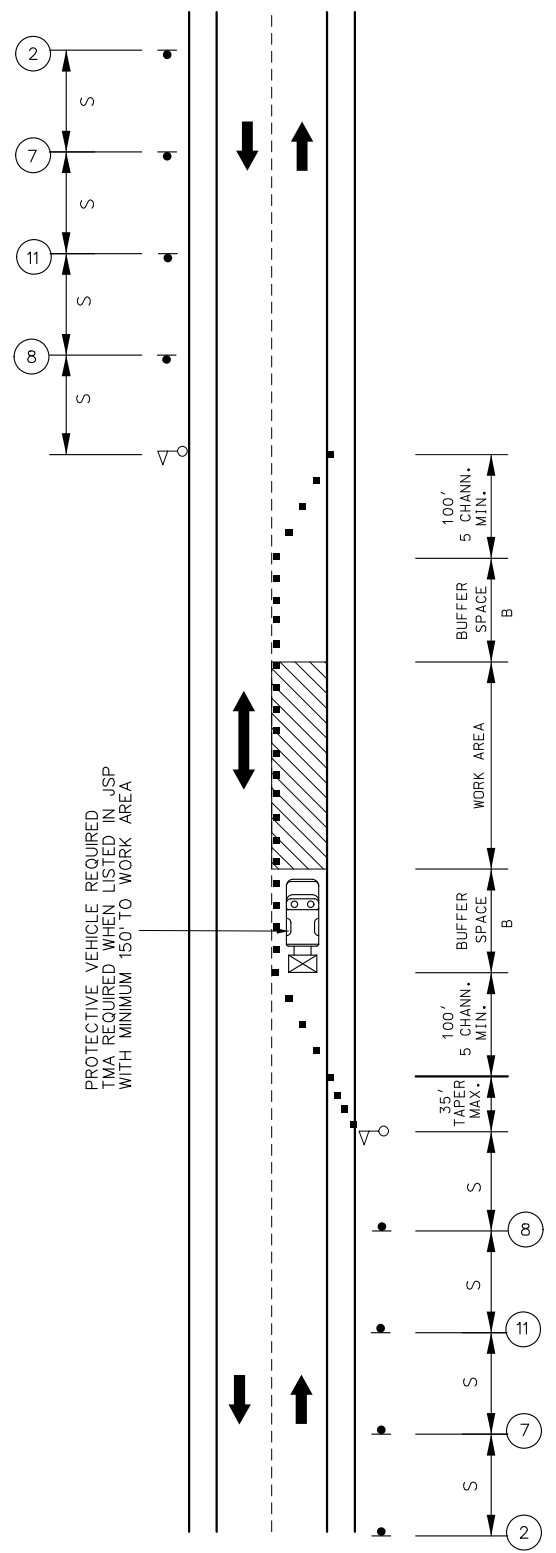
NOT TO SCALE

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

TRAFFIC CONTROL SHEET
LEFT LANE OF INTERSECTION
SHEET 8 OF 10

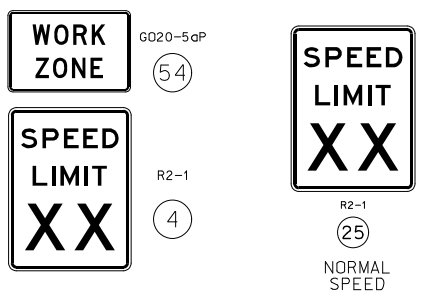
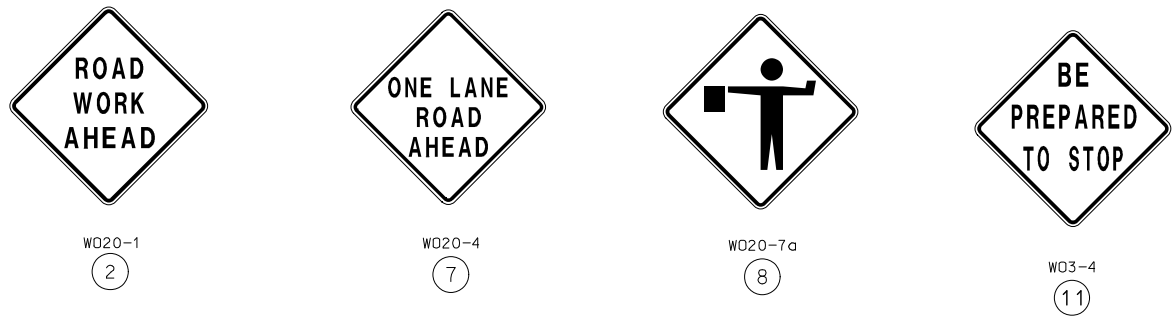


PROTECTIVE VEHICLE REQUIRED
TMA REQUIRED WHEN LISTED IN JSP
WITH MINIMUM 150' TO WORK AREA

LANE CLOSURE ON
TWO-LANE ROAD
USING FLAGGERS

TRAFFIC CONTROL LEGEND

- ▲ SIGN (SINGLE SIDED)
- CHANNELIZER (TRIM-LINE)
- ▨ WORK AREA
- FLAGGER



NOTES:
 AUTOMATED FLAGGER ASSISTANCE DEVICES (AFAD) AND PORTABLE SIGNAL FLAGGING DEVICES (PSFD) MAY BE USED AS AN ALTERNATIVE FLAGGING OPERATION

SEE EPG 616.12 WORK ZONE SPEED LIMITS FOR SPEED LIMIT GUIDELINES

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

LANES WILL BE A MINIMUM OF 10'.

SIGN SPACING MAY BE ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS UPON APPROVAL FROM THE ENGINEER.

ANY EXISTING SIGNS THAT CONFLICT WITH TRAFFIC CONTROL WILL BE COVERED OR REMOVED.

DISCLAIMER
 THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SPEED PERM. POSTED (MPH)	SIGN SPACING (ft.)		TAPER LENGTH (ft.)		OPTIONAL BUFFER LENGTH (ft) (B)	CHANNELIZER SPACING (ft.) TAPERS	BUFFER/ WORK AREAS
	UN -DIVIDED (S)	DIVIDED (S)	SHOULDER (1) (T1)	LANE (2) (T2)			
0-35	200	-	-	-	280	-	40
40-45	350	-	-	-	400	-	80
50-55	500	-	-	-	560	-	80
60-70	1000	-	-	-	840	-	120

1 Shoulder taper length based on 10 ft. (standard shoulder width) offset.
 2. Lane taper length based on 12 ft. (standard lane width) offset.

NOT TO SCALE

STATE OF MISSOURI
 ANASTASIA M. SMITH
 NUMBER PE-2014017016
 PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 11/25/2024

ROUTE VAR STATE MO

DISTRICT SL SHEET NO. 12

COUNTY FRANKLIN ST. LOUIS

JOB NO. JSL0206

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

SPEED	SIGN SPACING (FT) (1)	CHANNELIZER SPACING (FT)
PERMANENT POSTED (MPH)	NON-DIVIDED HIGHWAYS (S)	BUFFER/WORK AREA (TYP.)
0-35	200	40
40-45	350	80
50-55	500	80
60-70	1000	120

(1) SPACING BETWEEN SIGNS, BETWEEN LAST SIGN AND FLAGGER, BEGINNING OF TAPER OR SIGNED CONDITION.

SPACING MAY BE ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS.

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

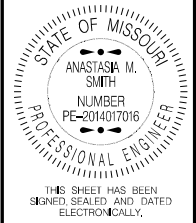
ADDITIONAL WARNING SIGNS SHALL BE ERECTED AT OTHER INTERSECTIONS WITHIN THE WORK ZONE, AS DIRECTED BY THE ENGINEER.

■ - CHANNELIZERS (AS SPECIFIED)

○ - FLAGGER

NOT TO SCALE

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



DATE PREPARED
11/25/2024

ROUTE STATE
VAR MO

DISTRICT SHEET NO.
SL 13

COUNTY
FRANKLIN

CITY
ST. LOUIS

JOB NO.
JSL0206

CONTRACT ID.

PROJECT NO.

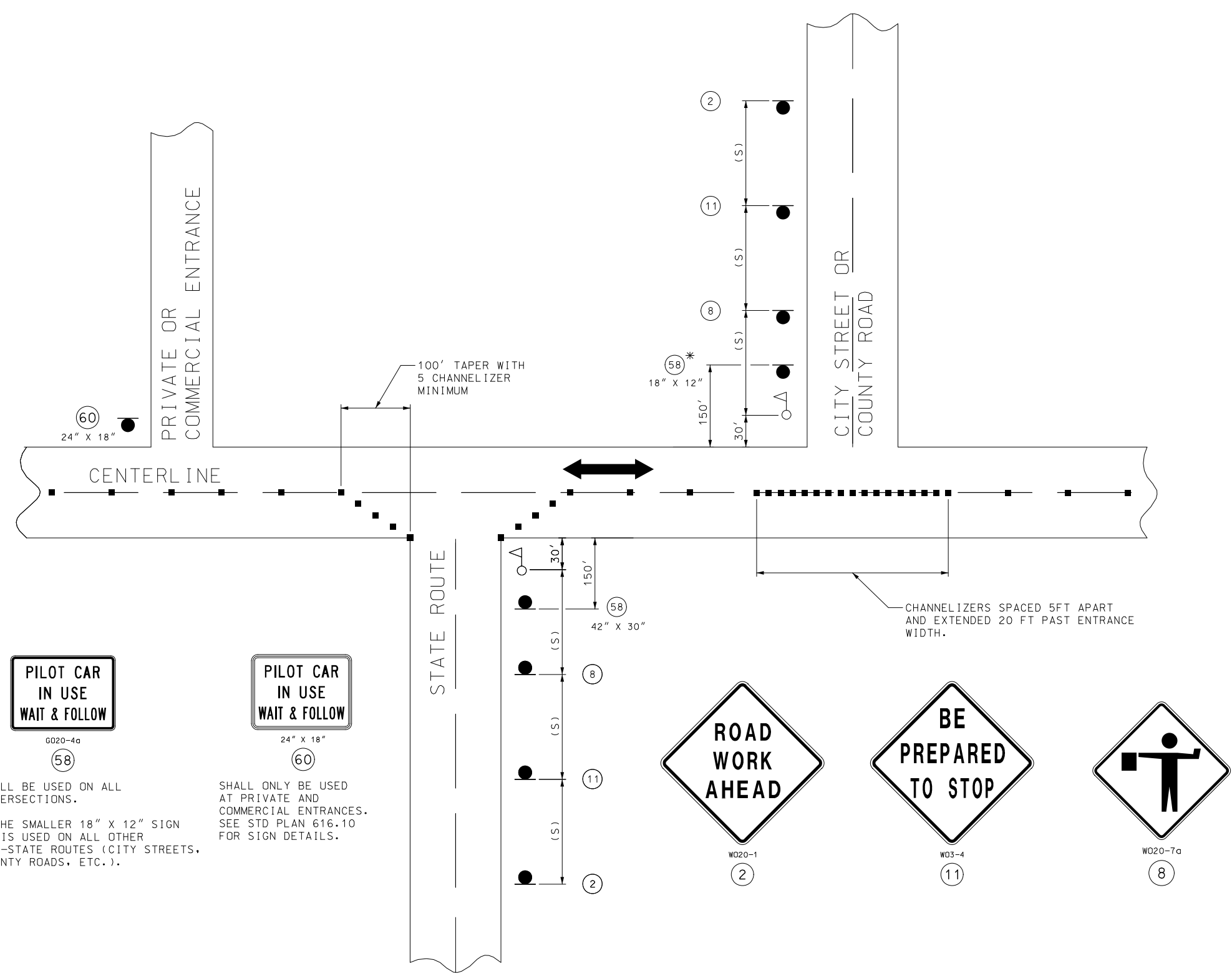
BRIDGE NO.

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

TRAFFIC CONTROL SHEET
SIDE STREETS WHILE FLAGGING
SHEET 10 OF 10



SIDE ROADS ENTERING WORK ZONES

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.).

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