

DESIGN DESIGNATION  
A.A.D.T. - 2021 = 1618  
T = 4.3%  
V = 40 M.P.H. - 60 M.P.H.

FUNCTIONAL CLASSIFICATION- MINOR ARTERIAL

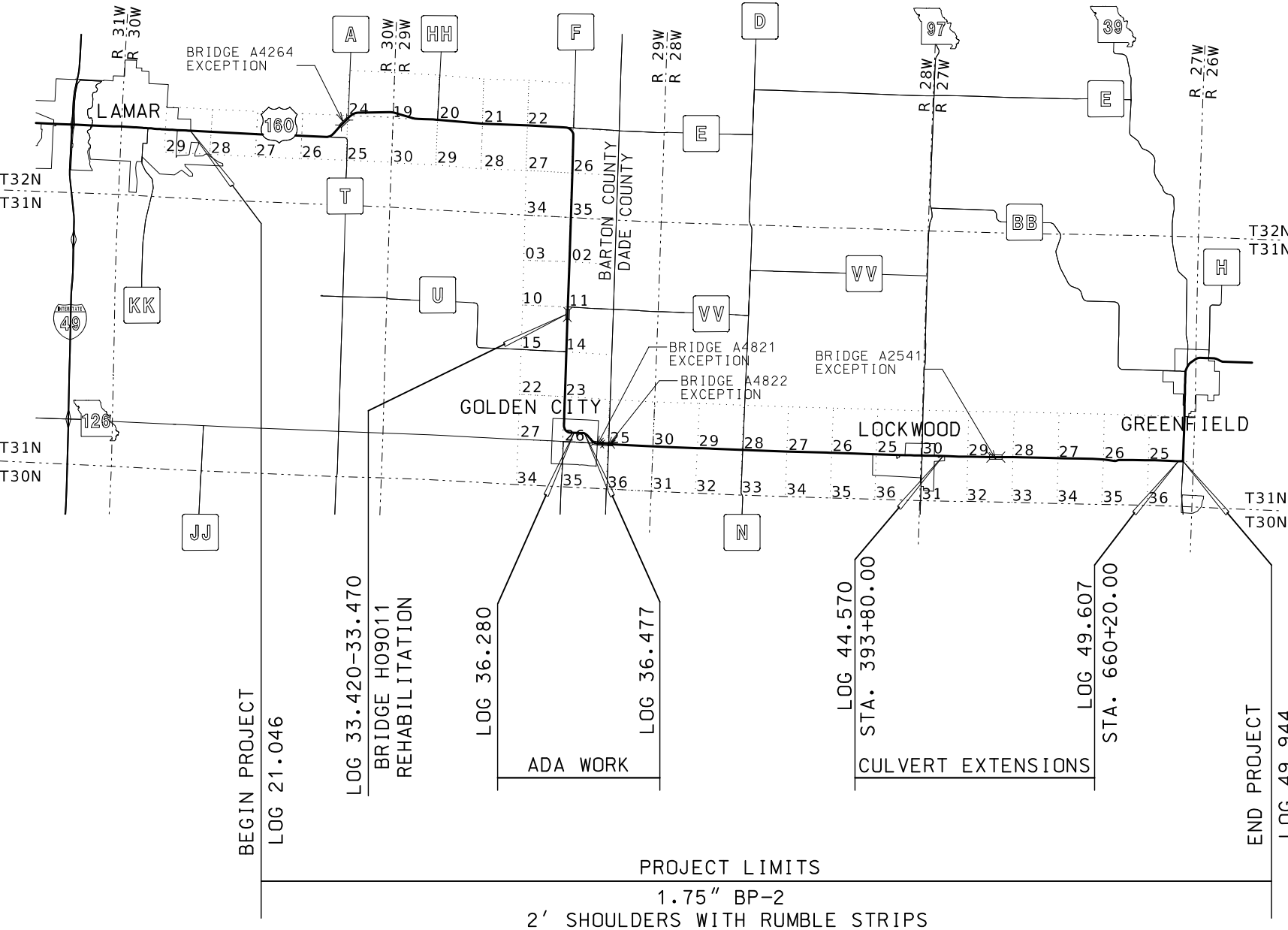
NORMAL ACCESS R/W

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		
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

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION  
PLANS FOR PROPOSED  
STATE HIGHWAY  
BARTON COUNTY  
DADE COUNTY

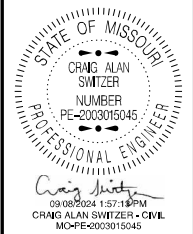


NOT TO SCALE

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

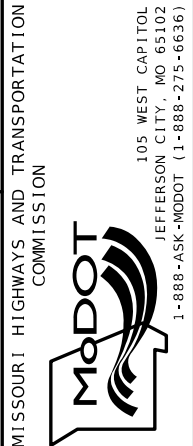
DESCRIPTION	SHEET NUMBER
TITLE SHEET	1
TYPICAL SECTIONS (TS) (16 SHEETS)	2
QUANTITIES (QU) (6 SHEETS)	3
PLAN SHEETS (PP)	4-15
TRAFFIC CONTROL SHEETS (TC)	16-24
SPECIAL SHEETS (SS)	25-30
BRIDGE H09011 (BR)	1



DATE PREPARED	8/29/2024
ROUTE	160
STATE	MO
DISTRICT	SW
SHEET NO.	1
COUNTY	BARTON, DADE
JOB NO.	JSR0042
CONTRACT ID.	

PROJECT NO.  
BRIDGE NO.

DESCRIPTION	DATE



LENGTH OF PROJECT

BEGINNING OF PROJECT EB LOG MILE	21.046
END OF PROJECT EB LOG MILE	49.944

APPARENT LENGTH	152,581.44 FEET
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EQUATIONS AND EXCEPTIONS:

BRIDGE A4264 LOG MILE 24.180-24.238	306.24 FEET
BRIDGE A4821 LOG MILE 36.860-36.900	211.20 FEET
BRIDGE A4822 LOG MILE 37.000-37.040	211.20 FEET
BRIDGE A2541 LOG MILE 45.500-45.535	184.80 FEET
CONCRETE PAVEMENT EXCEPTION LOG MILE 42.954-43.294	1795.20 FEET
LOG MILE 44.638-45.500	4551.36 FEET
LOG MILE 45.535-46.281	3938.88 FEET
LOG MILE 49.828-49.944	612.48 FEET

TOTAL CORRECTIONS	-11811.36 FEET
NET LENGTH OF PROJECT	140,770.08 FEET
STATE LENGTH	26.661 MILES

FOR INFORMATION ONLY ESTIMATED DISTURBED ACRES	14.06 ACRES
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NOTES: AS APPROVED BY THE ENGINEER, THE 2' MODIFIED TYPE A2 OR A3 SHOULDER MAY BE REDUCED TO 1' MINIMUM WIDTH IN SPECIFIC AREAS BASED ON EXISTING FIELD CONDITIONS. THE MODIFIED TYPE A2 OR 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.

MODIFIED LINEAR GRADING CLASS 2 FOR SHOULDERS EXTENDS BEYOND DITCH LINE ONTO BACKSLOPE (2:1 MAX, GRADE DITCH TO DRAIN)

LINEAR GRADING CLASS 2 FOR SHOULDERS CONFINED TO FORESLOPE.

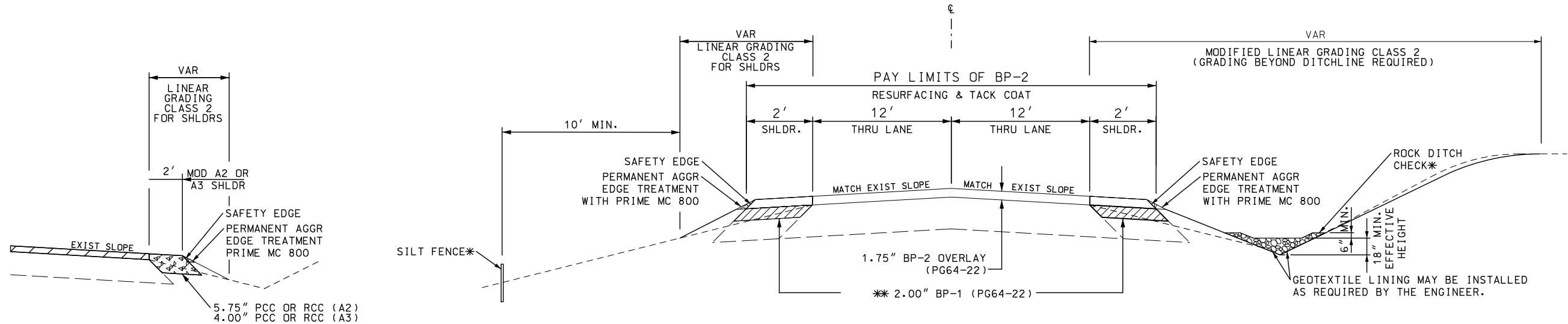
LANE WIDTH NOTED IS TYPICAL LANE WIDTH.  
ADJUST PAVING WIDTHS TO EXISTING FIELD CONDITIONS.

SURFACE PLACEMENT - ONE PASS PER LANE

NO S.E. CORRECTION

ASPHALT FACTORS		
	COMBINED FACTOR	% AC
BP-1 (PG64-22)	1.975 TONS/CY	5.5
BP-2 (PG64-22)	1.965 TONS/CY	5.5
TACK COAT		
OVERLAY (UNDILUTED)	0.08 GAL/SY	
PERMANENT AGGREGATE EDGE TREATMENT		
PRIME LIQUID ASPHALT MC 800	590 GAL/MI	
AGGREGATE	200 TON/MI	
IRREGULARITIES: 75 TONS/MI		

NOTE: USE IRREGULARITIES OF 150 TONS/MILE FROM LOG MILE 29.462 TO LOG MILE 35.704 AS WEDGING FOR CROSS SLOPE CORRECTION IN THE WESTBOUND LANE.



CONCRETE SHOULDERS

\*\*\* LOG MILE 38.500 TO LOG MILE 38.558  
1.75" BP-2 MILL AND FILL, ADD 2'  
SHOULDERS, FROM EAST BRIDGE END OF  
J0064 TO RAILROAD CROSSING

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

ROUTE 160			
LOG MILE	21.046 TO	LOG MILE	23.999
LOG MILE	24.577 TO	LOG MILE	33.420
LOG MILE	33.470 TO	LOG MILE	35.704
LOG MILE	35.706 TO	LOG MILE	35.774
LOG MILE	37.116 TO	LOG MILE	38.440
LOG MILE	38.500 TO	LOG MILE	38.558 ***
LOG MILE	38.560 TO	LOG MILE	42.954
LOG MILE	43.294 TO	LOG MILE	43.496
LOG MILE	44.592 TO	LOG MILE	44.638
LOG MILE	46.281 TO	LOG MILE	49.828

RAILROAD EXCEPTIONS

LOG MILE	35.704 TO	LOG MILE	35.706
LOG MILE	38.558 TO	LOG MILE	38.560

*** USE 4.00" BP-1 (PG64-22) IN THESE LIMITS:			
LM	21.046 TO	LM	23.999
LM	24.577 TO	LM	29.508
LM	33.269 TO	LM	33.420
LM	33.470 TO	LM	35.704
LM	35.706 TO	LM	35.774
LM	37.116 TO	LM	38.440
LM	38.500 TO	LM	38.558
LM	38.560 TO	LM	42.954
LM	43.294 TO	LM	43.496

NOT TO SCALE

TYPICAL SECTIONS  
SHEET 1 OF 16

STATE OF MISSOURI  
CRAIG ALAN SWITZER  
NUMBER  
PE-2003015045  
PROFESSIONAL ENGINEER  
09/17/2024 8:02:29 AM  
CRAIG ALAN SWITZER - CIVIL  
MO-PE-2003015045

DATE PREPARED  
9/17/2024

ROUTE  
160

DISTRICT  
SW

STATE  
MO

SHEET NO.  
2

COUNTY  
BARTON, DADE

JOB NO.  
JSR0042

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

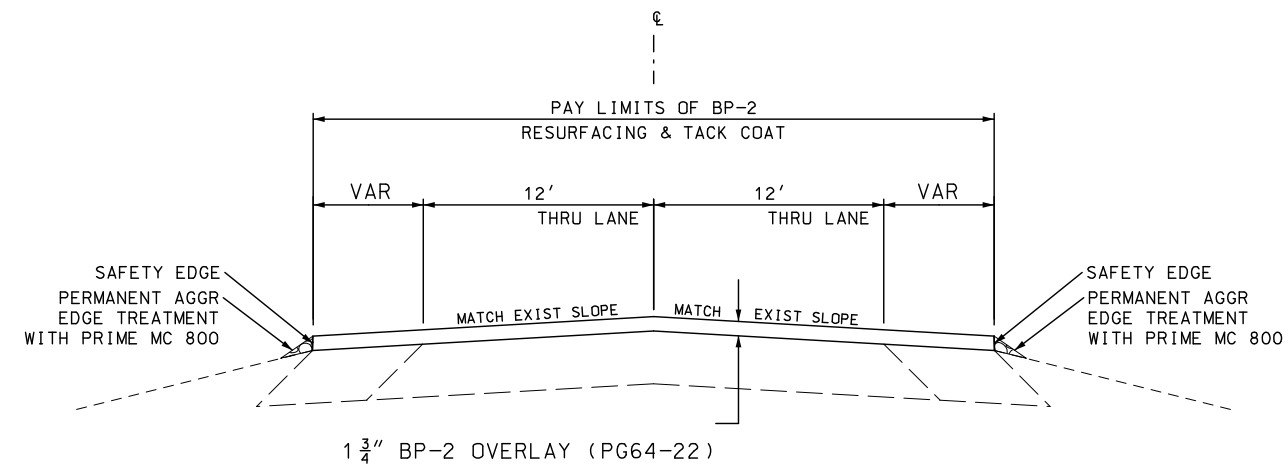
MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

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

MoDOT

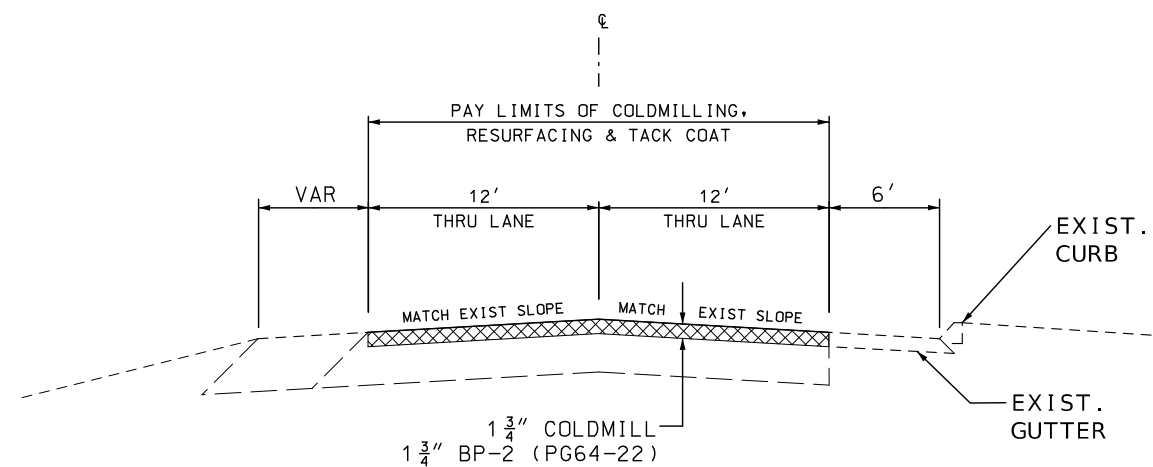
NO ADDITIONAL PAYMENT WILL BE MADE FOR ADDITIONAL COLDMILLING (UP TO 3") REQUIRED TO REMOVE ENTIRE TOP LIFT DUE TO DELAMINATION. THIS APPLIES TO ENTIRE PROJECT LIMITS.

SURFACE PLACEMENT - ONE PASS PER LANE  
NO S.E. CORRECTION



## ROUTE 160

LOG MILE	23.999	TO	LOG MILE	24.180
LOG MILE	24.238	TO	LOG MILE	24.577
LOG MILE	35.774	TO	LOG MILE	36.860
LOG MILE	36.900	TO	LOG MILE	37.000
LOG MILE	37.040	TO	LOG MILE	37.116
LOG MILE	43.496	TO	LOG MILE	43.540
LOG MILE	44.183	TO	LOG MILE	44.592

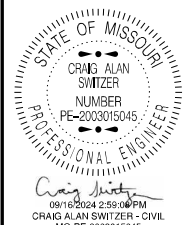


## ROUTE 160

LOG MILE 43.540 TO LOG MILE 43.937  
LOG MILE 44.017 TO LOG MILE 44.183

ASPHALT FACTORS		
	<u>COMBINED FACTOR</u>	<u>% AC</u>
BP-2 (PG64-22)	1.965 TONS/CY	5.5
TACK COAT		
MILLING (UNDILUTED)		0.10 GAL/SY
OVERLAY (UNDILUTED)		0.08 GAL/SY
PERMANENT AGGREGATE EDGE TREATMENT		
PRIME LIQUID ASPHALT MC 800		590 GAL/MI
AGGREGATE		200 TON/MI
IRREGULARITIES: 75 TONS/MI		

NOTE: USE IRREGULARITIES OF 150 TONS/MILE  
FROM LOG MILE 29.462 TO LOG MILE 35.704  
AS WEDGING FOR CROSS SLOPE CORRECTION IN  
THE WESTBOUND LANE.



DATE PREPARED

9/16/2024

ROUTE	STATE
160	MO

DISTRICT	SHEET NO.
SW	2

COUNTY  
BARTON, DADE

JOB NO.  
JSR0042

CONTRACT ID.
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PROJECT NO.
-------------

BRIDGE NO.

[illegible]MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

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

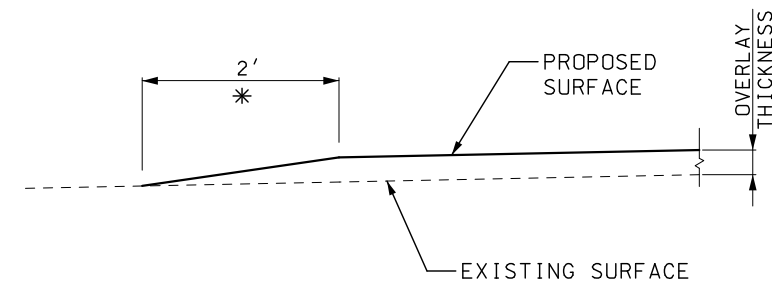
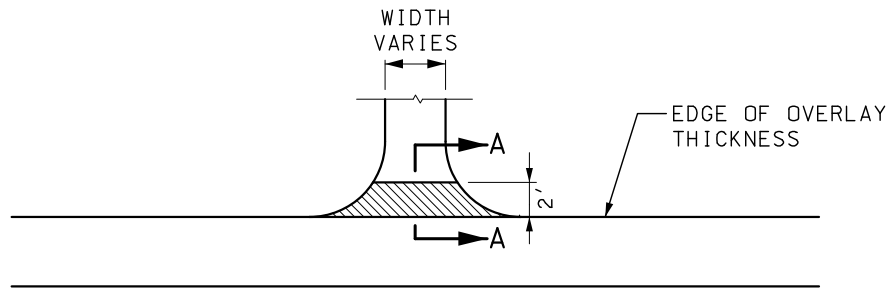
NOT TO SCALE

TYPICAL SECTIONS  
SHEET 2 OF 16



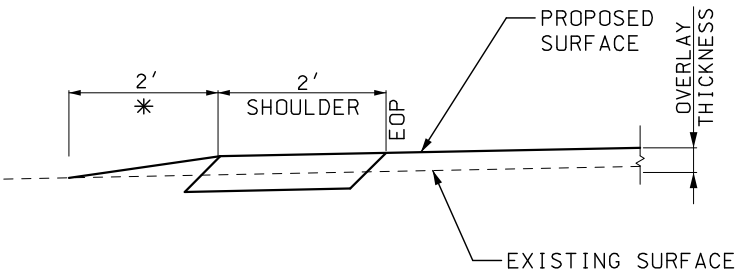
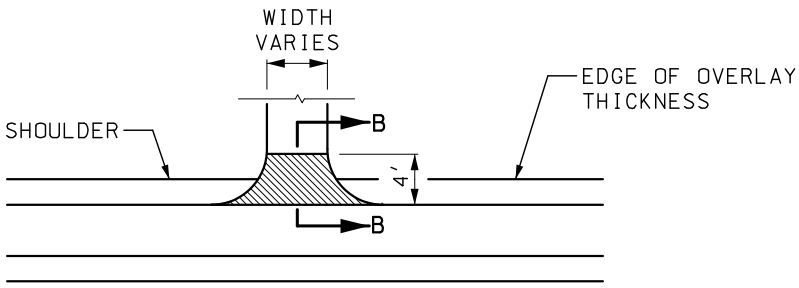




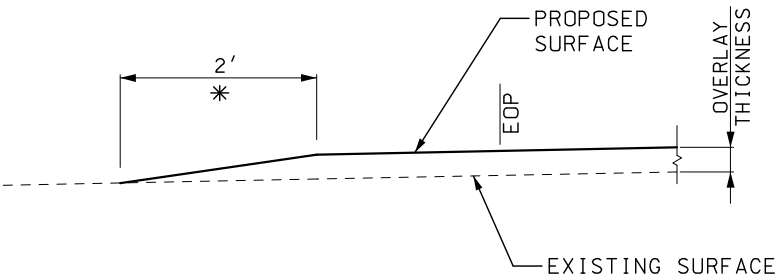


SECTION A-A  
TYPICAL ENTRANCE – NO SHOULDER  
(FIELD, PRIVATE OR COUNTY ROAD)  
\*TAPER AT 1:1 FOR FIELD ENTRANCE

NOTE: 4 TONS GRAVEL A OR CRUSHED STONE B  
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

STATE OF MISSOURI

CRAIG ALAN SWITZER

NUMBER PE-2003015045

PROFESSIONAL ENGINEER

09/08/2024 1:59:26PM

CRAIG ALAN SWITZER - CIVIL

MO-PE-2003015045

DATE PREPARED

8/12/2024

ROUTE

160

STATE

MO

DISTRICT

SW

SHEET NO.

2

COUNTY

BARTON, DADE

JOB NO.

JSR0042

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)





DATE PREPARED 8/29/2024	
ROUTE 160	STATE MO
DISTRICT SW	SHEET NO. 2
COUNTY BARTON, DADE	
JOB NO. JSR0042	
CONTRACT ID.	

PROJECT NO.
BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

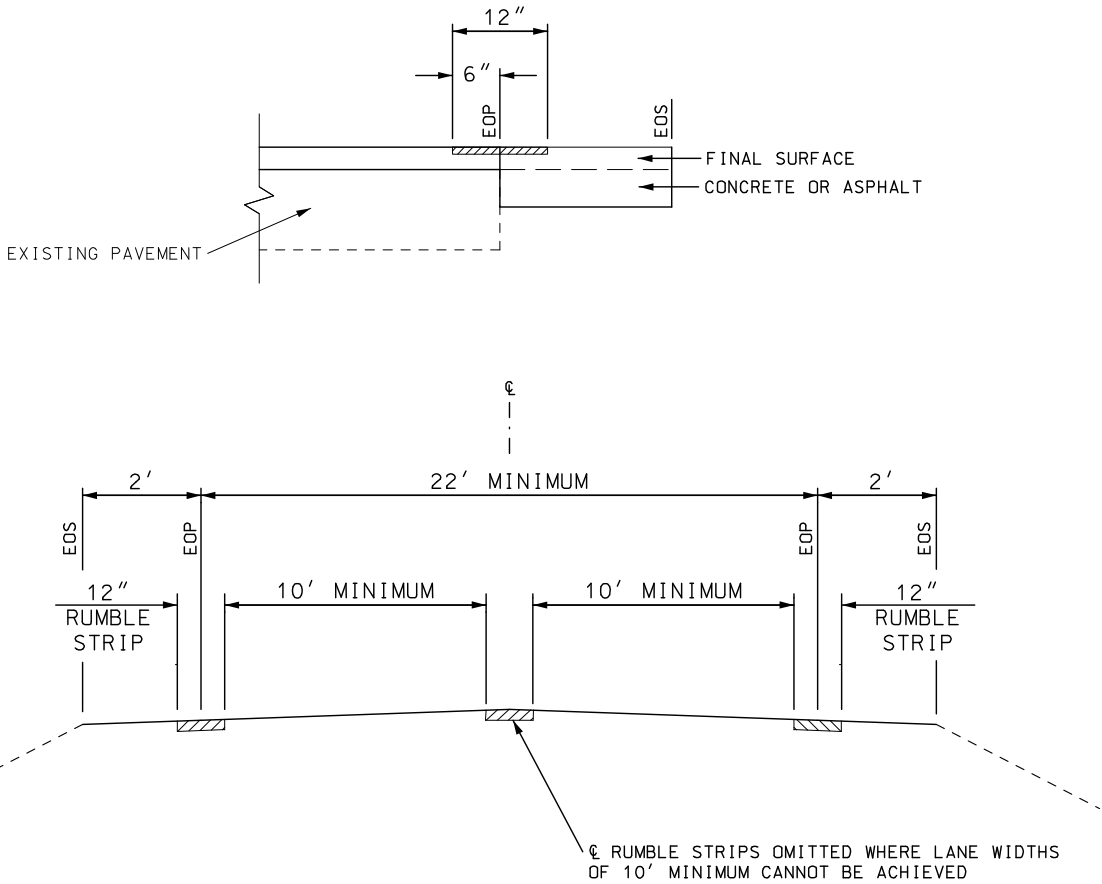


105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

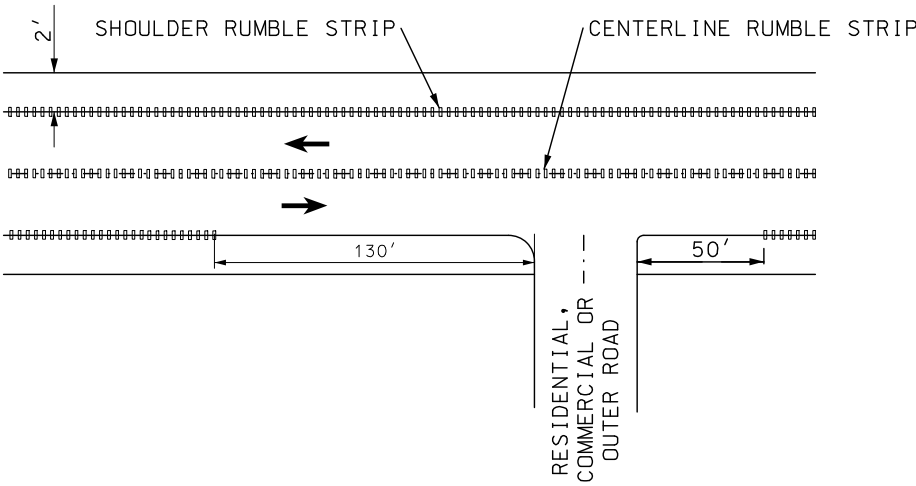
RUMBLE STRIPS FOR 2' MODIFIED A2 OR A3 SHOULDERS

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

RUMBLE STRIP DETAILS



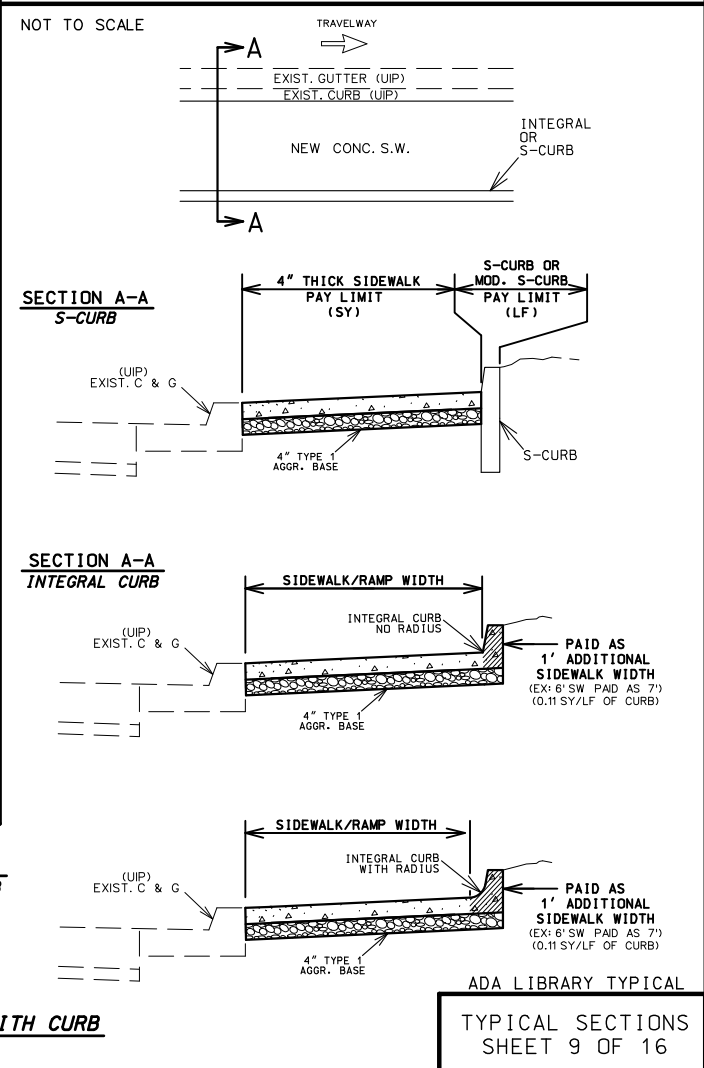
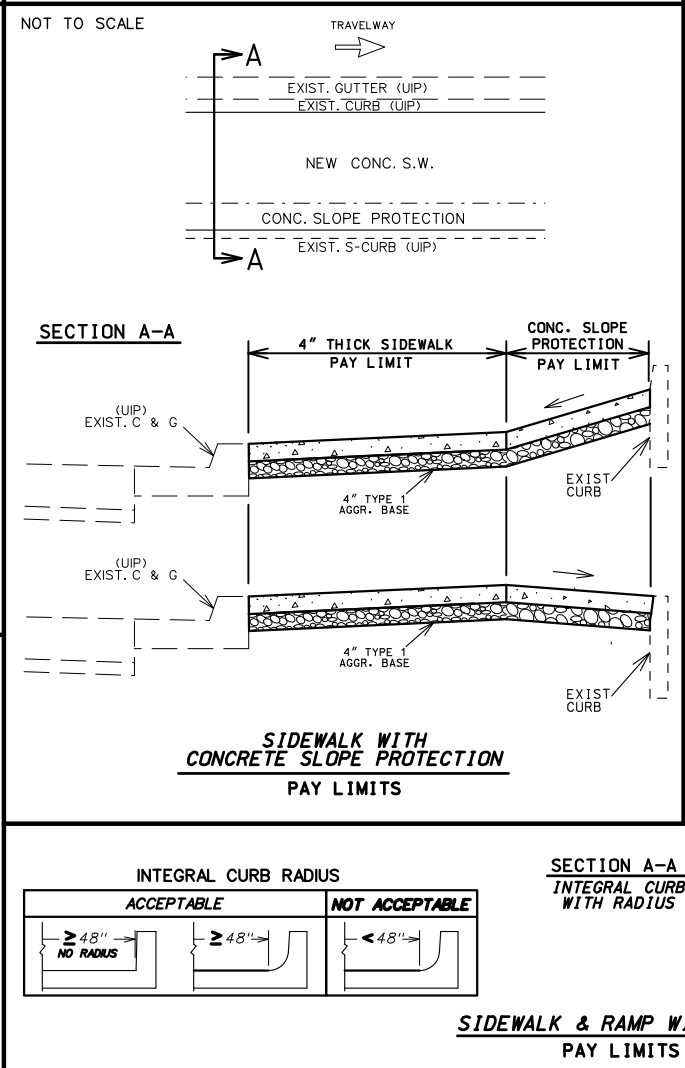
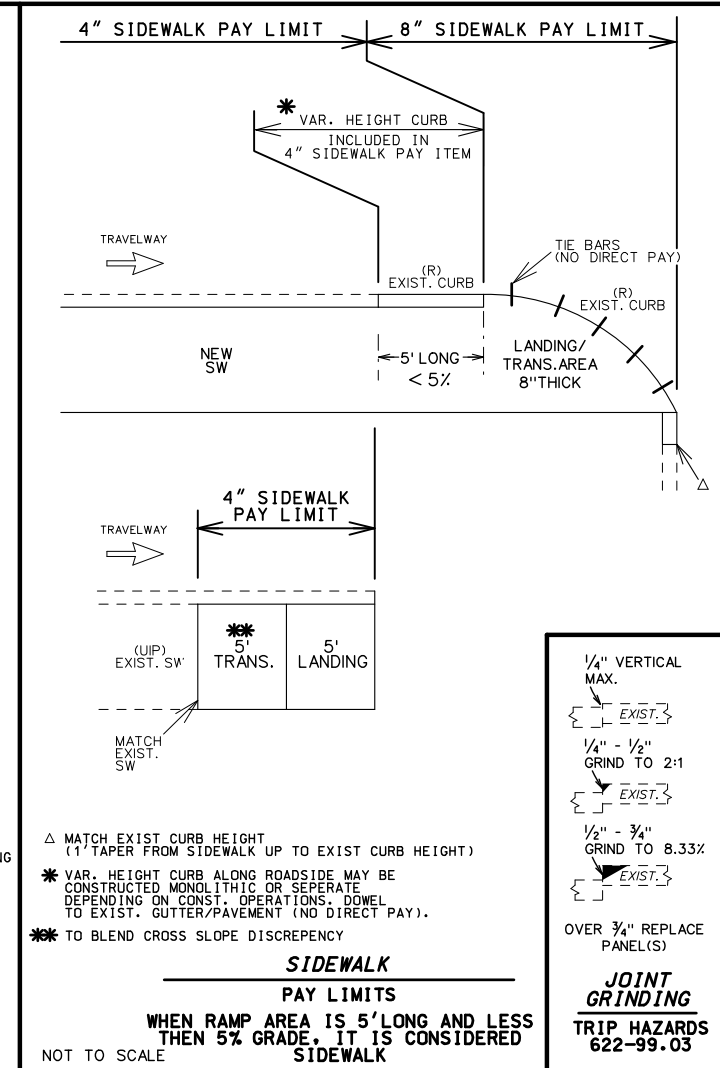
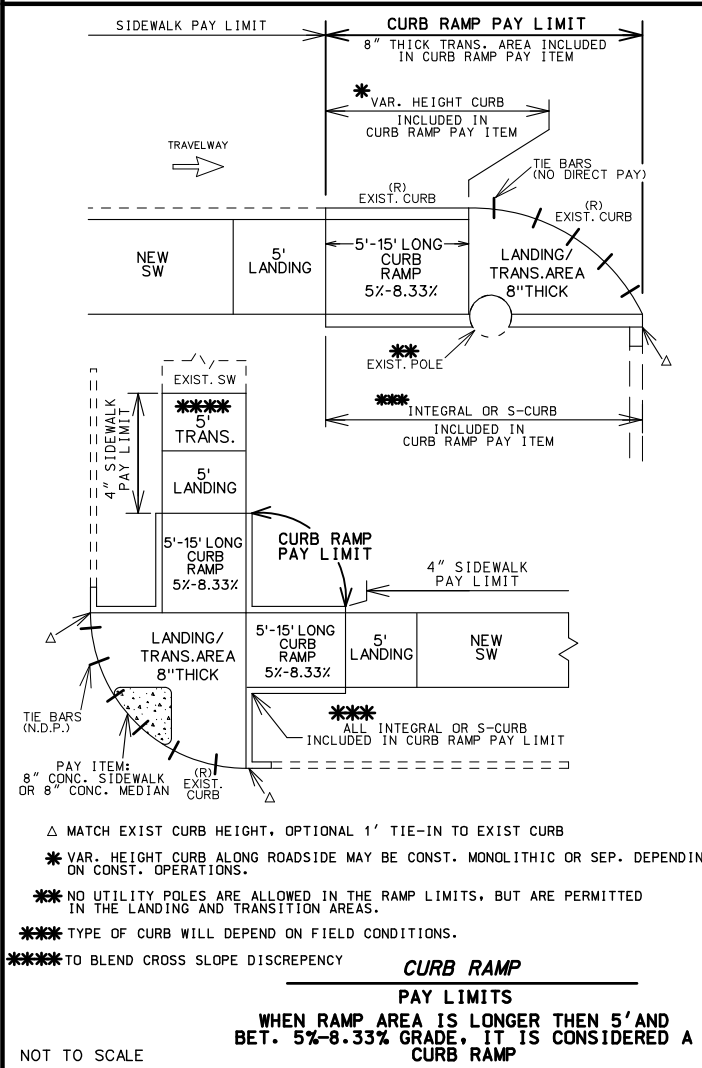
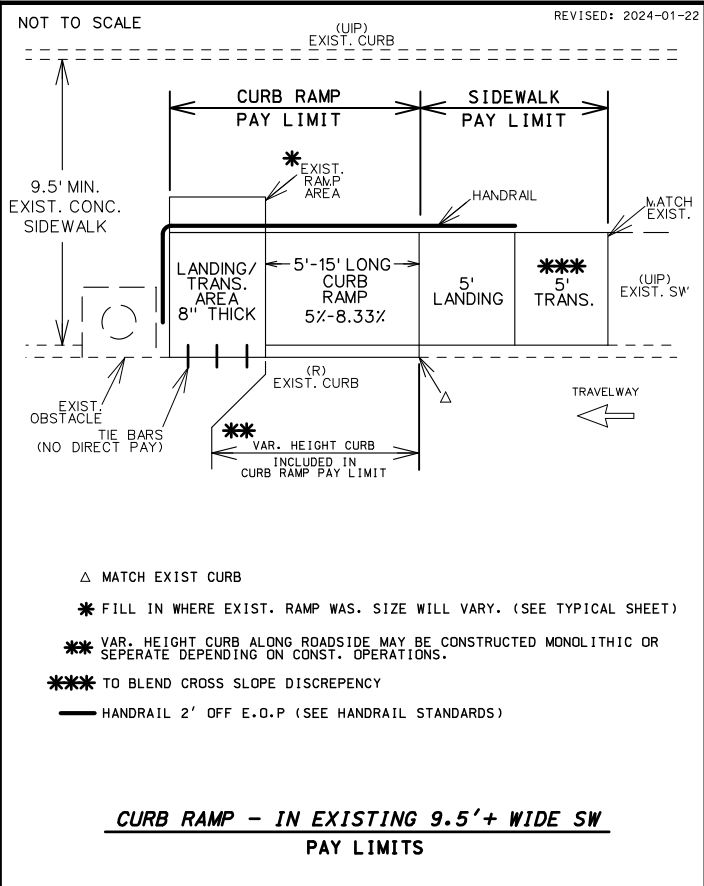
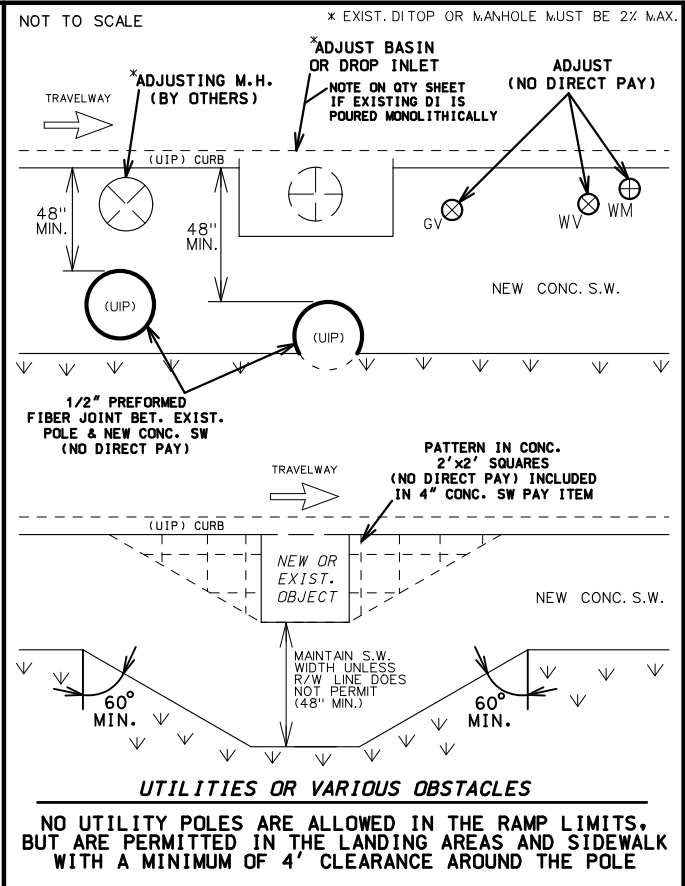
INTERSECTION RUMBLE STRIP LAYOUT



NOT TO SCALE



1. CONCRETE SIDEWALK, CURB RAMP AND DETECTABLE WARNING DEVICE (TRUNCATED DOMES) DETAILS SHALL CONFORM TO ADA REQUIREMENTS UNLESS NOTED OTHERWISE IN THESE PLANS. FOR SIDEWALK JOINT AND CURB DETAILS, SEE STANDARD PLAN 609.00.
2. TINTED CONCRETE SHALL NOT BE USED. TRUNCATED DOMES SHALL BE OF A COLOR CONTRASTING WITH UNTINTED CONCRETE AND APPROVED BY THE ENGINEER. TRUNCATED DOMES ARE REQ'D. AT STREET INTERSECTIONS AND COMMERCIAL ENTRANCES WITH TRAFFIC CONTROL ONLY. (STOP/YIELD SIGNS OR SIGNALS)
3. CONCRETE SHALL BE IN ACCORDANCE WITH SEC. 608 & SEC. 609. CURING COMPOUND SHALL BE TRANSPARENT.
4. ALL CONCRETE SIDEWALK AND CURB RAMP/TRANSITION/LANDING AREAS SHALL BE 4" THICK, WITH THE EXCEPTION OF THE BOTTOM TRANSITION WHICH TIES INTO THE EXISTING PAVED APPROACH AND ROADWAY. THIS TRANSITION, OR LANDING AREA, MUST BE 8" THICK IF IT FALLS WITHIN THE RADIUS OF THE APPROACH AND SITS AT THE BACK OF CURB OF THE ROADWAY. ALL CONCRETE SIDEWALK AND CURB RAMP/TRANSITION/LANDING AREAS SHALL BE ON 4" TYPE 1 AGGREGATE BASE.
5. AGGREGATE BASE DENSITY - CONTRACTOR SHALL EXERCISE GOOD COMPACTIVE EFFORT AS APPROVED BY THE ENGINEER. DENSITY REQUIREMENTS BY NUCLEAR METHOD WILL NOT BE REQUIRED DUE TO WORK AREA CONSTRAINTS.
6. CONCRETE CURB RAMP - WIDTH = 5' MIN. LENGTH = 5' MIN. TO 15' PREFERRED MAX. (16' MAX.)  
RUNNING SLOPE = >5% (MIN.) TO 8.33% (MAX.) UNIFORMLY DOWN THE LENGTH OF THE RAMP.
- CONCRETE LANDING - WIDTH - TO MATCH PROPOSED CURB RAMP AND SIDEWALK WIDTH LENGTH = 5' MIN.  
SLOPE IN ALL DIRECTIONS = 1% PREFERRED (2% MAX.) UNLESS TIED TO ROADWAY EXCEPTION.
7. ALL EXISTING UTILITIES SHALL BE USED IN PLACE UNLESS OTHERWISE NOTED. ALL MANHOLE OR VALVE COVER, ETC. ELEVATIONS SHALL BE ADJUSTED AS REQUIRED IF THEY ARE LOCATED WITHIN THE IMPROVEMENT AREA.
8. "PREFORMED FIBER JOINT" SHALL BE IN ACCORDANCE WITH SEC. 1057 FOR PREFORMED FIBER JOINT EXPANSION JOINT FILLER.
9. REINFORCING STEEL TIE BARS SHALL BE IN ACCORDANCE WITH SECTION 706. ALL REINFORCING STEEL SHALL BE EPOXY COATED AND USED AS APPROVED BY THE ENGINEER. WHERE TIE BARS ARE USED, THE CONCRETE SHALL BE 8" THICK (NO DIRECT PAY).
10. CONSTRUCTION AND LENGTH OF EACH CURB RAMP INCLUDING LANDINGS AND TRANSITION AREAS SHALL BE AS SHOWN ON THE PLANS UNLESS DIFFERING FIELD CONDITIONS ARE FOUND OR AS APPROVED BY THE ENGINEER. CURB RAMP CROSS SLOPES SHALL BE 1% PREFERRED (2% MAX.) TOWARD THE STREET. CURB RAMPS ARE TO BE FORMED UP AND HAVE A TRUE AND STRAIGHT LINE.
11. SIDEWALK AND CONCRETE CURB SHALL BE POURED MONOLITHICALLY. THE CONTRACTOR SHALL MATCH EXISTING GROUND SLOPES ADJACENT TO THE CURB RAMPS OR USE AN ALTERNATE METHOD APPROVED BY THE ENGINEER.
12. S-CURB 12"-30" HIGH (MODIFIED S-CURB) WILL REQUIRE #4 REINFORC. BARS ON MAX. 12" CENTERS - SEE DETAIL (NO DIRECT PAY)
13. SODDED SLOPES AT EDGES OF SIDEWALK OR S-CURB SHOULD BE GRADED TO BE 6:1 MIN.



STATE OF MISSOURI

CRAIG ALAN SWITZER

NUMBER PE-2003015045

PROFESSIONAL ENGINEER

DATE PREPARED 8/12/2024

ROUTE 160 STATE MO

DISTRICT SW SHEET NO. 2

COUNTY BARTON, DADE

JOB NO. JSR0042

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)

MoDOT

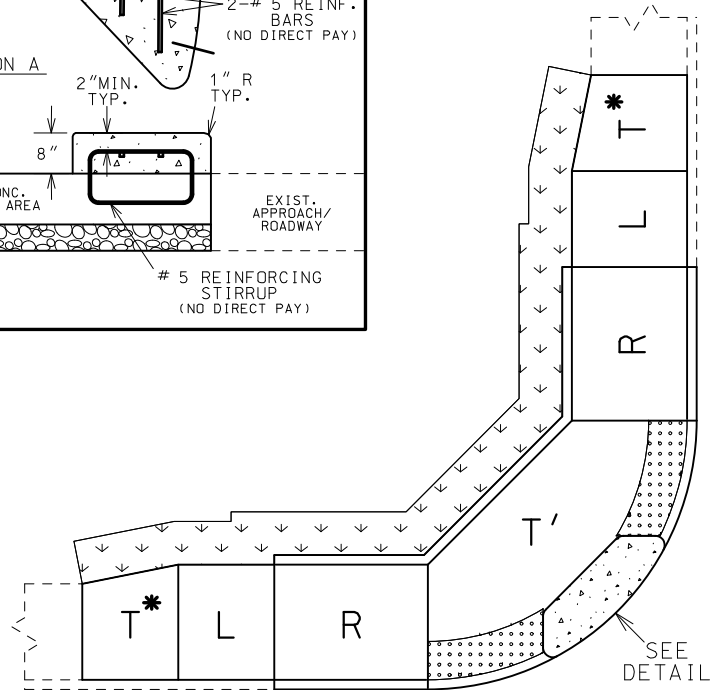
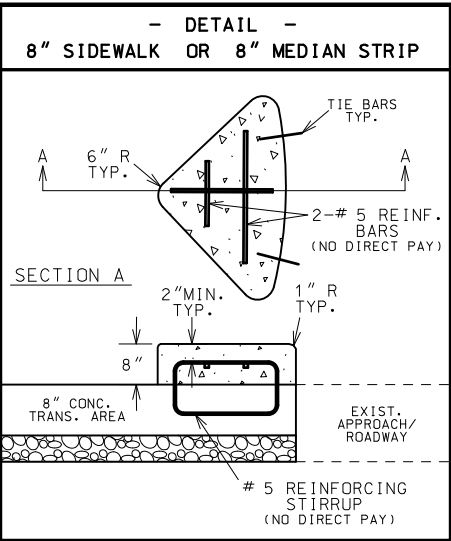








DIAGONAL - TYPE 3												
TYPE 3-A												
LENGTH (LF)	8			12			16			REMARKS		
	4	5	6	4	5	6	4	5	6			
TRUNCATED DOMES	SF	-	24.0	28.0	-	20.6	25.0	-	20.6	25.0		
CURB RAMP	SY	-	24.4	27.0	-	26.9	31.2	-	32.2	37.4		
CONC. SIDEWALK	SY	-	11.2	12.8	-	9.8	11.4	-	9.8	11.4		
TYPE 1 AGGREGATE	SY	-	35.6	39.8	-	36.7	42.6	-	42.0	48.8		
ADA LINEAR GRADING	LF	-	51.0	51.0	-	59.0	59.0	-	67.0	67.0		
SODDING	SY	-	11.6	11.4	-	12.9	12.9	-	14.9	14.9		
8"SW OR MED STRIP	SY	-	3.0	2.2	-	3.0	2.2	-	3.0	2.2		
TYPE 3-B												
LENGTH (LF)	8			12			16			REMARKS		
	4	5	6	4	5	6	4	5	6			
TRUNCATED DOMES	SF	-	24.0	28.0	-	20.6	25.0	-	20.6	25.0		
CURB RAMP	SY	-	22.0	26.3	-	25.9	31.2	-	31.2	37.4		
CONC. SIDEWALK	SY	-	11.2	12.8	-	9.8	11.4	-	9.8	11.4		
TYPE 1 AGGREGATE	SY	-	33.2	39.1	-	35.7	42.6	-	41.0	48.8		
ADA LINEAR GRADING	LF	-	51.0	51.0	-	59.0	59.0	-	67.0	67.0		
SODDING	SY	-	15.2	15.3	-	17.1	17.5	-	20.1	20.5		
8"SW OR MED STRIP	SY	-	1.5	1.5	-	1.5	1.5	-	1.5	1.5		
TYPE 3-C												
LENGTH (LF)	8			12			16			REMARKS		
	4	5	6	4	5	6	4	5	6			
TRUNCATED DOMES	SF	-	20.0	24.0	-	20.0	24.0	-	20.0	24.0		
CURB RAMP	SY	-	20.7	26.8	-	25.1	31.5	-	30.4	37.7		
CONC. SIDEWALK	SY	-	11.2	12.8	-	9.8	11.4	-	9.8	11.4		
TYPE 1 AGGREGATE	SY	-	31.9	39.6	-	34.9	42.9	-	40.2	49.1		
ADA LINEAR GRADING	LF	-	51.0	51.0	-	58.0	58.0	-	67.0	67.0		
SODDING	SY	-	18.8	19.3	-	21.3	22.1	-	25.3	26.1		
8"SW OR MED STRIP	SY	-	1.0	1.6	-	1.0	1.6	-	1.0	1.6		
TYPE 3-D												
LENGTH (LF)	8			12			16			REMARKS		
	4	5	6	4	5	6	4	5	6			
TRUNCATED DOMES	SF	-	24.0	28.0	-	22.4	26.5	-	22.4	26.5		
CURB RAMP	SY	-	15.9	19.1	-	17.7	21.4	-	20.4	24.5		
CONC. SIDEWALK	SY	-	5.6	6.4	-	4.9	5.7	-	4.9	5.7		
TYPE 1 AGGREGATE	SY	-	21.5	25.5	-	22.6	27.1	-	25.3	30.2		
ADA LINEAR GRADING	LF	-	31.0	31.0	-	34.0	34.0	-	38.0	38.0		
SODDING	SY	-	12.6	12.9	-	13.5	14.0	-	15.5	16.0		
8"SW OR MED STRIP	SY	-	1.0	0.8	-	1.0	0.8	-	1.0	0.8		
TYPE 3-E												
LENGTH (LF)	8			12			16			REMARKS		
	4	5	6	4	5	6	4	5	6			
TRUNCATED DOMES	SF	-	20.0	24.0	-	20.0	24.0	-	20.0	24.0		
CURB RAMP	SY	-	17.2	19.8	-	17.7	21.4	-	20.4	24.5		
CONC. SIDEWALK	SY	-	8.4	10.7	-	7.3	9.4	-	7.3	9.4		
TYPE 1 AGGREGATE	SY	-	25.6	30.5	-	25.0	30.8	-	27.7	33.9		
ADA LINEAR GRADING	LF	-	30.0	30.0	-	35.5	35.5	-	39.5	39.5		
SODDING	SY	-	12.4	12.4	-	12.9	13.3	-	14.9	15.3		
8"SW OR MED STRIP	SY	-	1.6	1.6	-	1.6	1.6	-	1.6	1.6		



TYPE 3-A

T' - IS TO BE 8" THICK  
AT ALL PAVED APPROACHES  
AND STREETS IF WITHIN THE  
RADIUS. PAID FOR AS  
CONCRETE CURB RAMP

NOTE:  
QUANTITIES ARE CALCULATED BY AREA AND  
MAY NOT MATCH EXACT FIELD CONDITIONS.

T - TRANSITION TO EXISTING SW  
OR PAVED APPROACH (LANDING  
PREFERRED IF CONDITIONS ALLOW)

T\* - IS STILL NEEDED EVEN IF THE  
EXISTING SIDEWALK IS THE SAME  
WIDTH AS THE NEW SIDEWALK. (IT  
WILL BLEND THE EXIST XSLOPE WITH  
THE NEW LANDING XSLOPE)

L - LANDING

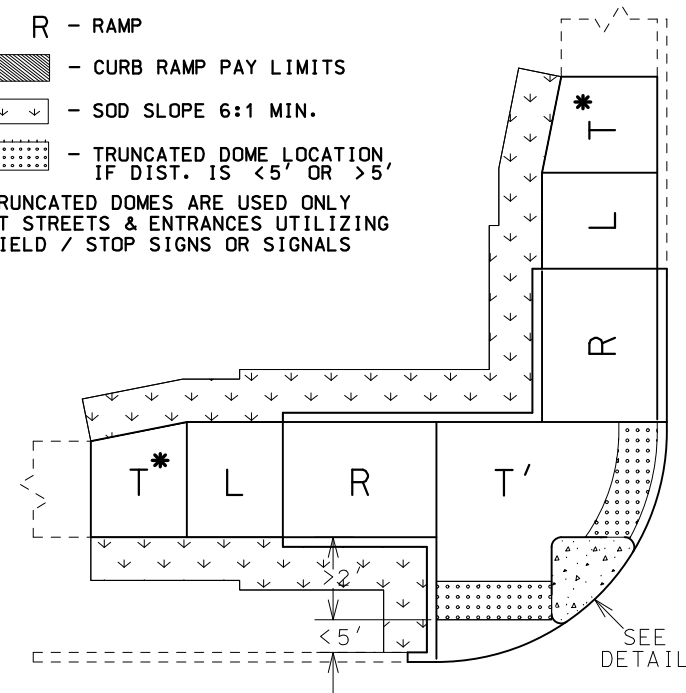
R - RAMP

- CURB RAMP PAY LIMITS

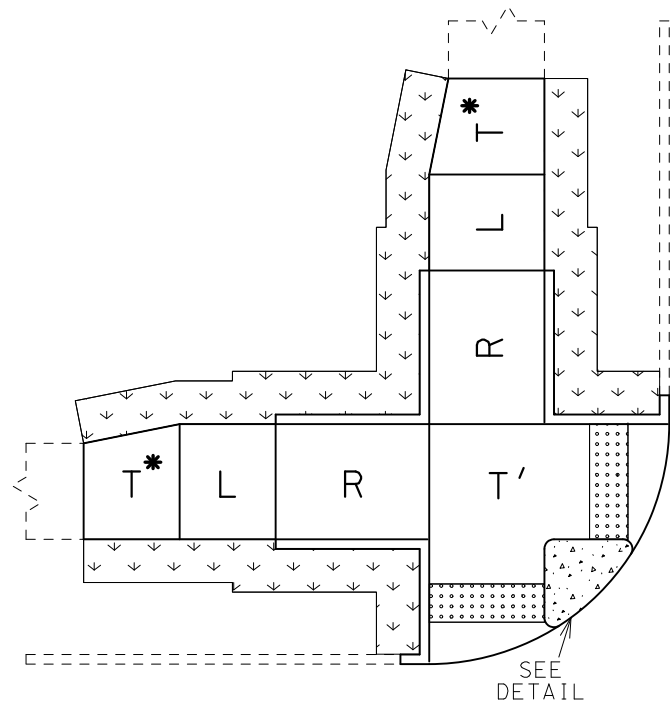
- SOD SLOPE 6:1 MIN.

- TRUNCATED DOME LOCATION,  
IF DIST. IS <5' OR >5'

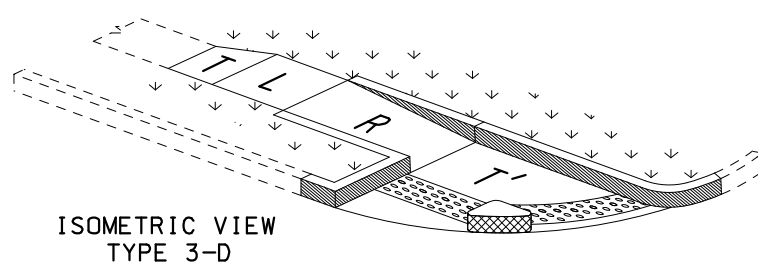
TRUNCATED DOMES ARE USED ONLY  
AT STREETS & ENTRANCES UTILIZING  
YIELD / STOP SIGNS OR SIGNALS



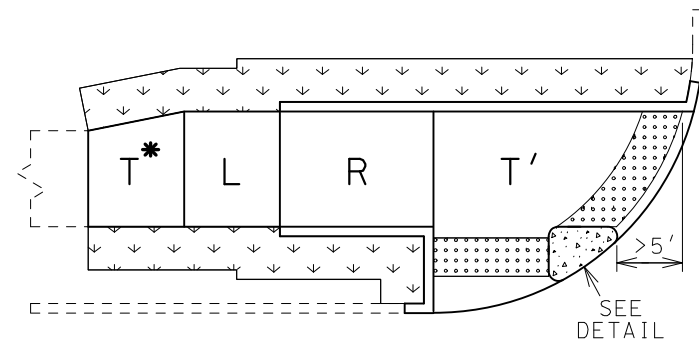
TYPE 3-B



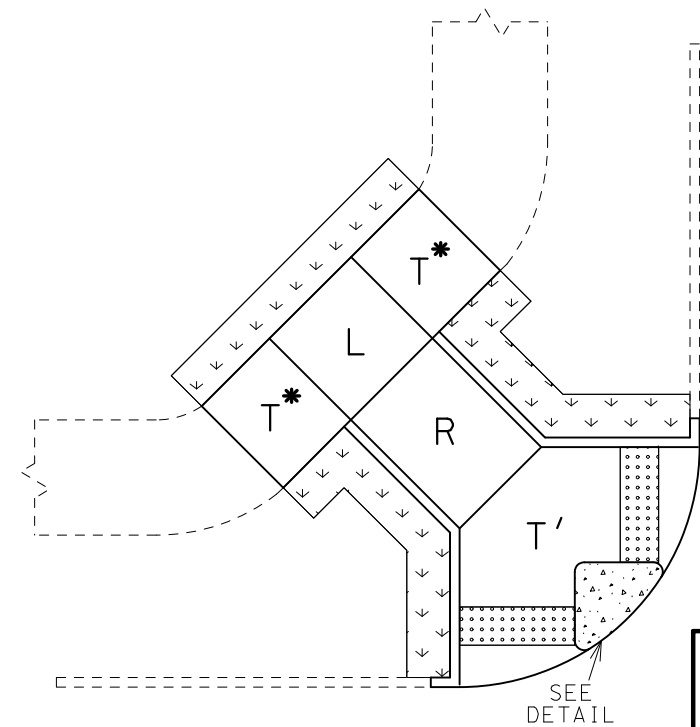
TYPE 3-C



ISOMETRIC VIEW  
TYPE 3-D



TYPE 3-D



TYPE 3-E

ADA LIBRARY TYPICAL

TYPE 3  
DIAGONAL  
CURB RAMPS

TYPICAL SECTIONS  
SHEET 13 OF 16

REVISED: 2022-05-18

DATE PREPARED 8/12/2024	
ROUTE 160	STATE MO
DISTRICT SW	SHEET NO. 2
COUNTY BARTON, DADE	
JOB NO. JSR0042	
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 FOR MODIFIED SIDEWALK:

1. REMOVE EXIST. CURB & RAISED ISLAND WITHIN LIMITS SHOWN.
2. AREA INSIDE FINAL CURB TO BE REPAIRED OR REPLACED WITH EXISTING SURFACE MATERIAL. GRADE TO DRAIN.
3. CONSTRUCT 8" THICK CONC. SIDEWALK FLUSH WITH EXIST. CONC. PAVED APPROACH.
4. CONSTRUCT CURB ADJACENT TO MODIFIED SIDEWALK.
5. MODIFIED SIDEWALK PAID FOR AS 8" SIDEWALK.
6. 6' MINIMUM WIDTH.
7. NO DIRECT PAY FOR SAW CUTS AND TIE BARS (ON 12" CENTERS MAX.)
8. TRUNCATED DOMES ARE USED ONLY AT STREETS & ENTRANCES UTILIZING STOP SIGNS OR SIGNALS.
9. X-SLOPE 1% PREFERRED (2% MAX.)
10. USE S-CURB IF CONSTRUCTING CURB ON R/W LINE.

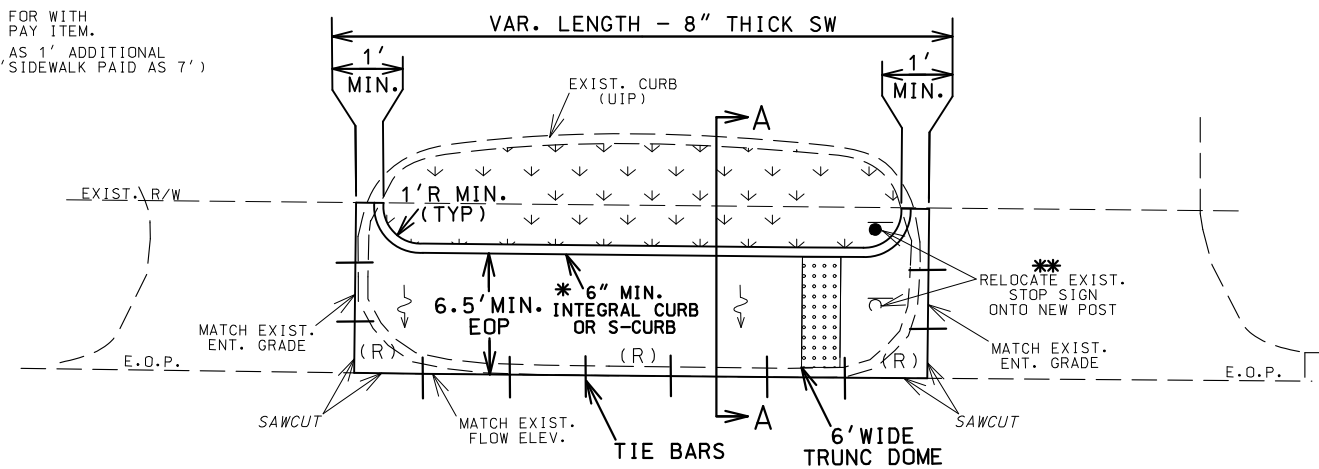
\* INTEGRAL CURB IS PAID FOR WITH  
THE 8" CONC. SIDEWALK PAY ITEM.  
INTEGRAL CURB IS PAID AS 1' ADDITIONAL  
SIDEWALK WIDTH (EX. 6'SIDEWALK PAID AS 7')  
(0.11 SY/LF OF CURB)

*TYPICAL  
MODIFIED SIDEWALK*

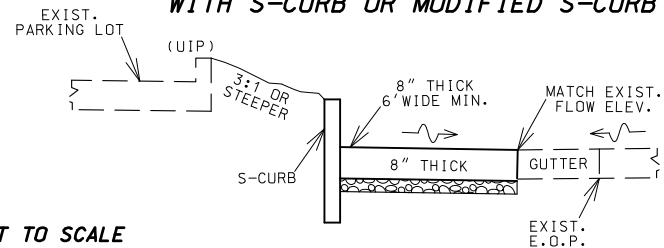
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*8" THICK*

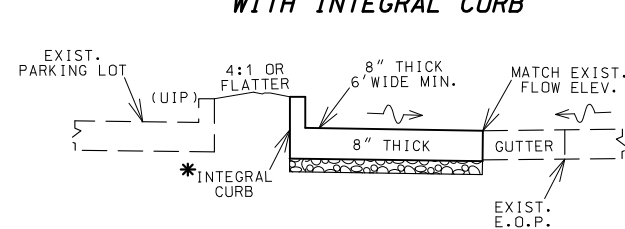
\*\*\* TRUNCATED DOMES ARE USED ONLY  
AT STREETS & ENTRANCES UTILIZING  
STOP/YIELD SIGNS OR SIGNALS.



SECTION A-A  
WITH S-CURB OR MODIFIED S-CURB



SECTION A-A  
WITH INTEGRAL CURB



**NOT TO SCALE**

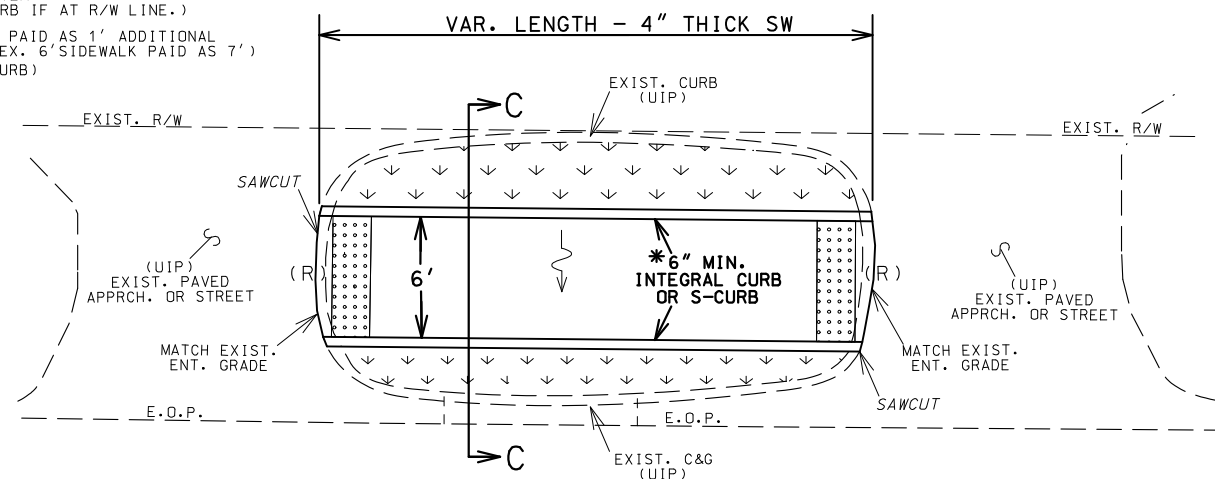
NOTES FOR CUT-THRU SIDEWALK:

1. REMOVE EXIST. CURB & RAISED ISLAND WITHIN LIMITS SHOWN.
2. AREA INSIDE FINAL CURB TO BE REPAIRED OR REPLACED WITH EXISTING SURFACE MATERIAL. GRADE TO DRAIN.
3. CONSTRUCT 4" THICK CONC. SIDEWALK FLUSH WITH EXIST. CONC. PAVED APPROACH.
4. CONSTRUCT CURB ON BOTH SIDES ADJACENT TO SIDEWALK.
5. CUT-THRU SIDEWALK PAID FOR AS 4" SIDEWALK.
6. 6' PREFERRED WIDTH (5' MIN.)
7. SAW CUTS (NO DIRECT PAY).
8. TRUNCATED DOMES ARE USED ONLY AT STREETS & ENTRANCES UTILIZING STOP SIGNS OR SIGNALS.
9. X-SLOPE 1% PREFERRED (2% MAX.)
10. USE S-CURB IF CONSTRUCTING CURB ON R/W LINE.

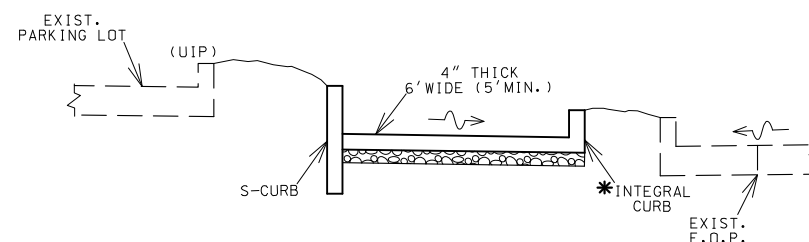
\* INTEGRAL CURB IS PAID FOR AS 4" CONC. SIDEWALK PAY ITEM. S-CURB IS PAID FOR AS ITS OWN PAY ITEM. (ALWAYS USE S-CURB IF AT R/W LINE.)

INTEGRAL CURB IS PAID AS 1' ADDITIONAL SIDEWALK WIDTH (EX. 6' SIDEWALK PAID AS 7') (0.11 SY/LF OF CURB)

NE. *TYPICAL*  
*CUT-THRU SIDEWALK*



SECTION C-C  
WITH S-CURB OR INTEGRAL

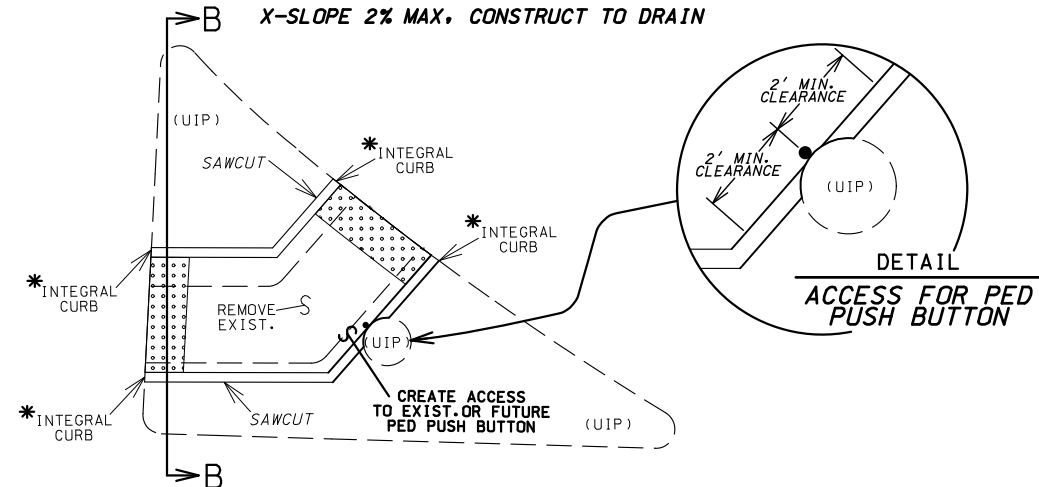


**NOT TO SCALE**

TYPICAL  
ISLAND CUT-THRU SIDEWALK

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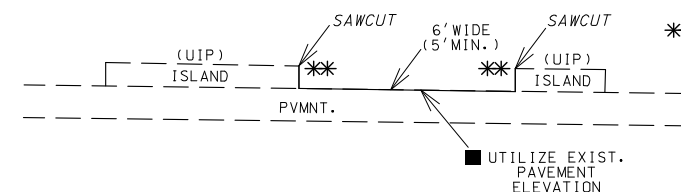
X-SLOPE 2% MAX, CONSTRUCT TO DRAIN



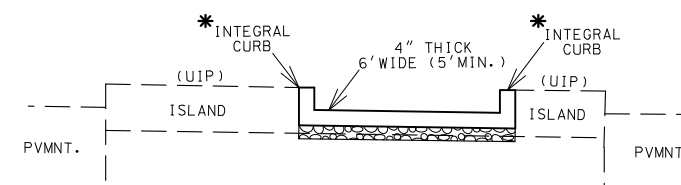
SECTION B-B

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*ISLAND CUT-THRU SIDEWALK  
FOR EXISTING 'PINNED-ON' ISLAND*



SECTION B-B  
ISLAND CUT-THRU SIDEWALK



■ SMALL QTY. HAS BEEN INCLUDED FOR 8" THICK  
SIDEWALK TO ADDRESS ANY UNFORSEEN PVMNT.  
REPAIRS OR DIFFERENCES IN ELEVATION.  
(UNDERRUN IF FIELD CONDITIONS DO NOT WARRANT)

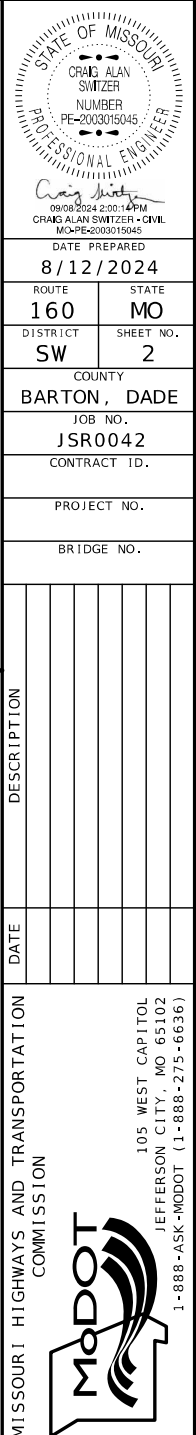
NO INTEGRAL CURB, AGGR. OR LIN. GRADING  
REQUIRED IF THE ISLAND IS 'PINNED-ON'


\* INTEGRAL CURB IS PAID FOR WITH THE 4" CONC. SIDEWALK PAY ITEM.  
INTEGRAL CURB IS PAID AS 1' ADDITIONAL SIDEWALK WIDTH (EX. 6' SIDEWALK PAID AS 7')  
(0.11 SY/LF OF CURB)

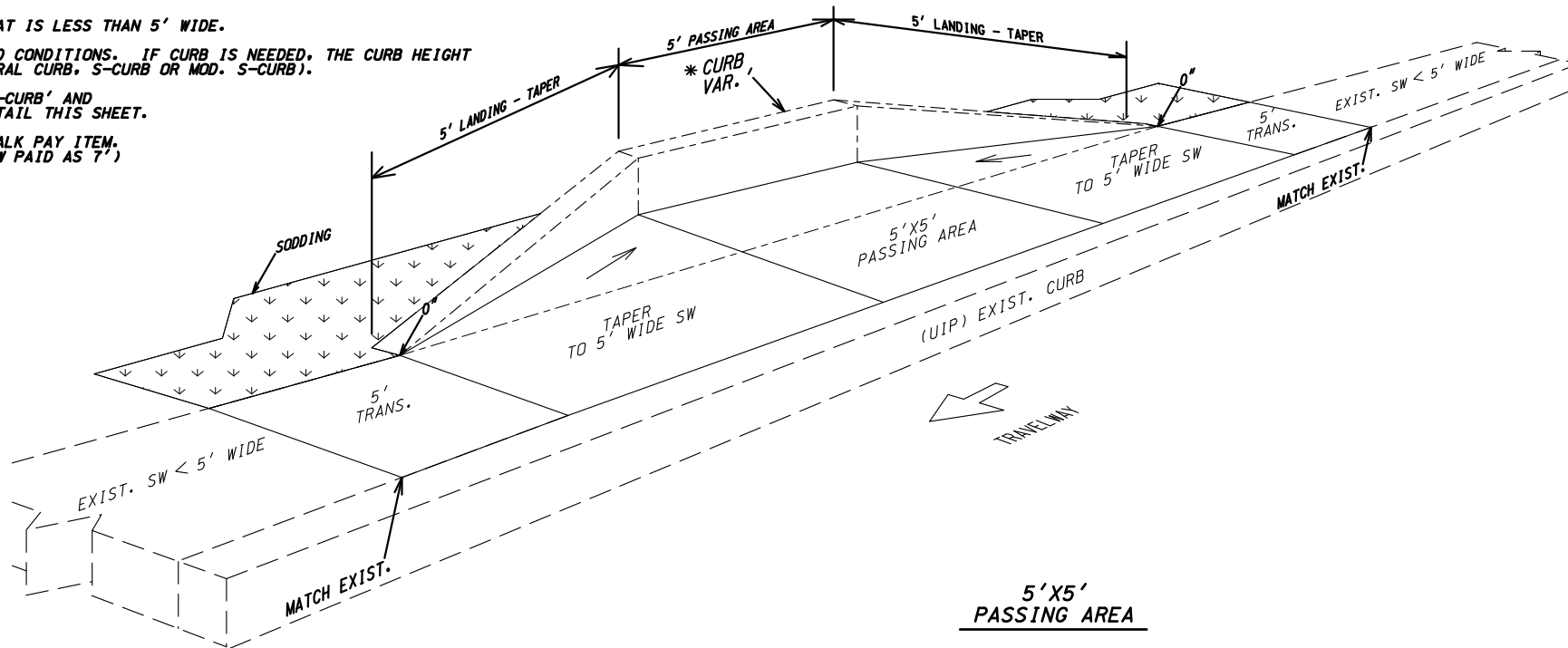
ADA LIBRARY TYPICAL

## MODIFIED SIDEWALK AND SIDEWALK CUT-THROUS

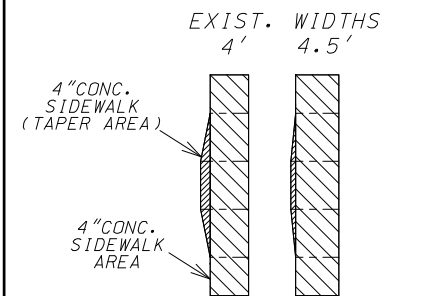
TYPICAL SECTIONS  
SHEET 14 OF 16



1. PASSING AREA REQUIRED EVERY 200' ON SIDEWALK THAT IS LESS THAN 5' WIDE.
- \* 2. CURB MAY OR MAY NOT BE NEEDED DEPENDING ON FIELD CONDITIONS. IF CURB IS NEEDED, THE CURB HEIGHT WILL VARY DEPENDING ON FIELD CONDITIONS. (INTEGRAL CURB, S-CURB OR MOD. S-CURB).
3. S-CURB OVER 12" TALL IS PAID FOR AS 'MODIFIED S-CURB' AND REQUIRES REINFORCEMENT (NO DIRECT PAY). SEE DETAIL THIS SHEET.
- \*\* 4. INTEGRAL CURB IS PAID FOR IN THE 4" CONC. SIDEWALK PAY ITEM. PAID AS 1' ADDITIONAL SIDEWALK WIDTH. (EX. 6" SW PAID AS 7") (0.11 SY/LF OF CURB).
- 
- A diagram of a right-angled triangle with a vertical leg on the left and a horizontal leg at the bottom. The hypotenuse is labeled '5' LA'. The angle at the bottom right vertex is labeled '1:4'.

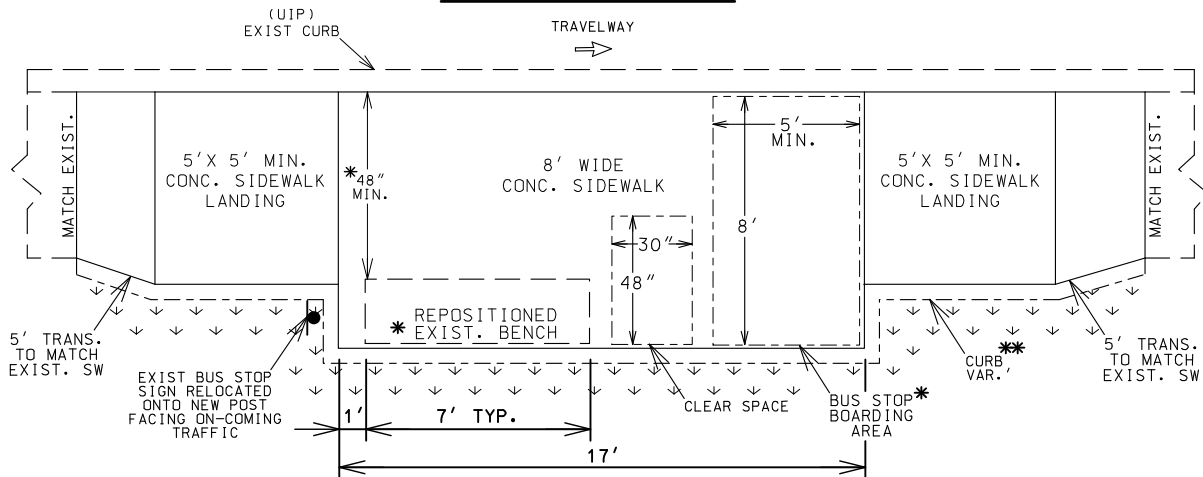


QUANTITIES FOR PASSING AREAS			
EXISTING SW WIDTH		4'	4.5'
4" CONC. SIDEWALK (TAPER)	SY	1.3	0.7
TYPE 1 AGGREGATE	SY	1.3	0.7
4" CONC. SIDEWALK	SY	10.4	11.7
TYPE 1 AGGREGATE	SY	10.4	11.7
INTEGRAL CURB	SY	2.0	2.0
TYPE 1 AGGREGATE	SY	1.0	1.0
S-CURB	LF	17.2	16.0
MODIFIED S-CURB	LF	17.2	16.0
SODDING	SY	53.0	53.0
LINEAR GRADING	LF	25.0	25.0



NOT TO SCALE

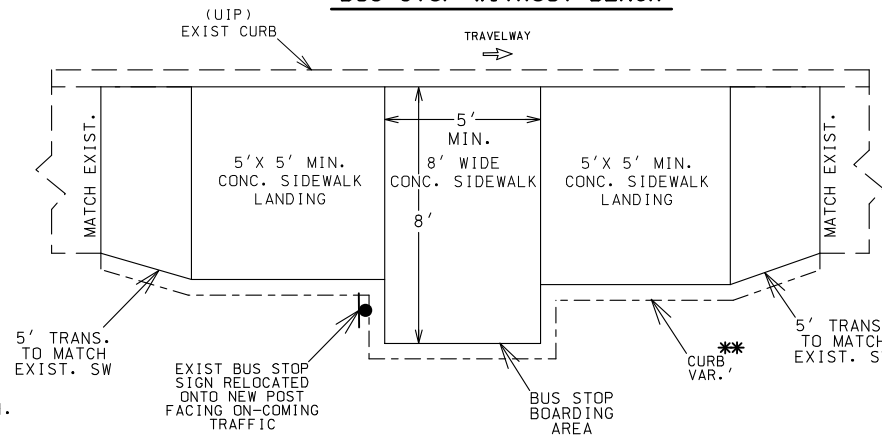
**BUS STOP WITH BENCH**



**NOTES:**

- \* 1. THE REPOSITIONED BENCH SHALL NOT BE PLACED ON THE 5'X8' BUS STOP BOARDING AREA. PLACE THE BACK OF THE BENCH AT THE BACK EDGE OF THE CONC. PAD TO PROVIDE MAX. CLEARANCE.
- \*\* 2. CURB USAGE DEPENDS ON FIELD CONDITIONS. IF CURB IS NEEDED DUE TO CUT, THE CURB HEIGHT WILL VARY DEPENDING ON FIELD CONDITIONS. (INTEGRAL CURB, S-CURB OR MOD. S-CURB).
- 3. S-CURB OVER 12" TALL IS PAID FOR AS 'MODIFIED S-CURB' AND REQUIRES REINFORCEMENT (NO DIRECT PAY). SEE DETAIL THIS SHEET.
- \*\*\* 4. INTEGRAL CURB IS PAID FOR IN THE 4" CONC. SIDEWALK PAY ITEM.  
INTEGRAL CURB PAID AS 1' ADDITIONAL SIDEWALK WIDTH. (EX. 6'SW PAID AS 7') (0.11 SY/LF OF CURB)

**BUS STOP WITHOUT BENCH**



QUANTITIES FOR BUS STOPS WITH BENCH					
EXISTING SW WIDTH		4'	5'	6'	7'
4" CONC. SIDEWALK (TAPER)	SY	9.3	5.8	3.9	1.9
TYPE 1 AGGREGATE	SY	9.3	5.8	3.9	1.9
4" CONC. SIDEWALK	SY	16.5	20.4	24.3	28.2
TYPE 1 AGGREGATE	SY	16.5	20.4	24.3	28.2
INTEGRAL CURB ***	SY	5.4	3.4	3.2	2.9
TYPE 1 AGGREGATE	SY	2.7	1.7	1.6	1.5
S-CURB	LF	43.5	27.0	25.0	23.0
MODIFIED S-CURB	LF	43.5	27.0	25.0	23.0
SODDING	SY	10.6	10.4	9.8	9.4
LINEAR GRADING	LF	37.0	37.0	37.0	37.0

QUANTITIES FOR BUS STOPS – NO BENCH					
EXISTING SW WIDTH		4'	5'	6'	7'
4" CONC. SIDEWALK (TAPER)	SY	3.9	1.8	1.3	0.7
TYPE 1 AGGREGATE	SY	3.9	1.8	1.3	0.7
4" CONC. SIDEWALK	SY	10.4	12.9	15.5	18.0
TYPE 1 AGGREGATE	SY	10.4	12.9	15.5	18.0
INTEGRAL CURB ***	SY	3.8	2.0	1.8	1.6
TYPE 1 AGGREGATE	SY	1.9	1.0	0.9	0.8
S-CURB	LF	31.0	15.0	13.0	11.0
MODIFIED S-CURB	LF	31.0	15.0	13.0	11.0
SODDING	SY	7.6	7.4	6.8	6.4
LINEAR GRADING	LF	25.0	25.0	25.0	25.0

NOT TO SCALE

ADA LIBRARY TYPICAL

# PASSING AREAS AND BUS STOPS

TYPICAL SECTIONS  
SHEET 15 OF 16

STATE OF MISSOURI

CRAIG ALAN SWITZER

NUMBER

PE-2003015045

PROFESSIONAL ENGINEER

*Craig Switzer*

09/08/2024 2:00:33PM

CRAIG ALAN SWITZER - CIVIL

MO-PE-2003015045

COUNTY
BARTON, DADE
JOB NO.
JSR0042
CONTRACT ID.

BRIDGE NO.

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10. *Journal of the American Medical Association*, 2000; 284: 1361-1366.

10. *Journal of the American Medical Association*, 2000; 284: 1361-1366.

10. *Journal of the American Medical Association*, 2000; 284: 1361-1366.

10. *Journal of the American Medical Association*, 2000; 284: 1361-1366.

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10. *Journal of the American Medical Association*, 2000; 283: 2686-2692.

10. *Journal of the American Medical Association*, 2000; 284: 1361-1366.

1. *Journal of Management Studies*, 1996, 33, 1, 1-14.

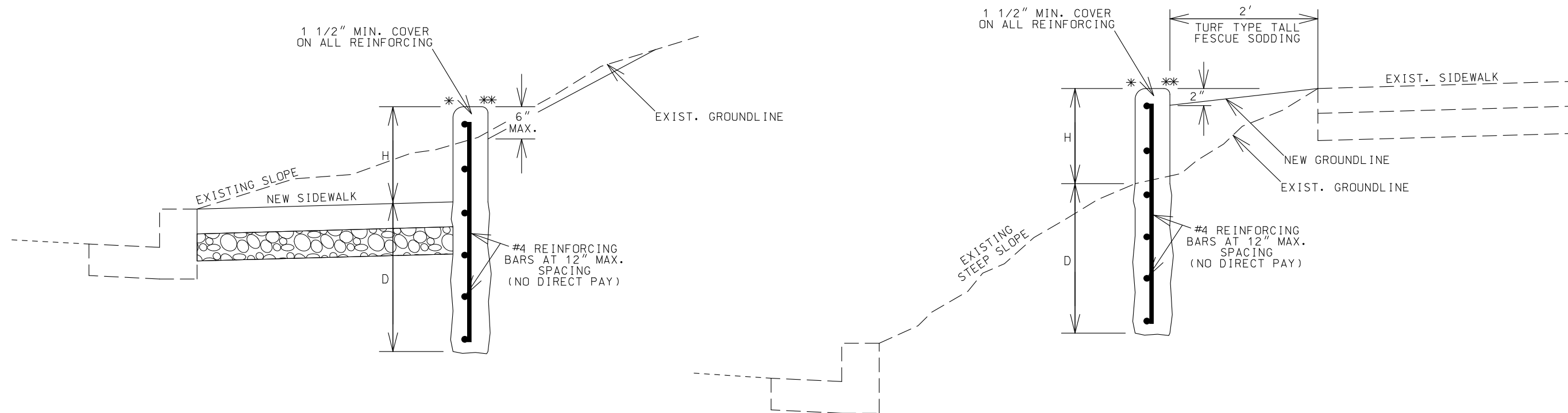
10. *Journal of the American Medical Association*, 2000; 283: 2689-2694.

10. *Journal of the American Medical Association*, 2000; 284: 1039-1044.

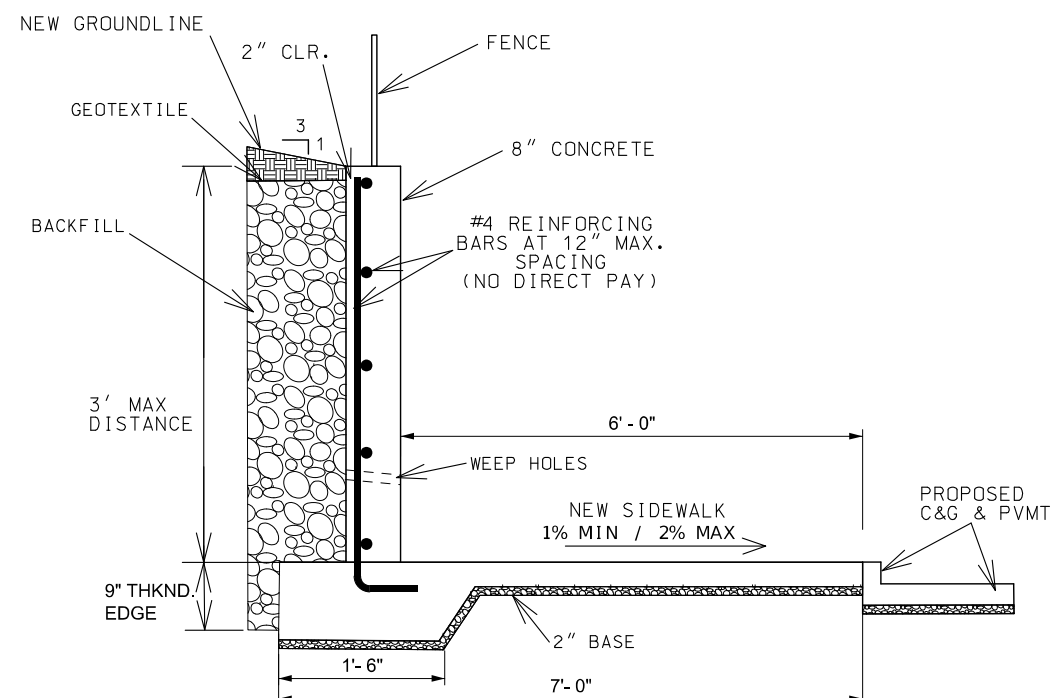
**Abstract**

10. *Journal of the American Medical Association*, 2000; 284: 1039-1044.

MODIFIED S-CURB  
 > 12" TALL (2'-6" MAX.)



MODIFIED S-CURB  
 > 12" TALL (3'-0" MAX.)  
 POURED CONCRETE SIDEWALK WALL



NOT TO SCALE

TYPICAL SECTIONS  
SHEET 16 OF 16

REMOVAL OF IMPROVEMENTS								
ROUTE	LOG MILE	-	LOG MILE	LOCATION	DESCRIPTION	UNITS	TOTAL	REMARKS
160	24.294			LT	ISLAND	EA	1	ISLAND ON RTE A, REMOVE & REPLACE
160	36.763			RT	ISLAND	EA	1	ISLAND ON RTE 126, REMOVE & REPLACE
160	44.578	-	44.578	LT & RT	HEADWALL	EA	2	
160	44.59	-	44.59	LT & RT	36" FES	EA	2	
160	46.261	-	46.261	LT & RT	HEADWALL	EA	2	
160	46.395	-	46.395	LT & RT	HEADWALL	EA	2	
160	47.278	-	47.278	LT & RT	HEADWALL	EA	2	
160	48.367	-	48.367	LT & RT	HEADWALL	EA	2	
160	48.534	-	48.534	LT & RT	HEADWALL	EA	2	
160	48.691	-	48.691	LT & RT	HEADWALL	EA	2	
160	49.1	-	49.1	LT & RT	HEADWALL	EA	2	
160	49.315	-	49.315	LT & RT	HEADWALL	EA	2	
160	49.378	-	49.378	LT & RT	HEADWALL	EA	2	
160	49.605	-	49.605	LT & RT	HEADWALL	EA	2	
160	24.147	-	24.271	LT & RT	GUARDRAIL	LF	500	BRIDGE A4264
160	36.827	-	36.933	LT & RT	GUARDRAIL	LF	500	BRIDGE A4821
160	36.967	-	37.073	LT & RT	GUARDRAIL	LF	500	BRIDGE A4822
160	45.479	-	45.560	LT & RT	GUARDRAIL	LF	500	BRIDGE A2541
TOTAL							1 LUMP SUM	

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

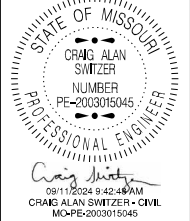
MOBILIZATION
1 LUMP SUM

CONTRACTOR FURNISHED SURVEYING & STAKING
1 LUMP SUM

BITUMINOUS PAVEMENT									
ROUTE	LOG MILE	TO	LOG MILE	NET LENGTH	AVERAGE WIDTH	APPROACH AREA	PAVEMENT 1.75" BP-2	TACK	REMARKS
				LF	LF	SF	TONS	GAL	
160	21.046	-	23.999	15591.8	24.0		3971.6	3326.3	
160	23.999	-	24.180	955.7	40.0		413.8	339.8	*
160	24.238	-	24.577	1789.9	40.0		775.1	636.4	*
160	24.577	-	33.420	46691.0	24.0		11893.2	9960.7	
160	33.470	-	35.704	11795.5	24.0		3004.6	2516.4	
160	35.706	-	35.774	359.0	24.0		91.4	76.6	
160	35.774	-	36.722	5005.4	24.0		1300.5	1067.8	*
160	36.722	-	36.860	728.6	28.0		220.9	181.3	*
160	36.900	-	37.000	528.0	28.0		160.0	131.4	*
160	37.040	-	37.116	401.3	28.0		121.6	99.9	*
160	37.116	-	38.407	6816.5	24.0		1736.3	1454.2	
160	38.407	-	38.440	174.2	22.0		40.7	34.1	WIDTH TRANSITION 24' TO 20'
160	38.440	-	38.500	316.8	20.0		67.2	56.3	
160	38.500	-	38.524	126.7	22.0		29.6	24.8	WIDTH TRANSITION 20' TO 24'
160	38.524	-	38.558	179.5	24.0		45.7	38.3	
160	38.560	-	42.954	23200.3	24.0		5909.6	4949.4	
160	43.294	-	43.496	1066.6	24.0		271.7	227.5	
160	43.496	-	43.540	232.3	24.0		60.4	49.6	*
160	43.540	-	43.937	2096.2	24.0		533.9	447.2	
160	43.937	-	44.017	422.4	24.0		107.6	90.1	
160	44.017	-	44.183	876.5	24.0		223.3	187.0	
160	44.183	-	44.592	2159.5	24.0		561.1	460.7	*
160	44.592	-	44.638	242.9	24.0		61.9	51.8	
160	46.281	-	49.828	18728.2	24.0		4770.5	3995.3	
T	0.005	-	0.067	327.4		13386.0	142.1	119.0	
A	11.117	-	11.141	126.7		4737.0	50.3	42.1	
HH	2.975	-	2.976	5.3		2734.5	29.0	24.3	
E	0.023	-	0.053	158.4		3505.5	37.2	31.2	
F	0.100	-	0.127	142.6		5907.0	62.7	52.5	
VV	0.006	-	0.025	100.3		3500.5	37.2	31.1	
U	6.439	-	6.452	68.6		4057.0	43.1	36.1	
126	29.198	-	29.222	126.7		10221.0	108.5	90.9	
D	13.230	-	13.247	89.8		3729.0	39.6	33.1	
N	0.004	-	0.020	84.5		3697.5	39.2	32.9	
ENTRANCES AND IRREGULARITIES									
160	21.046	-	49.828	141523.0			2010.3		IRREGULARITIES 75 TONS/MILE (CONCRETE PORTIONS EXCEPTED)
160	29.462	-	35.704	32957.76			468.2		ADDITIONAL IRREGULARITIES 75 TONS/MILE
160						300000	3184.0	2666.7	ENTRANCES AND MAILBOXES
TOTALS							42623.6	33562.8	* SAFETY EDGE INCLUDED IN QUANTITY
USE							SEE BP-2 TABLE	SEE TACK TABLE	
NOTE: ANY AND ALL IRREGULARITIES MAY BE UNDERRUN AND NO ADJUSTMENT TO ANY UNIT BID COST WILL BE MADE.									

MODIFIED COLDMILLING (DEPTH TRANSITIONS)							
ROUTE	LOG MILE	TO	LOG MILE	NET LENGTH	AVERAGE WIDTH	AREA	REMARKS
				LF	LF	SY	
160	21.046	-	21.079	175.0	24.0	466.7	BEGIN PROJECT
160	24.147	-	24.180	175.0	40.0	777.8	BRIDGE A4264 EXCEPTION
160	24.238	-	24.271	175.0	40.0	777.8	BRIDGE A4264 EXCEPTION
160	33.393	-	33.420	140.0	21.0	326.7	BRIDGE H0901
160	33.470	-	33.497	140.0	21.0	326.7	BRIDGE H0901
160	35.671	-	35.704	175.0	24.0	466.7	RR XING
160	35.706	-	35.739	175.0	24.0	466.7	RR XING
160	36.827	-	36.860	175.0	28.0	544.4	BRIDGE A4821 EXCEPTION
160	36.900	-	36.933	175.0	28.0	544.4	BRIDGE A4821 EXCEPTION
160	36.967	-	37.000	175.0	28.0	544.4	BRIDGE A4822 EXCEPTION
160	37.040	-	37.073	175.0	28.0	544.4	BRIDGE A4822 EXCEPTION
160	38.407	-	38.440	175.0	22.0	427.8	BRIDGE J0064
160	38.560	-	38.593	175.0	24.0	466.7	RR XING
160	42.921	-	42.954	175.0	24.0	466.7	CONCRETE PVMT EXCEPTION
160	43.294	-	43.327	175.0	24.0	466.7	CONCRETE PVMT EXCEPTION
160	43.507	-	43.540	175.0	24.0	466.7	
160	44.183	-	44.216	175.0	24.0	466.7	
160	44.605	-	44.638	175.0	24.0	466.7	CONCRETE PVMT EXCEPTION
160	46.281	-	46.314	175.0	24.0	466.7	CONCRETE PVMT EXCEPTION
160	49.795	-	49.828	175.0	24.0	466.7	CONCRETE PVMT EXCEPTION
T	0.067	-	0.076	50.0	24.0	133.3	
A	11.108	-	11.117	50.0	26.0	144.4	
U	6.430	-	6.439	50.0	22.0	122.2	
126	29.189	-	29.198	50.0	30.0	166.7	
TOTAL						10514.7	
USE						10515	

SUMMARY OF QUANTITIES  
SHEET 1 OF 6



DATE PREPARED 9/11/2024	
ROUTE 160	STATE MO
DISTRICT SW	SHEET NO. 3
COUNTY BARTON, DADE	
JOB NO. JSR0042	
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)

SHOULDERS BITUMINOUS PAVEMENT													
ROUTE	LOG MILE	TO	LOG MILE	NET LENGTH	AVERAGE WIDTH	APPROACH AREA	SHOULDERS 2.00" BP-1	SHOULDERS 4.00" BP-1	SHOULDERS 1.75" BP-2	BITUMINOUS SHOULDER RUMBLE STRIPS	CENTERLINE RUMBLE STRIPS	TACK	REMARKS
				LF	LF	SF	TONS	TONS	TONS	STA	STA	GAL	
160	21.046	-	23.999	15591.8	4.0			1551.1	675.2	311.8	155.9	554.4	*
160	23.999	-	24.180	955.7						19.1	9.6		*
160	24.238	-	24.577	1789.9						35.8	17.9		*
160	24.577	-	29.508	26035.7	4.0			2590.1	1127.4	520.7	260.4	925.7	*
160	29.508	-	33.269	19858.1	4.0		987.8		859.9	397.2	198.6	706.1	*
160	33.269	-	33.420	797.3	4.0			79.3	34.5	15.9	8.0	28.3	*
160	33.470	-	35.704	11795.5	4.0			1173.4	510.8	235.9	118.0	419.4	*
160	35.706	-	35.774	359.0	4.0			35.7	15.5	7.2	3.6	12.8	*
160	36.900	-	37.000	528.0						10.6	5.3		
160	37.040	-	37.116	401.3						8.0	4.0		
160	37.116		38.440	6990.7	4.0			695.4	302.7	139.8	69.9	248.6	*
160	38.500		38.558	306.2	4.0			30.5	13.3	6.1	3.1	10.9	*
160	38.560	-	42.954	23200.3	4.0			2308.0	1004.6	464.0	232.0	824.9	*
160	43.294	-	43.496	1066.6	4.0			106.1	46.2	21.3	10.7	37.9	*
160	44.592	-	44.638	242.9	4.0				10.5	4.9	2.4	8.6	*
160	46.281	-	49.828	18728.2	4.0			931.6	811.0	374.6	187.3	665.9	*
TOTALS							1931.5	8569.6	5411.6	2572.9	1286.7	4443.5	* SAFETY EDGE INCLUDED IN QUANTITY
USE							10501.1		SEE BP-2 TABLE	2572.9	1286.7	SEE TACK TABLE	

COLDMILLING BITUMINOUS PAVEMENT (3 IN. THICK OR LESS)							
ROUTE	LOG MILE	TO	LOG MILE	NET LENGTH	AVERAGE WIDTH	AREA	REMARKS
				LF	LF	SY	
160	38.440	-	38.500	316.8	20.0	704.0	1.75" COLDMILL
160	38.500	-	38.524	126.7	22.0	309.7	1.75" COLDMILL, WIDTH TRANSITION
160	38.524	-	38.558	179.5	24.0	478.7	1.75" COLDMILL
160	43.540	-	43.937	2096.2	24.0	5589.9	1.75" COLDMILL
160	43.937	-	44.017	422.4	24.0	1126.4	1.75" COLDMILL
160	44.017	-	44.183	876.5	24.0	2337.3	1.75" COLDMILL
97	31.660	-	31.677	89.8	VAR	232.9	1.75" COLDMILL
TOTAL						10778.9	
USE						10779	

ISLANDS AND SIGNS						
LOG	LOCATION	3" CONCRETE MEDIAN	2.5" PSST	CONCRETE ANCHOR	BREAKAWAY ASSEMBLY	REMARKS
		SY	LF	EA	EA	
24.294	LT	76.60	16	1	1	RTE A
36.763	RT	7.56	16	1	1	RTE 126
SUBTOTAL		84.16	32	2	2	
TOTAL		84.2	32	2	2	
*NOTE: RELOCATION OF EXIST. SIGNS TO NEW POSTS IS INCIDENTAL.						

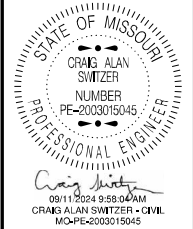
PERMANENT AGGREGATE EDGE TREATMENT						
ROUTE	LOG MILE	TO	LOG MILE	AGGREGATE	PRIME MC 800	REMARKS
				LENGTH 200 TON/MILE*	590 GAL/MILE*	
160	21.046	-	23.999	2.953	590.6	
160	23.999	-	24.180	0.181	36.2	
160	24.238	-	24.577	0.339	67.8	
160	24.577	-	29.508	4.931	986.2	
160	29.508	-	33.269	3.761	752.2	
160	33.269	-	33.420	0.151	30.2	
160	33.470	-	35.704	2.234	446.8	
160	35.706	-	35.774	0.068	13.6	
160	35.774	-	36.860	1.086	217.2	
160	36.900	-	37.000	0.100	20.0	
160	37.040	-	37.116	0.076	15.2	
160	37.116		38.440	1.324	264.8	
160	38.500		38.558	0.058	11.6	
160	38.560	-	42.954	4.394	878.8	
160	43.294	-	43.496	0.202	40.4	
160	43.496	-	43.540	0.044	8.8	
160	44.183	-	44.952	0.769	153.8	
160	44.592	-	44.638	0.046	9.2	
160	46.281	-	49.828	3.547	709.4	
TOTALS				5252.8	15495	*INCLUDES 2' WIDTH BOTH SIDES OF ROADWAY

EROSION CONTROL					
LOG (STA)	LOG (STA)	ROCK DITCH CHECKS	ROCK DITCH CHECKS	SILT FENCE	SEDIMENT REMOVAL
		EA	LF	LF	CY
21.046	23.999	148	1480.0	222.0	150.2
24.577	33.420	442	4420.0	663.0	448.6
33.470	35.774	115	1150.0	172.5	116.7
37.116	38.440	66	660.0	99.0	67.0
38.500	42.954	223	2230.0	334.5	226.3
43.294	43.496	10	100.0	15.0	10.2
44.592	44.638	2	20.0	3.0	2.0
46.281	49.828	177	1770.0	265.5	179.7
393+00.00	396+00.00	6	60.0		6.0
485+00.00	487+00.00	4	40.0		4.0
489+00.00	491+00.00	4	40.0		4.0
536+00.00	538+00.00	4	40.0		4.0
593+00.00	595+50.00	4	40.0		4.0
602+00.00	604+00.00	4	40.0		4.0
611+00.00	612+00.00	4	40.0		4.0
633+00.00	634+00.00	4	40.0		4.0
644+00.00	645+50.00	4	40.0		4.0
646+50.00	648+50.00	4	40.0		4.0
659+00.00	660+50.00	4	40.0		4.0
SUBTOTAL			12290.0	1774.5	1246.7
TOTAL			12290	1775	1247

TACK COAT	
TABLE	TACK COAT
BITUMINOUS PAVEMENT	33562.8
SHOULDERS	4443.5
SUBTOTAL	38006.3
TOTAL	38006

BP-2	
TABLE	BP-2
BITUMINOUS PAVEMENT	42623.6
SHOULDERS	5411.6
SUBTOTAL	48035.2
TOTAL	48035.2

SUMMARY OF QUANTITIES  
SHEET 2 OF 6



DATE PREPARED  
9/11/2024

ROUTE 160	STATE MO
DISTRICT SW	SHEET NO. 3

COUNTY  
BARTON, DADE

JOB NO.  
JSR0042

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION						

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

SIDEWALK PIPES										
LOG	LOCATION	15" GR C PIPE	18" GR C PIPE	24" GR C PIPE	15" GR C FES	18" GR C FES	24" GR C FES	CLASS 3	ROCK	REMARKS
		PIPE	PIPE	PIPE	FES	FES	FES	EXCAVATION	LINING	
		LF	LF	LF	EA	EA	EA	CY	CY	
36.28	LT			19.0			2	6.9	3.0	CHURCH AVE NE
36.28	RT		13.0			2		1.5	2.0	CHURCH AVE SE
36.34	LT		19.0			2		1.5	2.0	MILL ST NE
36.34	RT	16.0			2			1.4	2.0	MILL ST SE
36.4	LT	9.0			2			1.4	2.0	DEPOT AVE NW
36.4	RT	14.0			2			1.4	2.0	DEPOT AVE SW
SUBTOTAL		39.0	32.0	19.0	6	4	2	14.1	13.0	
USE		39	32	19	6	4	2	SEE CULVERT TABLE	SEE CULVERT TABLE	

PIPE EXTENSIONS									
STA	SHEET	30" GR A PIPE	30" GR A FES	34"X53" HE	34"X53" HE	PIPE COLLAR	CLASS 3	ROCK	REMARKS
		PIPE	FES	PIPE	TAPERED END SECTION	TYPE A	EXCAVATION	LINING	
		LF	EA	LF	EA	EA	CY	CY	
394+94.06	5			5.8	2	2	12.0	9.0	
536+87.00	8	3.7	2			2	3.0	4.0	
611+53.24	11	7.4	2			2	7.0	4.0	
633+58.04	12	11.4	2			2	2.0	4.0	
SUBTOTAL		22.5	6	5.8	2	8	24.0	21.0	
FROM SIDEWALK PIPES TABLE							14.1	13.0	
FROM BOX EXTENSIONS TABLE								186.0	
TOTAL		22.5	6	5.8	2	8	38.1	220.0	
USE		23	6	6	2	8	39	220	

LINEAR GRADING						
LOG (STA)	LOG (STA)	LENGTH	LINEAR GRADING	MODIFIED LINEAR	SEEDING	MULCHING
		LF	CLASS 2 FOR SHOULDERS	GRADING CLASS 2		
			100 FT	100 FT	ACRE	ACRE
21.046	23.999	15591.84	311.8			
24.577	29.508	26035.68	520.7			
29.508	33.269	19858.08	397.2			
33.269	33.420	797.28	15.9			
33.470	35.704	11795.52	235.9			
35.706	35.774	359.04	7.2			
37.116	38.440	6990.72	139.8			
38.500	38.558	306.24	6.1			
38.560	42.954	23200.32	464.0			
43.294	43.496	1066.56	21.3			
393+30.00	396+04.80	274.80		5.5	0.32	0.32
44.609	44.638	153.12	3.1			
485+29.14	486+29.14	100.00		2.0	0.11	0.11
46.277	46.379	538.56	10.8			
489+30.00	491+15.00	185.00		3.7	0.21	0.21
46.414	47.265	4493.28	89.9			
536+05.00	537+70.00	165.00		3.3	0.19	0.19
47.296	48.347	5549.28	111.0			
593+45.00	595+35.00	190.00		3.8	0.22	0.22
48.383	48.513	686.4	13.7			
602+25.00	604+05.00	180.00		3.6	0.21	0.21
48.547	48.679	696.96	13.9			
610+70.00	612+40.00	170.00		3.4	0.20	0.20
48.711	49.102	2064.48	41.3			
632+65.00	634+50.00	185.00		3.7	0.21	0.21
49.137	49.301	865.92	17.3			
643+50.00	645+50.00	200.00		4.0	0.23	0.23
49.339	49.360	110.88	2.2			
646+75.00	648+60.00	185.00		3.7	0.21	0.21
49.395	49.589	1024.32	20.5			
658+75.00	660+70.00	195.00		3.9	0.22	0.22
49.626	49.828	1066.56	21.3			
TOTAL			2464.9	40.6	2.33	2.33
USE			2465	41	2.4	2.4

\*NOTE: USE LINEAR GRADING CLASS 2 FOR SHOULDERS WHERE SHOULDER WIDENING OCCURS AND MODIFIED LINEAR GRADING CLASS 2 HAS NOT BEEN SPECIFIED.

BOX EXTENSIONS									
STA	SHEET	FILL HEIGHT FT	END SECTION		CLASS B-1 CONCRETE	REINFORCING STEEL	CLASS 4 EXCAVATION	ROCK LINING	REMARKS
			STANDARD	PLAN					
			LT	RT	CY	LBS	CY	CY	
394+34.96	4	2.3	703.11	703.10	5.50	1080	6.0	28.0	5'X3' RCB
485+79.14	6	1.4	703.10	703.10	2.80	560	4.0	9.0	3'X2' RCB
490+23.57	7	2.3	703.15	703.14	6.60	1330	4.0	28.0	5'X3' RCB
594+41.44	9	4.2	703.15	703.14	16.40	2680	7.0	28.0	5'X3' RCB
603+14.36	10	2.5	703.13	703.12	6.10	1180	5.0	9.0	3'X2' RCB
644+57.33	13	1.0	703.15	703.14	4.30	840	7.0	28.0	6'X4' RCB
647+69.99	14	2.1	703.13	703.12	7.30	1490	12.0	28.0	5'X3' RCB
659+75.07	15	2.5	703.14	703.14	7.70	1500	2.0	28.0	6'X4' RCB
TOTAL					56.70	10660	47.0	186.0	
USE					56.7	10660	47	SEE PIPE EXTENSIONS	

STATE OF MISSOURI

CRAIG ALAN SWITZER

NUMBER

PE-2003015045

PROFESSIONAL ENGINEER

Craig Switzer

09/11/2024 10:07:28 AM

CRAIG ALAN SWITZER - CIVIL

MO-PE-2003015045

DATE PREPARED

9/11/2024

ROUTE

160

STATE

MO

DISTRICT

SW

SHEET NO.

3

COUNTY

BARTON, DADE

JOB NO.

JSR0042

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)



SIDEWALK										
LOG	LOCATION	4" SIDEWALK	CURB RAMP	4" TYPE 1 AGG BASE	SOD	TRUNCATED DOMES	ADA LINEAR GRADING	30" WHITE MIDBLOCK	SIDEWALK MANICURING	REMARKS
		SY	SY	SY	SY	SF	LF	EA	LF	
36.28	LT	5.56	5.56	11.1	8.9	10.0	20.0	5	20.0	CHURCH AVE NE
36.28	RT	5.56	5.56	11.1	8.9	10.0	20.0			CHURCH AVE SE
36.33	LT	5.56	5.56	11.1	8.9	10.0	20.0	5	20.0	MILL ST NW
36.33	RT	5.56	5.56	11.1	8.9	10.0	20.0			MILL ST SW
36.34	LT	5.56	5.56	11.1	8.9	10.0	20.0	5		MILL ST NE
36.34	RT	5.56	5.56	11.1	8.9	10.0	20.0			MILL ST SE
36.4	LT	5.56	5.56	11.1	8.9	10.0	20.0	5		DEPOT AVE NW
36.4	RT	5.56	5.56	11.1	8.9	10.0	20.0		20.0	DEPOT AVE SW
36.47	LT	5.56	5.56	11.1	8.9	10.0	20.0	5		WYATT AVE NW
36.47	RT	5.56	5.56	11.1	8.9	10.0	20.0			WYATT AVE SW
SUBTOTAL		55.60	55.60	111.0	89.0	100.0	200.0	25	60.0	
TOTAL		55.6	55.6	111	89	100	200	25	60	

PAVEMENT MARKING													
ROUTE	LOG MILE	TO	LOG MILE	LOCATION	STANDARD WATERBORNE PAINT TYPE P BEADS				PREFORMED THERMOPLASTIC PAVEMENT MARKING				REMARKS
					4" SOLID WHITE	4" INT YELLOW	4" SOLID YELLOW	24" WHITE	24" WHITE	24" YELLOW	LEFT/RIGHT ARROW	RAILROAD CROSSING	
					LF	LF	LF	LF	LF	LF	EA	EA	
160	21.046		21.718		7100.0	890.0							
160	21.718		21.938		2320.0	290.0	1160.0						
160	21.938		23.100		12270.0		12270.0						
160	23.100		23.338		2510.0	310.0	1260.0						
160	23.338		23.378		420.0	50.0							
160	23.378		23.599		2330.0	290.0	1170.0						
160	23.599		23.958		3790.0	470.0	3790.0						
160	23.958		24.319		3810.0	480.0	1910.0						
160	24.319		24.498		1890.0		1890.0						
160	24.498		24.677		1890.0	240.0	950.0						
160	24.677		24.778		1070.0	130.0							
160	24.778		24.958		1900.0	240.0	950.0						
160	24.958		26.258		13730.0		13730.0						
160	26.258		26.439		1910.0	240.0	960.0						
160	26.439		26.538		1050.0	130.0							
160	26.538		26.918		4010.0	500.0	2010.0						
160	26.918		26.959		430.0		430.0						
160	26.959		27.639		7180.0	900.0	3590.0						
160	27.639		27.758		1260.0		1260.0						
160	27.758		28.118		3800.0	480.0	1900.0						
160	28.118		28.678		5910.0		5910.0						
160	28.678		28.840		1710.0	210.0	860.0						
160	28.840		28.997		1660.0	210.0							
160	28.997		29.177		1900.0	240.0	950.0						
160	29.177		29.480		3200.0		3200.0						
160	29.480		29.620		1480.0	180.0	740.0						
160	29.620		29.861		2540.0	320.0							
160	29.861		30.442		6140.0	770.0	3070.0						
160	30.442		30.560		1250.0		1250.0						
160	30.560		30.922		3820.0	480.0	1910.0						
160	30.922		31.100		1880.0		1880.0						
160	31.100		31.282		1920.0	240.0	960.0						
160	31.282		31.381		1050.0	130.0							
160	31.381		31.783		4250.0	530.0	2120.0						
160	31.783		31.843		630.0		630.0						
160	31.843		32.022		1890.0	240.0	950.0						
160	32.022		32.161		1470.0		1470.0						
160	32.161		32.341		1900.0	240.0	950.0						
160	32.341		34.203		19660.0	2460.0							
160	34.203		35.161		10120.0	1260.0	5060.0						
160	35.161		36.860		17940.0		17940.0	21				2	
160	36.860		37.100		2530.0	320.0	1270.0						
160	37.100		37.320		2320.0	290.0							
160	37.320		37.660		3590.0	450.0	1800.0						
160	37.660		37.700		420.0		420.0						
160	37.700		38.078		3990.0	500.0	2000.0						
160	38.078		38.379		3180.0	400.0							
160	38.379		38.438		620.0	80.0	310.0					1	
160	38.438		38.840		4250.0		4250.0	20				1	
160	38.840		39.060		2320.0	290.0	1160.0						
160	39.060		39.398		3570.0		3570.0						
CONTINUED ON SHEET 5													

STATE OF MISSOURI

CRAG ALAN SWITZER

NUMBER  
PE-2003015045

PROFESSIONAL ENGINEER

Craig Switzer

09/08/2024 2:13:08PM

CRAG ALAN SWITZER - CIVIL

MO-PE-2003015045

DATE PREPARED  
9/4/2024

ROUTE  
160

DISTRICT  
SW

STATE  
MO

SHEET NO.  
3

COUNTY  
BARTON, DADE

JOB NO.  
JSR0042

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)



										EFFECTIVE: 07-01-2024										
SIGN	SIZE	AREA	QTY	TOTAL	QTY	TOTAL	SIGN	DESCRIPTION	SIGN	SIZE	AREA	QTY	TOTAL	QTY	TOTAL	SIGN	DESCRIPTION	ITEM	TOTAL	DESCRIPTION
	IN.	SQ. FT.	EACH	SQ. FT.	EACH	SQ. FT.	NUM.			IN.	SQ. FT.	EACH	SQ. FT.	EACH	SQ. FT.			NUMBER	QTY	
WARNING SIGNS								DESCRIPTION	GUIDE SIGNS							DESCRIPTION	ITEM	TOTAL	DESCRIPTION	
W01-1L	48X48	16.00							E05-1	36X48	12.00									IMPACT ATTENUATOR 40 MPH (SAND BARRELS)
W01-1R	48X48	16.00						TURN (SYMBOL RIGHT)	E05-2	48X36	12.00					EXIT OPEN	6122009		IMPACT ATTENUATOR 45 MPH (SAND BARRELS)	
W01-2L	48X48	16.00						CURVE (SYMBOL LEFT)	E05-2a	48X36	12.00					EXIT CLOSED	6122010		IMPACT ATTENUATOR 50 MPH (SAND BARRELS)	
W01-2R	48X48	16.00						CURVE (SYMBOL RIGHT)	GO20-1	60X24	10.00	2	20			ROAD WORK NEXT XX MILES	6122012		IMPACT ATTENUATOR 55 MPH (SAND BARRELS)	
W01-3L	48X48	16.00						REVERSE TURN (SYMBOL LEFT)	GO20-2	48X24	8.00	2	16			END ROAD WORK	6122014		IMPACT ATTENUATOR 60 MPH (SAND BARRELS)	
W01-3R	48X48	16.00						REVERSE TURN (SYMBOL RIGHT)	GO20-4	36X18	4.50					PILOT CAR FOLLOW ME	6122017		IMPACT ATTENUATOR 65 MPH (SAND BARRELS)	
W01-4L	48X48	16.00						REVERSE CURVE (SYMBOL LEFT)	GO20-4a	42X30	8.75	10	87.5			PILOT CAR IN USE WAIT & FOLLOW	6122019		IMPACT ATTENUATOR 70 MPH (SAND BARRELS)	
W01-4R	48X48	16.00						REVERSE CURVE (SYMBOL RIGHT)	GO20-4a	18X12	1.50	19	28.5			PILOT CAR IN USE WAIT & FOLLOW	6122020		REPLACEMENT SAND BARREL	
W01-4bL	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL LEFT)	GO20-5aP	36X24	6.00	8	48			WORK ZONE (PLAQUE)	6122030		IMPACT ATTENUATOR (RELOCATION)	
W01-4bR	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL RIGHT)	MO4-8a	24X18	3.00					END DETOUR	6123001	1	TRUCK MOUNTED ATTENUATOR (TMA)	
W01-4cL	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL LEFT)	MO4-9L	48X36	12.00					DETOUR (LEFT)	6161008	2	ADVANCED WARNING RAIL SYSTEM	
W01-4cR	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL RIGHT)	MO4-9R	48X36	12.00					DETOUR (RIGHT)	6161012		BUOYS (BOATS KEEP OUT)	
W01-6	60X30	12.50						HORIZONTAL ARROW (SYMBOL)	MO4-9P	48X12	4.00					STREET NAME (PLAQUE)	6161013		BUOYS (NO WAKE)	
W01-6a	72X36	18.00						HORIZ. ARROW (SYMBOL ON PERMANENT BARRICADE)	MO4-10L	48X18	6.00					DETOUR ARROW (LEFT)	6161014		SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)	
W01-7	60X30	12.50						DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)	MO4-10R	48X18	6.00					DETOUR ARROW (RIGHT)	6161025	250	CHANNELIZER (TRIM LINE)	
W01-7a	72X36	18.00						DOUBLE HEAD HORIZ. ARROW (SYMBOL ON PERM. BARR.)	REGULATORY SIGNS							STOP	6161030	10	TYPE III MOVEABLE BARRICADE	
W01-8	18X24	3.00						CHEVRON (SYMBOL)	R1-1	48X48	13.25						6161033		DIRECTION INDICATOR BARRICADE	
W01-8a	30X36	7.50						CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)	R1-2	48TRI	6.93					YIELD	6161040		FLASHING ARROW PANEL	
W03-1	48X48	16.00						STOP AHEAD (SYMBOL)	R1-2a	36X36	9.00					TO ONCOMING TRAFFIC (PLAQUE)	6161047		TYPE III OBJECT MARKER	
W03-2	48X48	16.00						YIELD AHEAD (SYMBOL)	R1-3P	30X12	2.50					ALL WAY (PLAQUE)	6161055		SEQUENTIAL FLASHING WARNING LIGHT	
W03-3	48X48	16.00						SIGNAL AHEAD (SYMBOL)	R2-1	36X48	12.00	16	192			SPEED LIMIT XX	6161070		TUBULAR MARKER	
W03-4	48X48	16.00	21	336				BE PREPARED TO STOP	R3-1	48X48	16.00					NO RIGHT TURN (SYMBOL)	6161095		RADAR SPEED ADVISORY SYSTEM	
W03-5	48X48	16.00						SPEED LIMIT AHEAD	R3-2	48X48	16.00					NO LEFT TURN (SYMBOL)	6161096		CHANGEABLE MESSAGE SIGN, COMMISSION FURNISHED/RETAINED	
W04-1L	48X48	16.00						MERGE (SYMBOL FROM LEFT)	R3-3	36X36	9.00					NO TURNS			CHANGEABLE MESSAGE SIGN W/O COMM. INTERFACE - CONTRACTOR FURNISHED/RETAINED	
W04-1R	48X48	16.00						MERGE (SYMBOL FROM RIGHT)	R3-4	48X48	16.00					NO U-TURN (SYMBOL)	6161098A		CHANGEABLE MESSAGE SIGN WITH COMM. INTERFACE - CONTRACTOR FURNISHED/RETAINED	
W04-1aL	48X48	16.00						MERGE (LEFT)	R3-7L	30X30	6.25					LEFT LANE MUST TURN LEFT			TEMPORARY LONG-TERM RUMBLE STRIPS	
W04-1aR	48X48	16.00						MERGE (RIGHT)	R3-7R	30X30	6.25					RIGHT LANE MUST TURN RIGHT	6161099	3	TEMPORARY TRAFFIC BARRIER	
W05-1	48X48	16.00	1	16				ROAD/BRIDGE/RAMP NARROWS	R4-1	36X48	12.00					DO NOT PASS			TEMPORARY TRAFFIC SIGNAL SYSTEM	
W05-3	48X48	16.00						ONE LANE BRIDGE	R4-2	36X48	12.00					PASS WITH CARE	6162000A		WORK ZONE TRAFFIC SIGNAL SYSTEM	
W05-5	48X48	16.00						NARROW LANES	R4-7a	36X48	12.00					KEEP RIGHT (HORIZONTAL ARROW)	6162002		TEMPORARY TRAFFIC BARRIER	
W06-1	48X48	16.00						DIVIDED HIGHWAY (SYMBOL)	R4-8a	36X48	12.00					KEEP LEFT (HORIZONTAL ARROW)	6173600D	56	CONTRACTOR FURNISHED/RETAINED	
W06-2	48X48	16.00						DIVIDED HIGHWAY END (SYMBOL)	R5-1	30X30	6.25					DO NOT ENTER			TEMPORARY TRAFFIC BARRIER	
W06-3	48X48	16.00						TWO WAY TRAFFIC (SYMBOL)	R5-1a	36X24	6.00					WRONG WAY	6173602B		CONTRACTOR FURNISHED/COMMISSION RETAINED	
W07-3a	30X24	5.00	1	5				NEXT XX MILES (PLAQUE)	R6-1L	54X18	6.75					ONE WAY ARROW (LEFT)	6174000A		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION	
W08-1	48X48	16.00						BUMP	R6-1R	54X18	6.75					ONE WAY ARROW (RIGHT)	6175010A		RELOCATING TEMPORARY TRAFFIC BARRIER	
W08-2	48X48	16.00						DIP	R6-2L	24X30	5.00					ONE WAY (LEFT)			TEMPORARY TRAFFIC BARRIER	
W08-3	48X48	16.00						PAVEMENT ENDS	R6-2R	24X30	5.00					ONE WAY (RIGHT)	6176000B		COMMISSION FURNISHED/RETAINED	
W08-4	48X48	16.00						SOFT SHOULDER	R9-9	24X12	2.00	10	20			SIDEWALK CLOSED			TEMP. TRAFFIC BARRIER HEIGHT TRANSITION	
W08-5	48X48	16.00						SLIPPERY WHEN WET (SYMBOL)	R9-11L	24X18	3.00					SIDEWALK CLOSED AHEAD, (ARROW LEFT) CROSS HERE	6177000B		COMMISSION FURNISHED/RETAINED	
W08-6	48X48	16.00						TRUCK CROSSING								SIDEWALK CLOSED AHEAD, (ARROW RIGHT) CROSS HERE			TEMPORARY RAISED PAVEMENT MARKER	
W08-6c	48X48	16.00						TRUCK ENTRANCE	R9-11R	24X18	3.00					(ARROW RIGHT) CROSS HERE	6208064A		TEMPORARY TRAFFIC SIGNALS	
W08-7	36X36	9.00						LOOSE GRAVEL	R10-6	24X36	6.00					STOP HERE ON RED (45° ARROW)	9029400		TEMPORARY TRAFFIC SIGNALS AND LIGHTING	
W08-7a	36X36	9.00						FRESH OIL / LOOSE GRAVEL	R11-2	48X30	10.00	2	20			ROAD CLOSED	6169902	10	ADA COMPLIANT MOVEABLE BARRICADE	
W08-9	48X48	16.00						LOW SHOULDER	R11-3a	60X30	12.50	2	25			ROAD CLOSED XX MILES AHEAD				
W08-11	48X48	16.00						UNEVEN LANES								LOCAL TRAFFIC ONLY				
W08-12	48X48	16.00						NO CENTER LINE	R11-4	60X30	12.50					ROAD CLOSED TO THRU TRAFFIC				
W08-15	48X48	16.00						GROOVED PAVEMENT	CONST-3A	60X48	20.00					FINE SIGN				
W08-15P	30X24	5.00						MOTORCYCLE (PLAQUE)	CONST-3X	56X12	4.67					SPEEDING/PASSING (PLATE)				
W08-17L	48X48	16.00						SHOULDER DROP-OFF (SYMBOL LEFT)	MISCELLANEOUS SIGNS							POINT OF PRESENCE				
W08-17R	48X48	16.00						SHOULDER DROP-OFF (SYMBOL RIGHT)	CONST-5	48X36	12.00									
W08-17P	30X24	5.00						SHOULDER DROP-OFF (PLAQUE)	CONST-5	96X48	32.00	2	64			POINT OF PRESENCE				
W10-1	42RND	9.62						RAILROAD CROSSING	CONST-8	48X36	12.00					WORK ZONE NO PHONE ZONE				
W012-1	24X24	4.00						DOUBLE DOWN ARROW (SYMBOL)	CONST-7	72X36	18.00					RATE OUR WORK ZONE				
W012-2	48X48	16.00						LOW CLEARANCE (SYMBOL)	CONST-8	48X36	12.00	2	24			WORK ZONE NO PHONE ZONE				
W012-2x	24X18	3.00						LOW CLEARANCE (PLAQUE)												
W012-2a	84X24	14.00						OVERHEAD LOW CLEARANCE (FEET AND INCHES)												
W012-4	120X60	50.00						LOW CLEARANCE XX FT XX IN XX MILES AHEAD												
W012-5	120X60	50.00						WIDTH RESTRICTION XX FT XX IN XX MILES AHEAD												
W013-1	30X30	6.25						ADVISORY SPEED (PLAQUE)												
W016-2	30X24	5.00						XXX FEET (PLAQUE)												
W016-3	30X24	5.00						X MILE (PLAQUE)												
W020-1	48X48	16.00	80	1280				ROAD/BRIDGE/RAMP WORK AHEAD												
W020-2	48X48	16.00						DETOUR AHEAD												
W020-3	48X48	16.00	4	64				ROAD CLOSED AHEAD	616-10.05							TOTAL				
W020-4	48X48	16.00	4	64				ONE LANE ROAD AHEAD	CONSTRUCTION SIGNS											
W020-5	48X48	16.00						RIGHT/CENTER/LEFT LANE CLOSED AHEAD	616-10.10							TOTAL				
W020-5a	48X48	16.00						2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD	RELOCATED SIGNS											
W020-6a	48X48	16.00						RIGHT/CENTER/LEFT LANE CLOSED												
W020-7a	48X48	16.00	21	336				FLAGGER (SYMBOL)												
W021-2	36X36	9.00						FRESH OIL												
W021-5	48X48	16.00	4	64				SHOULDER WORK / SHOULDER WORK AHEAD												
W022-1	48X48	16.00						BLASTING ZONE AHEAD												
W022-2	42X36	10.50						TURN OFF 2-WAY RADIO AND PHONE												
W022-3	42X36	10.50						END BLASTING ZONE												
GO22-1	21X15	2.19						WET PAINT (ARROW PIVOTS)												

STATE OF MISSOURI

CRAIG ALAN SWITZER

NUMBER

PE-2003015045

PROFESSIONAL ENGINEER

09/08/2024 2:12:28 PM

CRAIG ALAN SWITZER - CIVIL

MO-PE-2003015045

DATE PREPARED

9/4/2024

ROUTE

160

STATE

MO

DISTRICT

SW

SHEET NO.

3

COUNTY

BARTON, DADE

JOB NO.

JSR0042

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

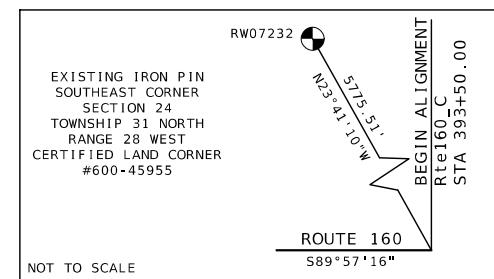
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL

JEFFERSON CITY, MO 65102

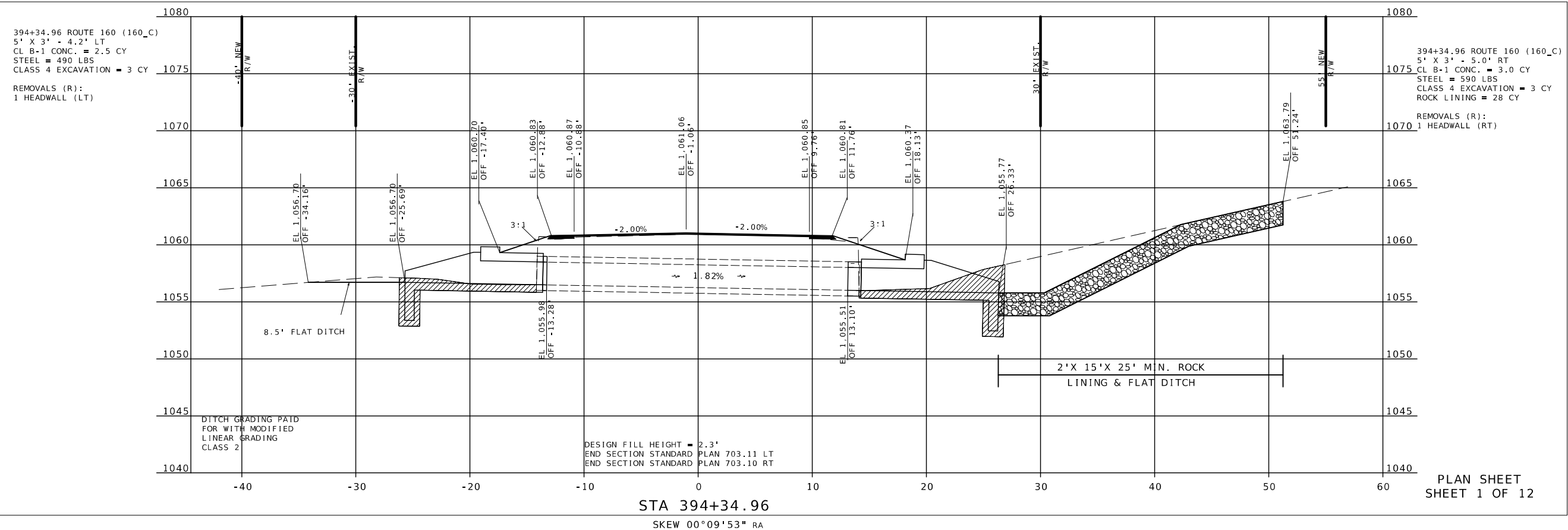
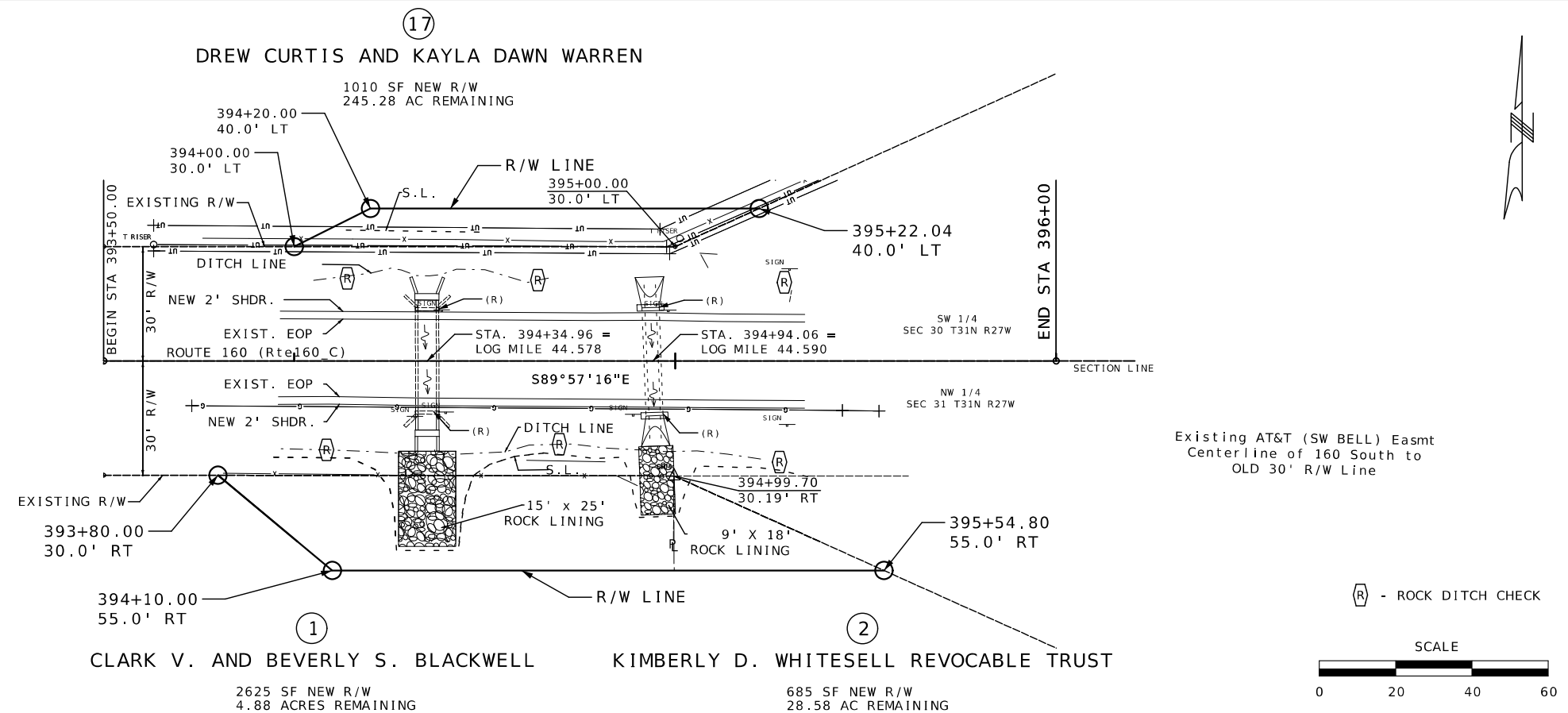
1-888-ASK-MODOT (1-888-275-6636)

ALL BEARINGS BASE ON STATE PLANE BEARINGS,  
WESTERN ZONE.

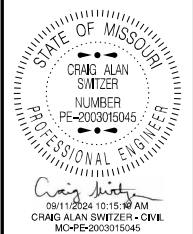


Existing AT&T (SW BELL) Easmt  
Centerline of 160 South to  
Existing R/W Line

THE APPROXIMATE LOCATION OF PROPERTY LINES 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.



PLAN SHEET  
SHEET 1 OF 12



DATE PREPARED

9 / 11 / 2024

ROUTE	STATE
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160	MO
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DISTRICT	SHEET NO.
Chh	1

SW	4
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COUNTY

BARTON, DADE

JOB NO.  
1550012

JSR0042

CONTRACT ID.

PROJECT NO.

PROJECT NO.

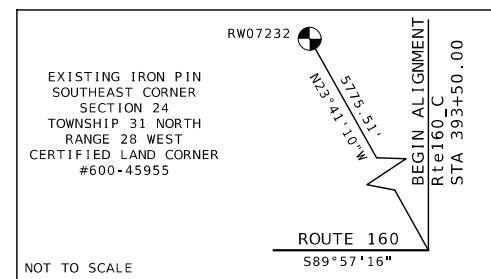
BRIDGE NO. \_\_\_\_\_

BRIDGE NO.

[illegible]MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

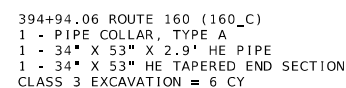
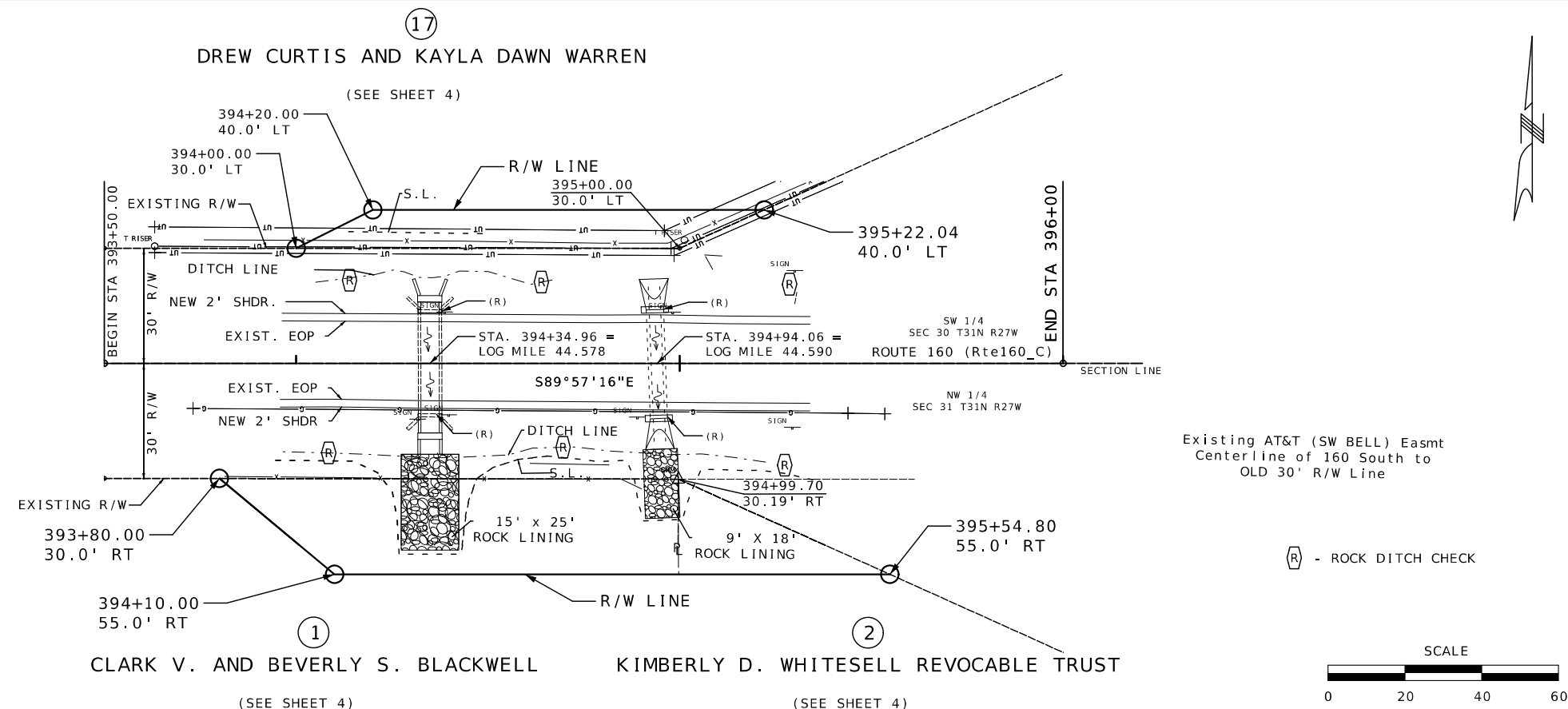
105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

ALL BEARINGS BASE ON STATE PLANE BEARINGS,  
WESTERN ZONE.

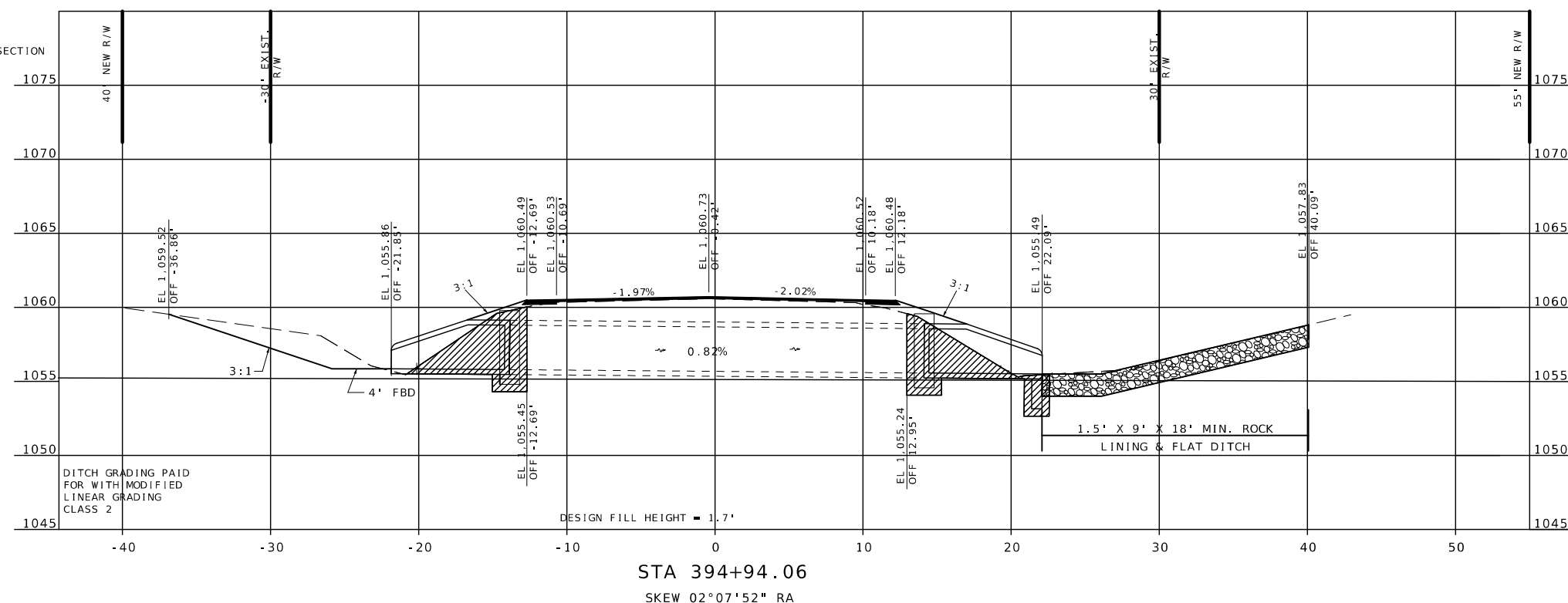


Existing AT&T (SW BELL) Easmt  
Centerline of 160 South to  
Existing R/W Line

THE APPROXIMATE LOCATION OF PROPERTY LINES 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.



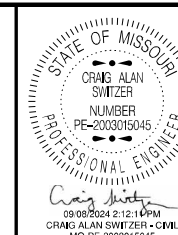
REMOVALS (R):  
36" FLARED END SECTION (LT)



394+94.06 ROUTE 160 (160\_C)  
1 - PIPE COLLAR, TYPE A  
1 - 34" X 53" X 2.9' HE PIPE  
1 - 34" X 53" HE TAPERED END SECTION  
CLASS 3 EXCAVATION = 6 CY  
ROCK LINING = 9 CY

REMOVALS (R):  
36" FLARED END SECTION (RT)

PLAN SHEET  
SHEET 2 OF 12



DATE PREPARED

DATE PREPARED  
9/4/2024

ROUTE	STA
100	11

160	MO
DISTRICT	SHEET

SW 5

COUNTY

BARTON, DA

JOB NO.
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JSR0042

CONTRACT ID.

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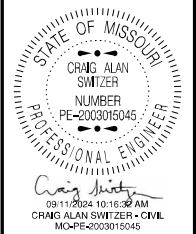
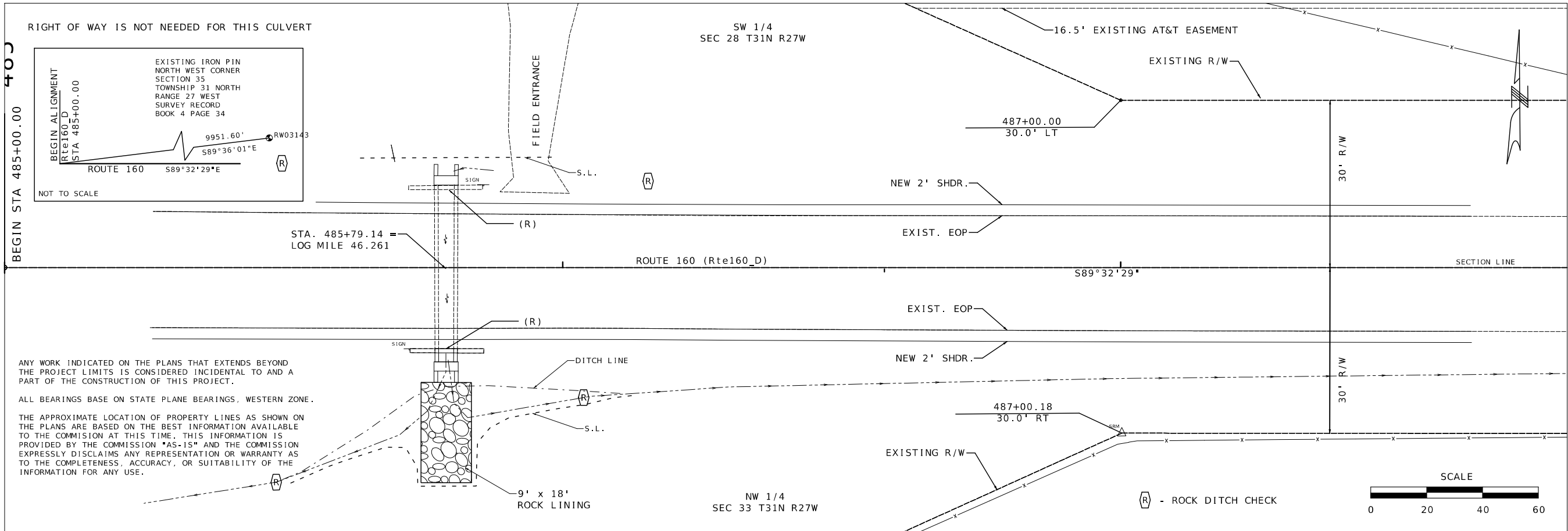
PROJECT NO.

BRIDGE NO.

BRIDGE NO.

[illegible]MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

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



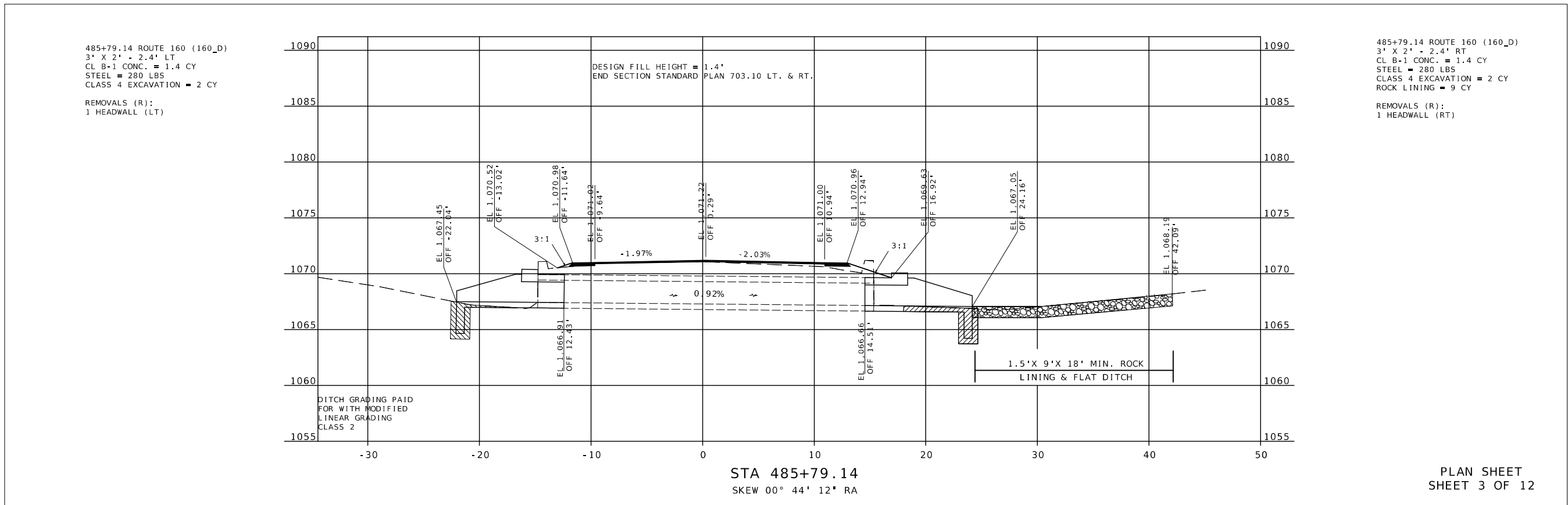
DATE PREPARED 9/11/2024	
ROUTE 160	STATE MO
DISTRICT SW	SHEET NO. 6
COUNTY BARTON, DADE	
JOB NO. JSR0042	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

MoDOT



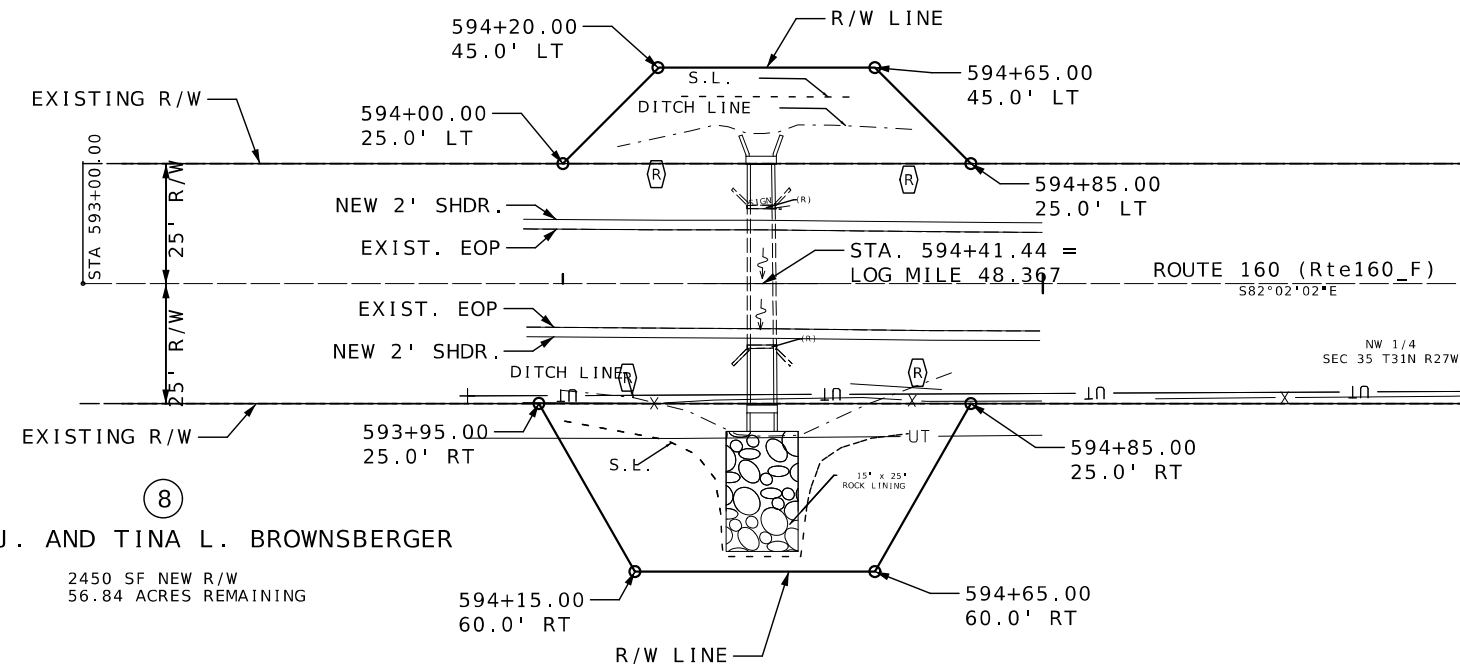






ALL BEARINGS BASE ON STATE PLANE BEARINGS,  
WESTERN ZONE.

2741 SF NEW R/W  
123.74 ACRES REMAINING



EXISTING IRON PIN  
NORTH WEST CORNER  
SECTION 35  
TOWNSHIP 31 NORTH  
RANGE 27 WEST  
SURVEY RECORD  
BOOK 4 PAGE 34

BEGIN ALIGNMENT  
Rte160 LF  
STA 583+35.53

582°02'02"E

ROUTE 160

108°59'  
N79°38'08"E

RW03143

NOT TO SCALE

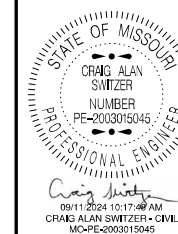
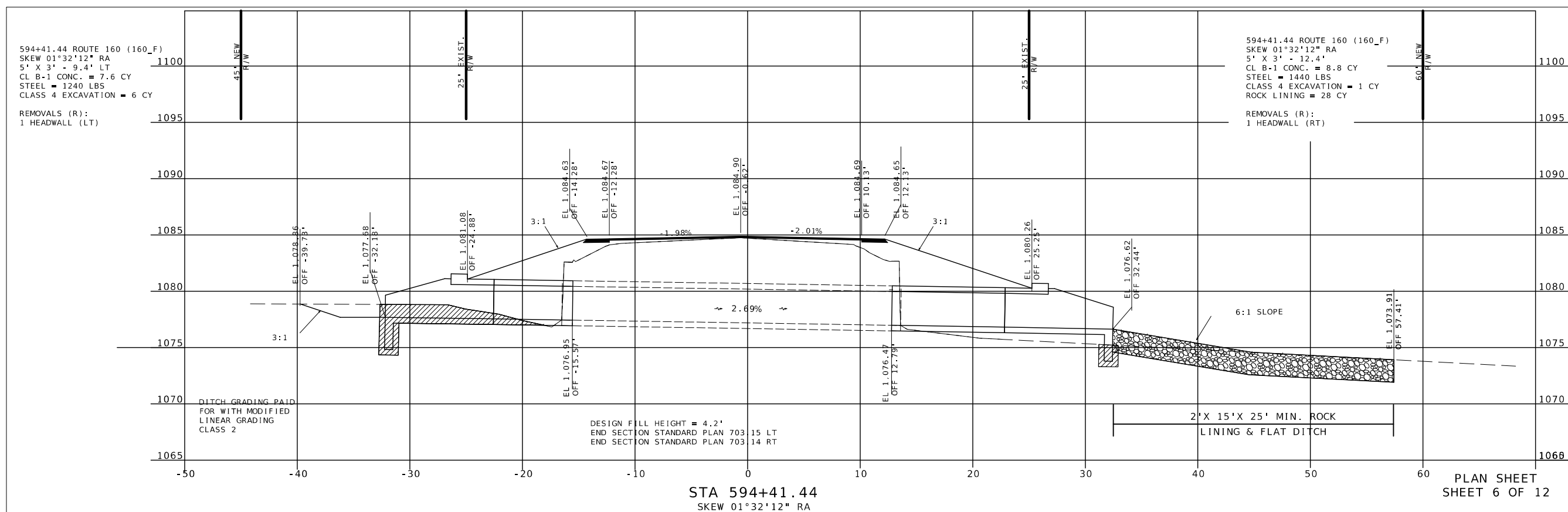
 - ROCK DITCH CHECK



THE APPROXIMATE LOCATION OF PROPERTY LINES 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.

GEREON J. AND TINA L. BROWNSBERGER

2450 SF NEW R/W  
56.84 ACRES REMAINING



DATE PREPARED  
9/11/2024

ROUTE	STATE
160	MO

100	MO
DISTRICT	SHEET N
SW	9

SW	9
COUNTY	
BARTON, DAF	

BARTON, DAE

JOB NO.

JSR0042
CONTRACT ID.

PROJECT NO.
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BRIDGE NO.

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[illegible]MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

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



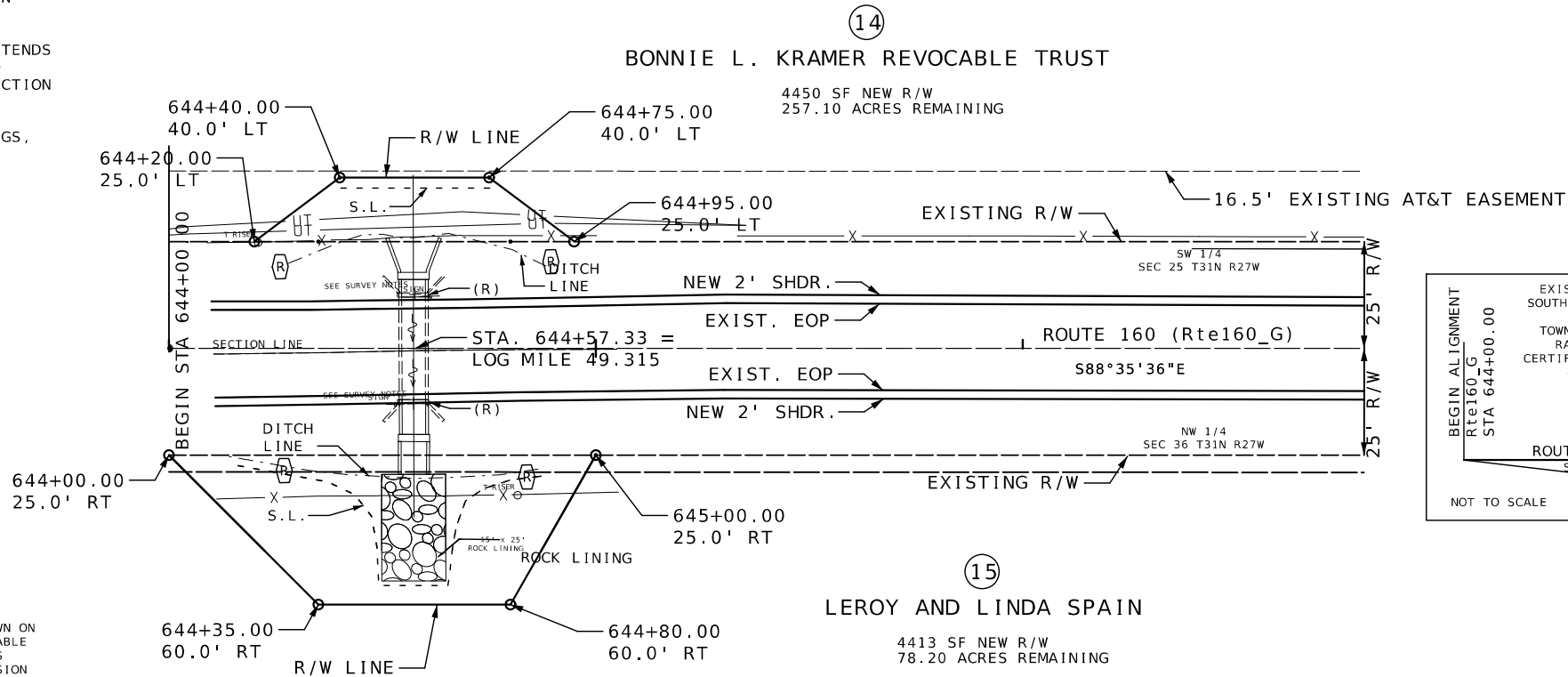




RIGHT OF WAY LIMITS FOR THIS PROJECT  
EXTEND FROM STATION 644+00.00 TO STATION  
645+00.00 A DISTANCE OF 0.019 MILES.

ANY WORK INDICATED ON THE PLANS THAT EXTENDS  
BEYOND THE PROJECT LIMITS IS CONSIDERED  
INCIDENTAL TO AND A PART OF THE CONSTRUCTION  
OF THIS PROJECT.

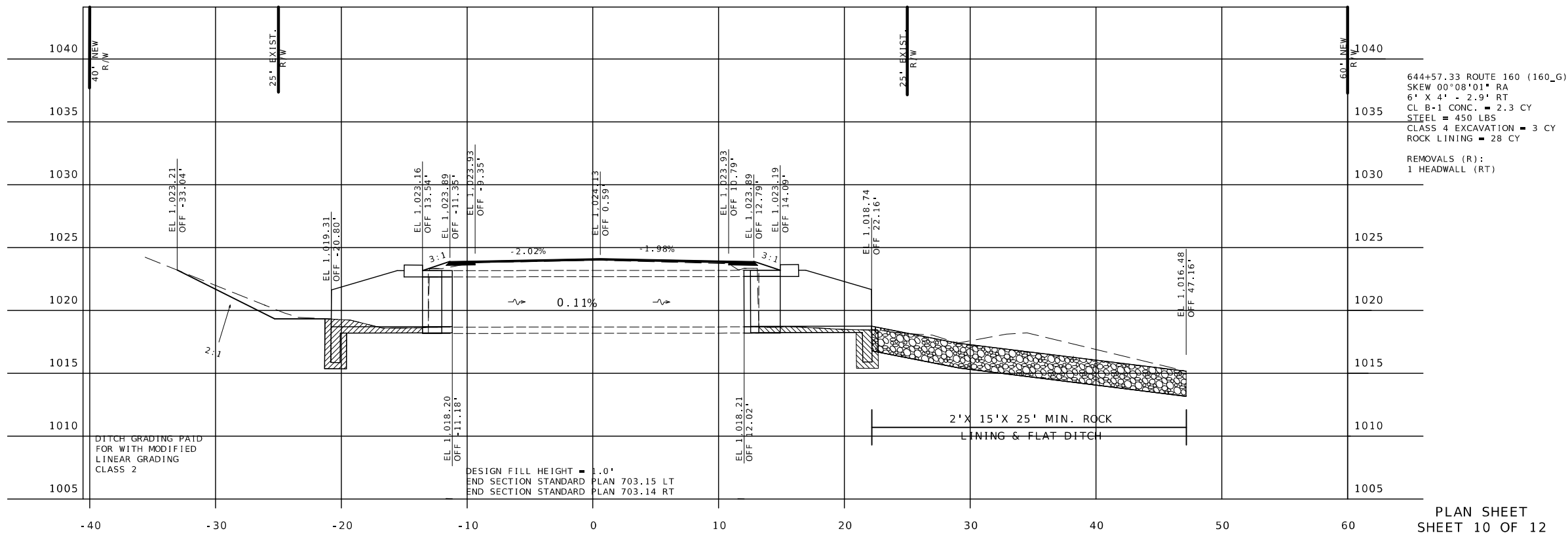
ALL BEARINGS BASE ON STATE PLANE BEARINGS,  
WESTERN ZONE.



THE APPROXIMATE LOCATION OF PROPERTY LINES 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.

644+57.33 ROUTE 160 (160\_G)  
SKEW 00°08'01" RA  
6' X 4' - 2.4' LT  
CL B-1 CONC. = 2.0 CY  
STEEL = 390 LBS  
CLASS 4 EXCAVATION = 4 CY

REMOVALS (R):  
1 HEADWALL (LT)



STA 644+57.33  
SKEW 00°08'01" RA



DATE PREPARED  
9/11/2024

ROUTE  
160

DISTRICT  
SW

STATE  
MO

SHEET NO.  
13

COUNTY  
BARTON, DADE

JOB NO.  
JSR0042

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)

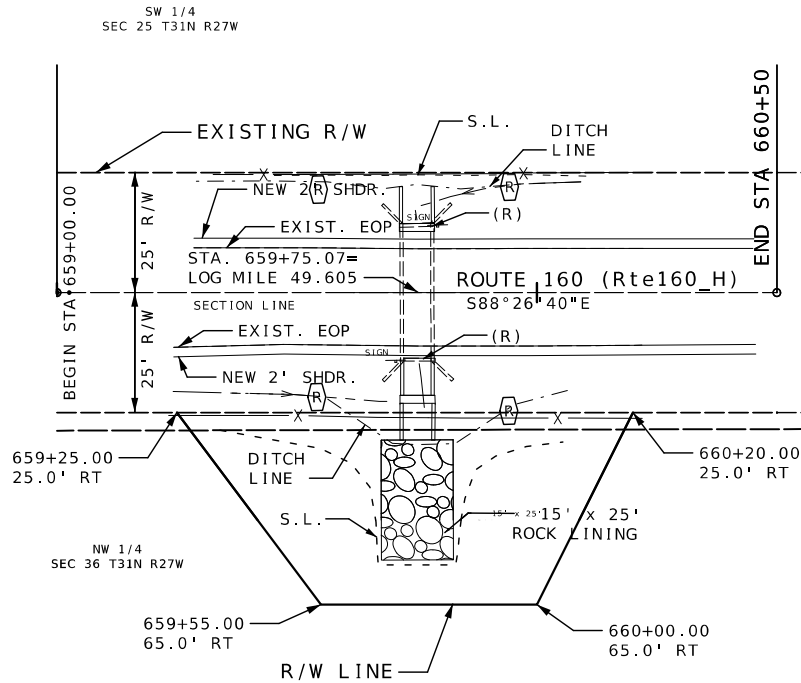
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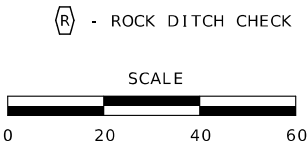
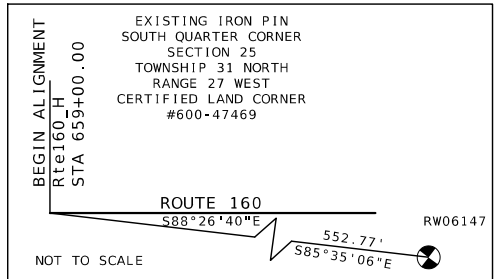
RIGHT OF WAY LIMITS FOR THIS PROJECT  
EXTEND FROM STATION 659+25.00 TO STATION  
660+20.00 A DISTANCE OF 0.018 MILES.

ANY WORK INDICATED ON THE PLANS THAT EXTENDS  
BEYOND THE PROJECT LIMITS IS CONSIDERED  
INCIDENTAL TO AND A PART OF THE CONSTRUCTION  
OF THIS PROJECT.

ALL BEARINGS BASE ON STATE PLANE BEARINGS,  
WESTERN ZONE.



THE APPROXIMATE LOCATION OF PROPERTY LINES 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.



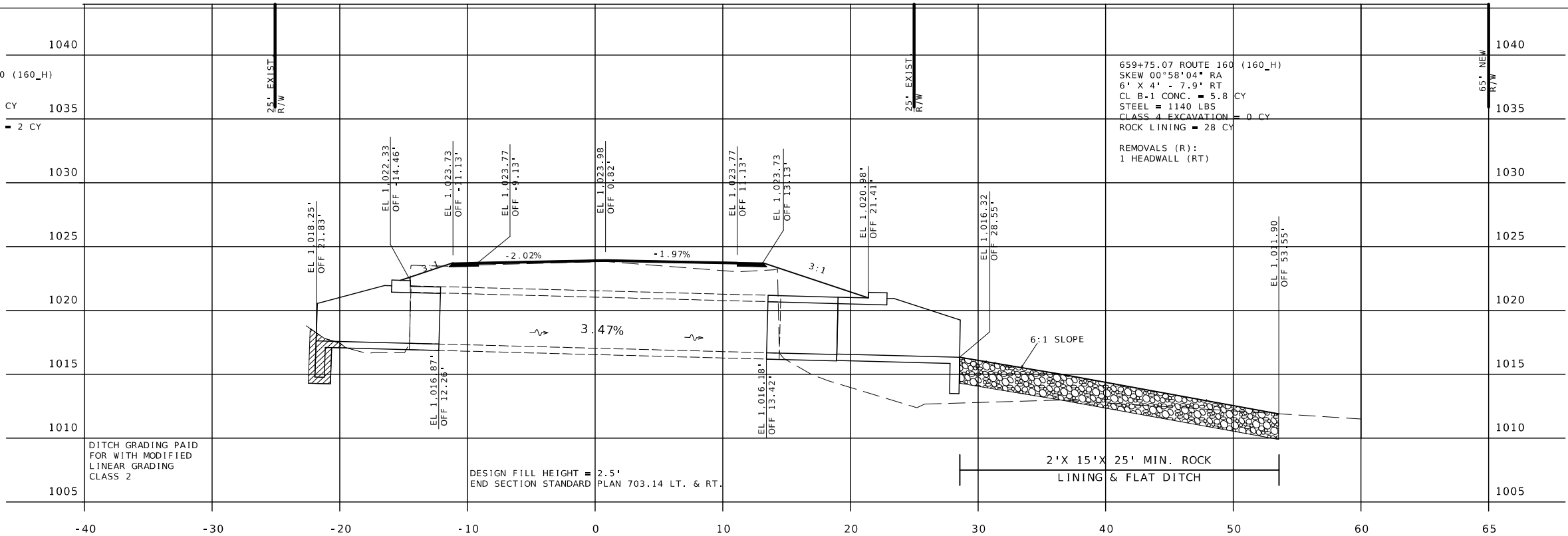
14  
BONNIE L. KRAMER REVOCABLE TRUST  
(SEE SHEET 13)

659+75.07 ROUTE 160 (160\_H)  
SKEW 00°58'04" RA  
6' X 4' - 2.4' LT  
CL B-1 CONC. = 1.9 CY  
STEEL = 360 LBS  
CLASS 4 EXCAVATION = 2 CY

REMOVALS (R):  
1 HEADWALL (LT)

659+75.07 ROUTE 160 (160\_H)  
SKEW 00°58'04" RA  
6' X 4' - 7.9' RT  
CL B-1 CONC. = 5.8 CY  
STEEL = 1140 LBS  
CLASS 4 EXCAVATION = 0 CY  
ROCK LINING = 28 CY

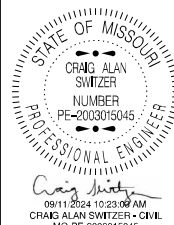
REMOVALS (R):  
1 HEADWALL (RT)



DESIGN FILL HEIGHT = 2.5'  
END SECTION STANDARD PLAN 703.14 LT. & RT.

2' X 15' X 25' MIN. ROCK  
LINING & FLAT DITCH

PLAN SHEET  
SHEET 12 OF 12



DATE PREPARED  
9/11/2024

ROUTE 160 STATE MO

DISTRICT SW SHEET NO. 15

COUNTY BARTON, DADE

JOB NO. JSR0042

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

DATE

DATE

DATE

DATE

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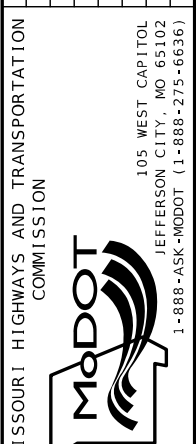
DATE







TRAFFIC CONTROL  
SHEET 3 OF 9



MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

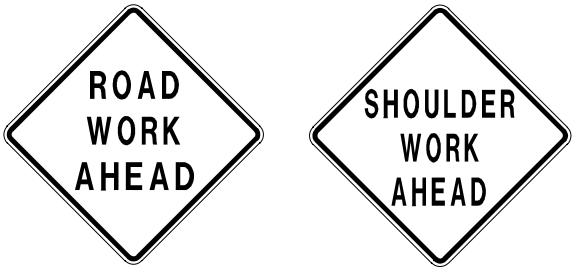
105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)





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

WORK BEYOND THE SHOULDER  
(UNDIVIDED HIGHWAY)

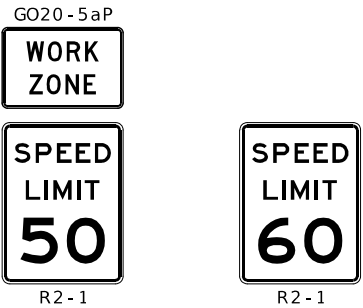


WO20-1 (2)  
WO21-5 (21)



WO5-1  
WO7-3a (3)  
(43) \*

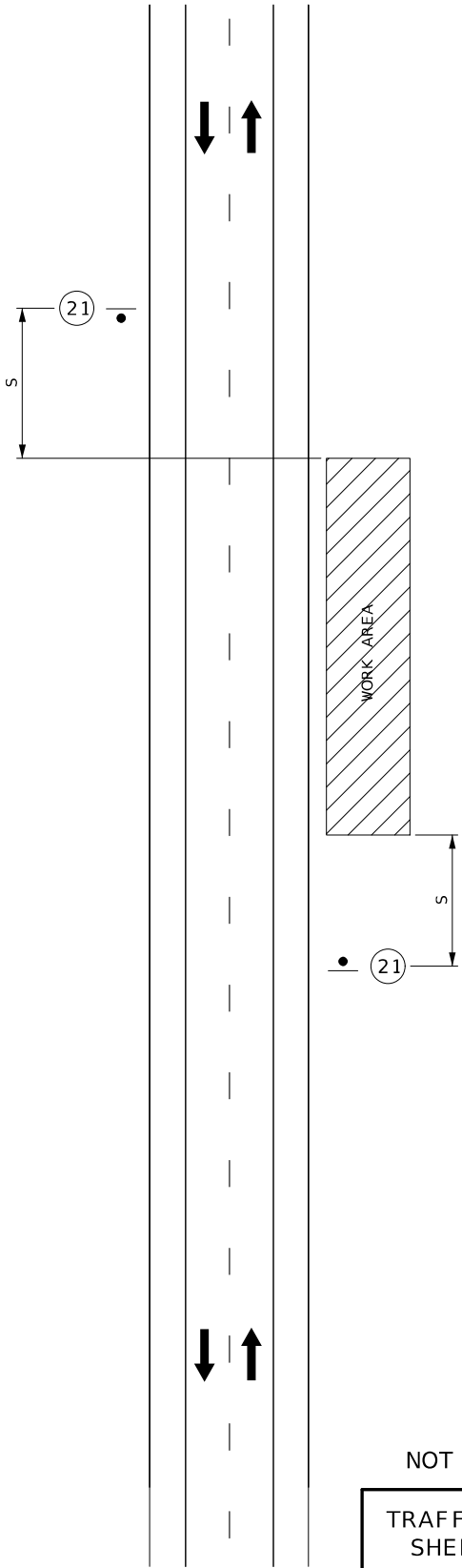
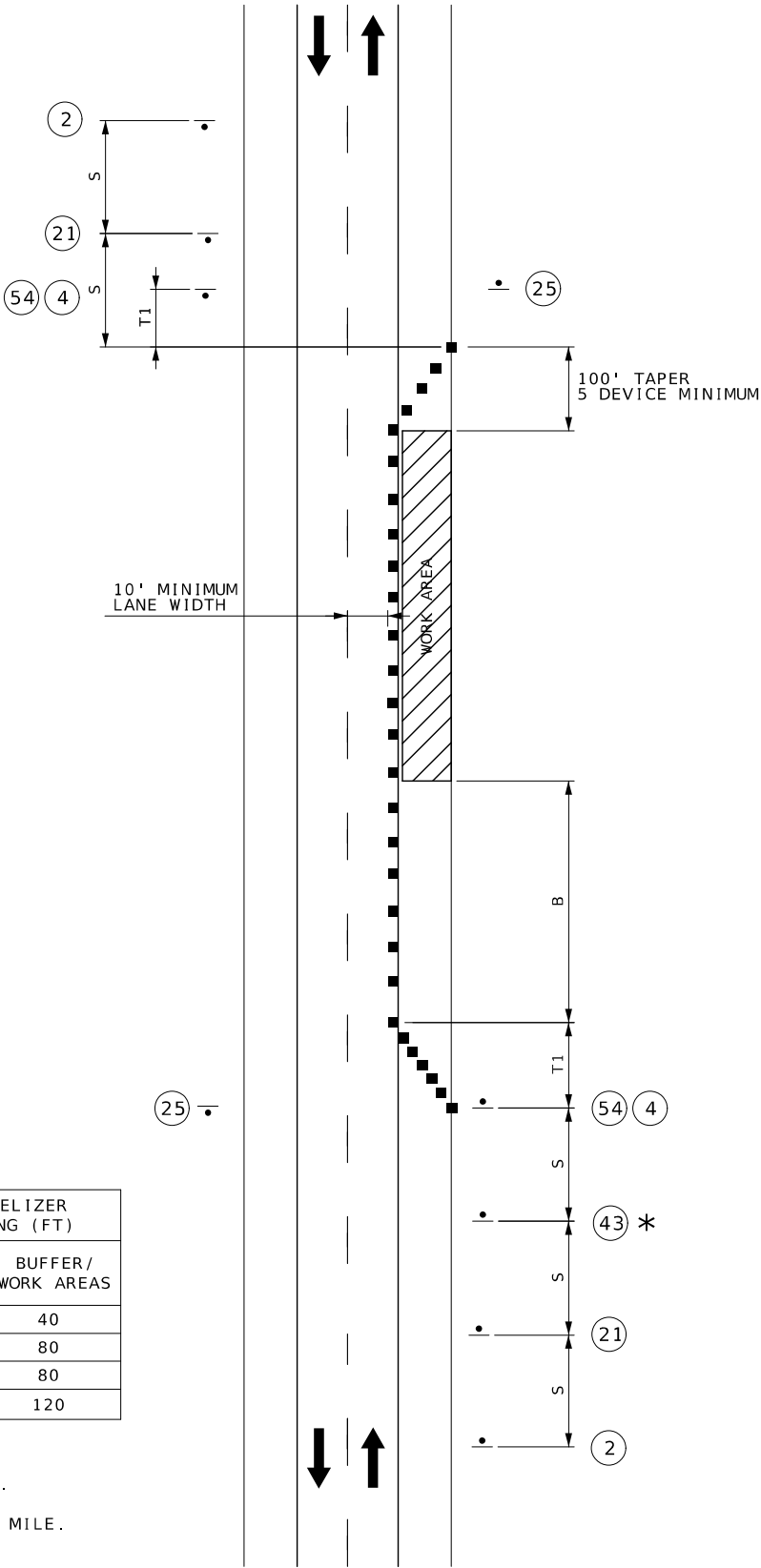
\* OMIT SIGN 43 FOR NO TRAVELWAY ENCROACHMENT.



(54) (4)  
(25) (NORMAL SPEED)

SPEED	SIGN SPACING (FT)	TAPER LENGTH (FT)		OPTIONAL BUFFER LENGTH (FT) (B)	CHANNELIZER SPACING (FT)	
		SHOULDER (1) (T1)	LANE (2) (T2)		TAPERS	BUFFER / WORK AREAS
0-35	200	70	245	250	35	40
40-45	350	150	540	360	40	80
50-55	500	185	660	495	50	80
60-70	1000	235	840	730	60	120

NOTES:  
(1) SHOULDER TAPER LENGTH BASED ON 10 FT. (STANDARD SHOULDER WIDTH) OFFSET.  
(2) LANE TAPER LENGTH BASED ON 12 FT. (STANDARD LANE WIDTH) OFFSET.  
(3) NEXT XX MILES SIGN NOT REQUIRED FOR NARROW LANE SECTIONS LESS THAN ONE MILE.



NOT TO SCALE

TRAFFIC CONTROL  
SHEET 6 OF 9

STATE OF MISSOURI  
CRAIG ALAN SWITZER  
NUMBER  
PE-2003015045  
PROFESSIONAL ENGINEER  
03/08/2024 2:19:18 PM  
CRAIG ALAN SWITZER - CIVIL  
MCEPE-2003015045

DATE PREPARED  
9/4/2024

ROUTE  
160

DISTRICT  
SW

COUNTY  
BARTON, DADE

JOB NO.  
JSR0042

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

## TYPICAL CLOSURE OF EXISTING BRIDGES OR NON-TRAVERSABLE ROADS

SPEED	SIGN SPACING (FT.)		TAPER LENGTH (FT.)		OPTIONAL BUFFER LENGTH (FT.)	CHANNELIZER SPACING (FT.)	
NORMAL POSTED (MPH)	UNDIVIDED (S)	DIVIDED (S)	SHOULDER (T1)	LANE (T2)		TAPERS	BUFFER/ WORK AREAS
0-35	200	200	-	-	250	-	-
40-45	350	500	-	-	360	-	-
50-55	500	1000	-	-	495	-	-
60-70	1000	SA - 1000 SB - 1500 SC - 2640	-	-	730	-	-

TYPE OF ROADWAY	SIGN HEIGHT	MAXIMUM WORK ZONE LENGTH (L)
URBAN	1' PORTABLE 7' POST	1 MI.
RURAL UNDIVIDED	1' PORTABLE 5' POST	3 MI.

REFER TO EPG 606.1.3.5 CLOSURES OF EXISTING STREETS,  
ROADS, AND BRIDGES OR NON-TRAVERSABLE ROADS FOR BRIDGE  
AND/OR ROAD CLOSURES DESIGNATED NON-TRAVERSABLE

(1) THE ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY SIGN SHOULD BE LOCATED AT THE FIRST STATE ROUTE OR, UPON THE DISCRETION OF THE SUPERVISOR, ANY OTHER INTERSECTION IN ADVANCE OF THE CLOSURE.

(2) ADDITIONAL BARRICADES MAY BE USED AND OFFSET TO FACILITATE ACCESS FOR LOCAL TRAFFIC, ETC.

(3) THE USE OF TYPE D GUARDRAIL AND TYPE 4 OBJECT MARKERS VERSUS TYPE III BARRICADES AND TEMPORARY CONCRETE TRAFFIC BARRIERS ARE DEPENDENT UPON THE DISTRICT/CENTRAL OFFICE REPLACEMENT SCHEDULE.

TRAFFIC CONTROL SHOULD BE REMOVED AS SOON AS PRACTICAL AFTER  
CONDITION FOR THE CLOSURE NO LONGER EXISTS.

FOR ADVANCE WARNING RAIL SYSTEM, REFER TO EPG 616.6.2.2  
FLAGS AND ADVANCE WARNING RAIL SYSTEM (AWRS).

REFER TO STANDARD PLANS FOR HIGHWAY CONSTRUCTION 606.00  
GUARDRAIL TYPE D FOR GUARDRAIL AND POST-MOUNTED TYPE III BARRICADES.

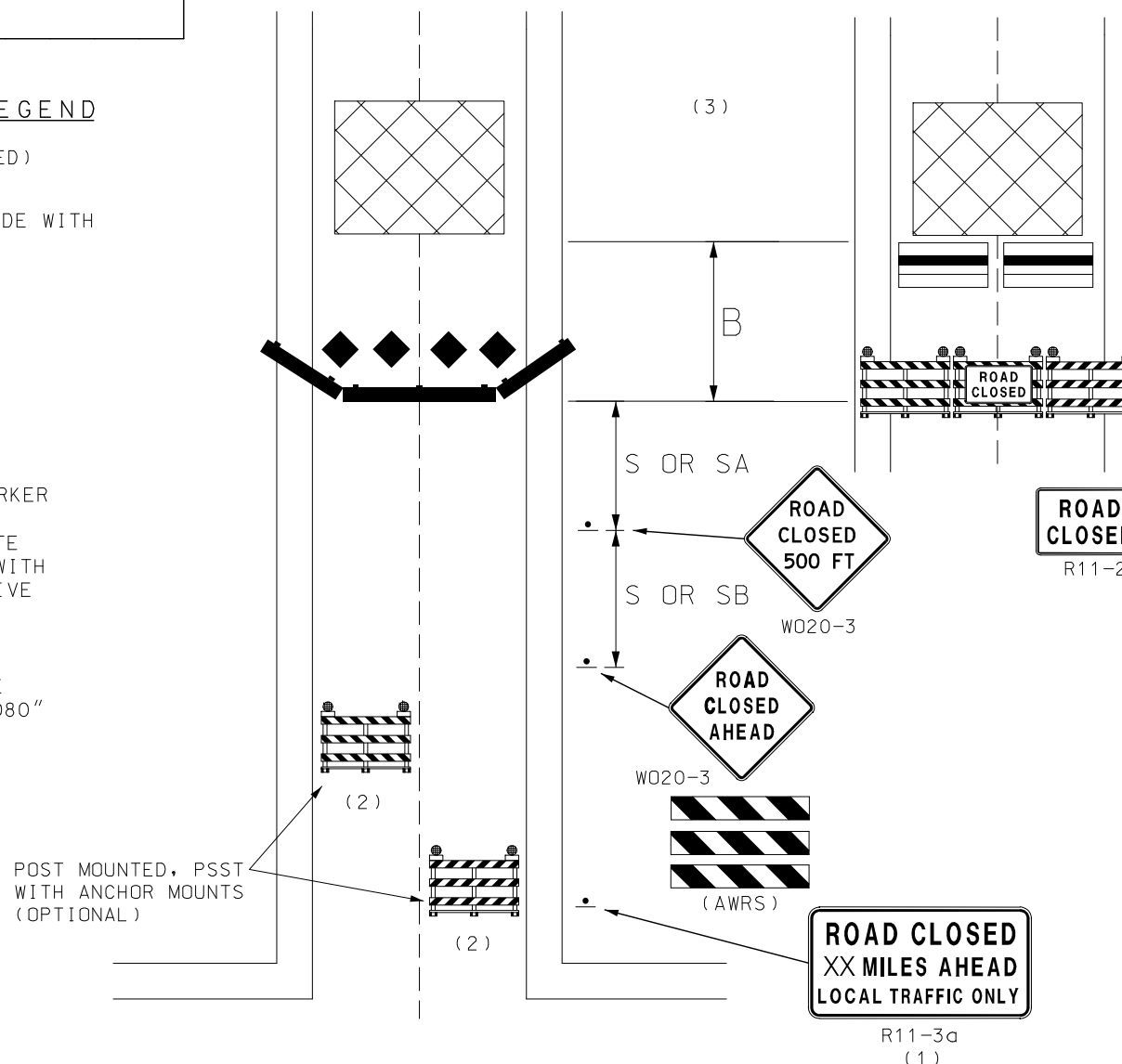
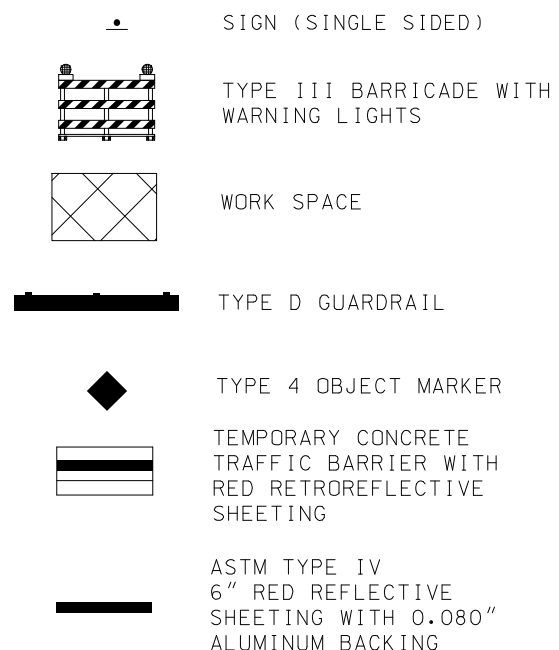
REFER TO STANDARD PLANS FOR HIGHWAY CONSTRUCTION 616.10  
TEMPORARY TRAFFIC CONTROL DEVICES FOR TYPE III BARRICADES.

REFER TO STANDARD PLANS FOR HIGHWAY CONSTRUCTION 903.03  
SIGN MOUNTING DETAILS DELINEATORS OBJECT MARKERS FOR TYPE 4  
OBJECT MARKER.

REFER TO STANDARD PLANS FOR HIGHWAY CONSTRUCTION 617.20  
TEMPORARY CONCRETE TRAFFIC BARRIER FOR CONCRETE BARRIERS.

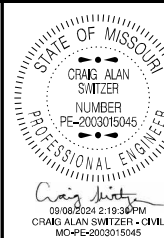
REFER TO STANDARD PLANS FOR HIGHWAY CONSTRUCTION 1042  
HIGHWAY SIGN MATERIAL FOR 6-INCH WIDE, 10-12-FOOT LONG  
RED RETROREFLECTIVE SHEETING.

### TRAFFIC CONTROL LEGEND



NOT TO SCALE

TRAFFIC CONTROL  
SHEET 7 OF 9



DATE PREPARED  
9/4/2024

ROUTE 160	STATE MO
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DISTRICT	SHEET NO.
SW	22

COUNTY  
BARTON, DAD

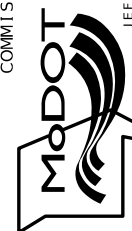
JOB NO.  
JSR0042

9 SR00-12
CONTRACT ID.

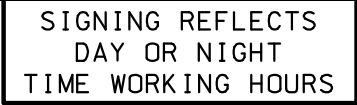
PROJECT NO.
-------------

BRIDGE NO.

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

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



Speed Limit <sup>1</sup> , mph	Taper Length <sup>2</sup> , ft.		Channelizing Spacing <sup>3</sup> , ft.	
	Shoulder <sup>4</sup> (T1)	Lane <sup>5</sup> (T2)	Tapers	Buffer/Work Areas
up to 35	70	245	35 <sup>6</sup>	40 <sup>6</sup>
40 to 45	150	540	40 <sup>6</sup>	80 <sup>6</sup>
50 to 55	185	660	50 <sup>7</sup>	80 <sup>7</sup>
60 to 70	235	840	60 <sup>7</sup>	120 <sup>7</sup>

<sup>1</sup> Speed limit is based on posted speed limit.

<sup>2</sup> Taper lengths may be adjusted to accommodate crossroads, curves, intersections, ramps or other geometric features.

<sup>3</sup> Channelizer spacing may be reduced to discourage traffic encroachment.

<sup>4</sup> Based on 10 ft. shoulder width.

<sup>5</sup> Based on 12 ft. lane width.

<sup>6</sup> Spacing reduced to 1/2 at intersections.

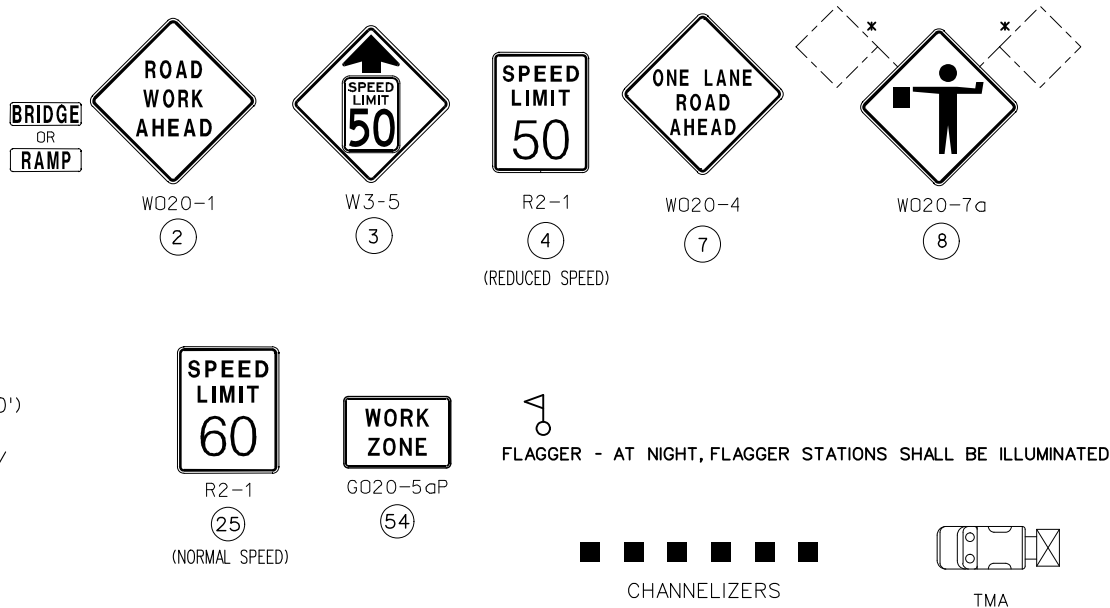
<sup>7</sup> Spacing may be reduced to 1/2 at intersections.

Speed Limit <sup>1</sup> , mph	Sign Spacing <sup>2</sup> , ft.	
	Undivided Highway	Divided Highway
up to 35	200 <sup>3</sup>	200 <sup>3</sup>
40 to 45	350	500
50 to 55	500	1000
60 to 70	1000	SA-1000 SB-1500 SC-2640

<sup>1</sup> Speed limit is based on posted speed limit.

<sup>2</sup> Sign spacing may be adjusted, normally by increasing it, to accommodate field conditions and visibility.

<sup>3</sup> For urban low speed, minimum recommended spacing in MUTCD is 100 ft.



\* SIGN W020-7A (FLAGGER SYMBOL) FLAGS ARE INCIDENTAL TO THE SIGN. NO DIRECT PAY.

NOTES:

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

▲ IN TAPER SECTIONS: QUANTITY OF TRIMLINE CHANNELIZERS IS DOUBLED WHEN COMPARED TO MAX. CHANNELIZER SPACING IN THE CHART.

TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM LANE CLOSURES (NO DIRECT PAY)

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

NO DIRECT PAYMENT WILL BE MADE FOR TEMPORARY STOP OR YIELD SIGNS AS NEEDED TO MAINTAIN EXISTING STOP/YIELD  
CONDITONS AS APPROVED BY THE ENGINEER.

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

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.

ALL SIGNS, EXCEPT "RATE OUR WORK ZONE", 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.

WORK WILL REQUIRE LANE CLOSURES UNLESS OTHERWISE APPROVED BY ENGINEER.

LAYOUT IS TYPICAL FOR EITHER DIRECTION. ALTERNATE TRAFFIC CONTROL MAY BE USED AS NEEDED AT THE APPROVAL OF THE ENGINEER. SEE STANDARD DRAWING 616.10 FOR ADDITIONAL DETAILS.

THE MAX. CHANNELIZER SPACING WITHIN THE WORK ZONE AREA MAY BE REDUCED BASED ON CONSTRUCTION CONDITIONS,  
AS APPROVED BY ENGINEER.

WORK ZONE TRAFFIC SIGNAL SYSTEM OR AUTOMATED FLAGGER MAY BE SUBSTITUTED AS APPROVED BY THE ENGINEER. NO DIRECT PAY.

TRAFFIC CONTROL  
SHEET 8 OF 9

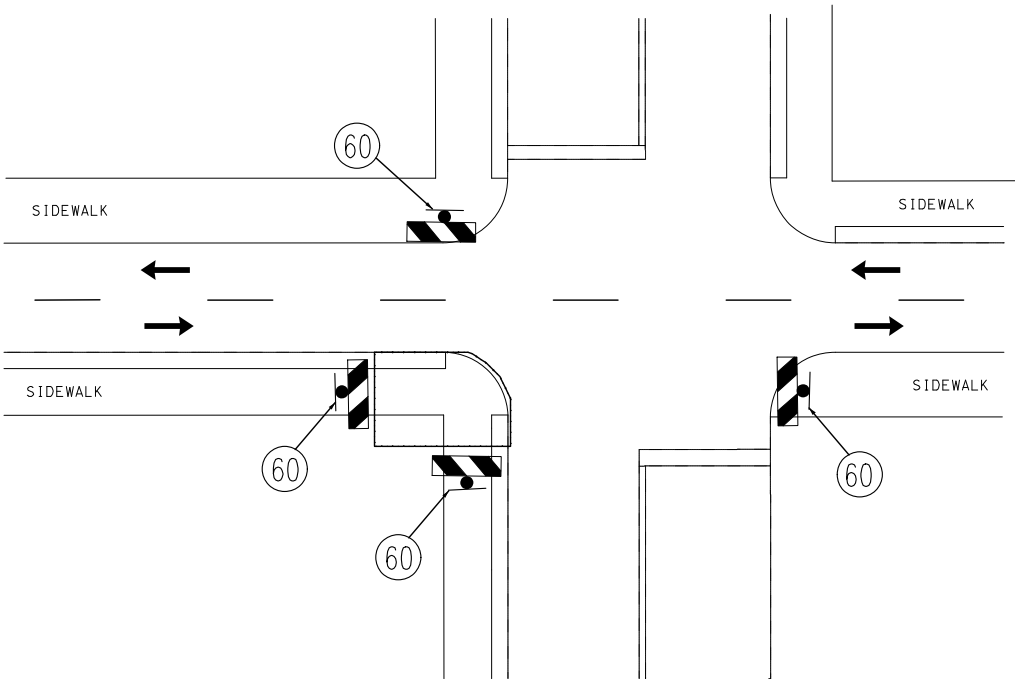
[illegible]

NOTES:

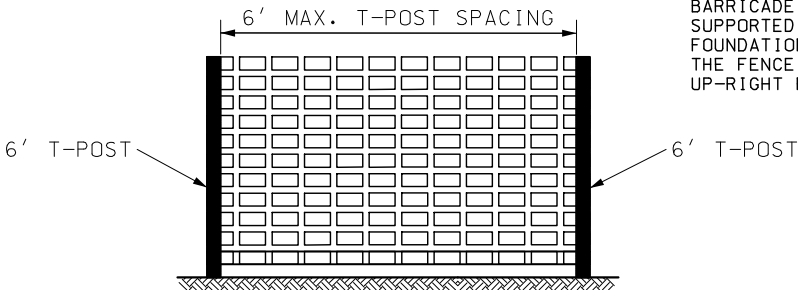
1. NO DIRECT PAYMENT WILL BE MADE FOR ORANGE SAFETY FENCE AS REQUIRED AROUND EXCAVATION OF SIDEWALK & CURB RAMP AREAS.
2. SEE JSP's FOR PEDESTRIAN TRAFFIC DEVICES.
3. WORKING AREAS SHALL BE GUARDED FROM PEDESTRIAN ACCESS BY BARRICADE FENCING 36" TO 48" IN HEIGHT WITH A GAP NO GREATER THAN 6" FROM THE GROUND AND HOLES NO GREATER THAN 4" IN ANY DIRECTION.
4. PEDESTRIAN ACCESS ON SIDEWALK SHALL BE PROVIDED WITH A WIDTH NOT LESS THAN 4' OF SMOOTH STABLE SURFACING ADJACENT TO BARRICADE FENCING FOR ACCESS TO THE MAIN BUILDING.
5. SIDEWALK RAMP CLOSURES FOR RECONSTRUCTION SHALL BE PERFORMED WITH ADA COMPLIANT MOVEABLE BARRICADES. TWO BARRICADES PER PEDESTRIAN APPROACH. ONE SIDEWALK CLOSED SIGN WILL BE PLACED UPON ONE BARRICADE FOR EACH APPROACH, NO MORE THAN ONE 5' SECTION OF SIDEWALK RAMP SHALL BE CLOSED LEADING TO THE MAIN BUILDING AT ANY TIME ADJACENT TO THE WORK AREA.

DUAL-LANE  
TYPICAL SIDEWALK CLOSURE

NOT TO SCALE

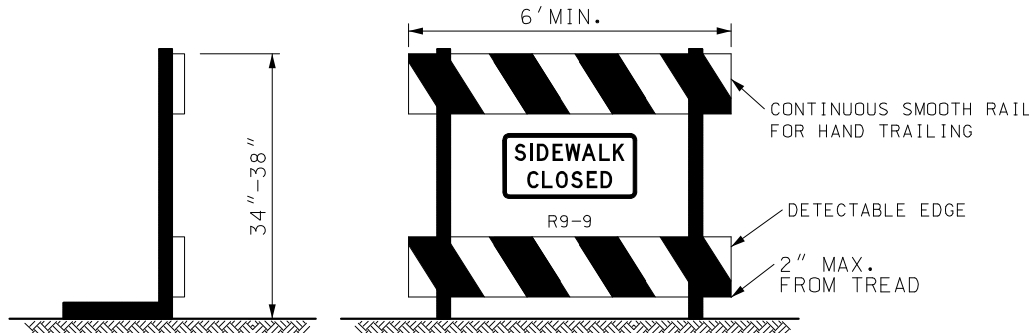


ORANGE PLASTIC SAFETY FENCE

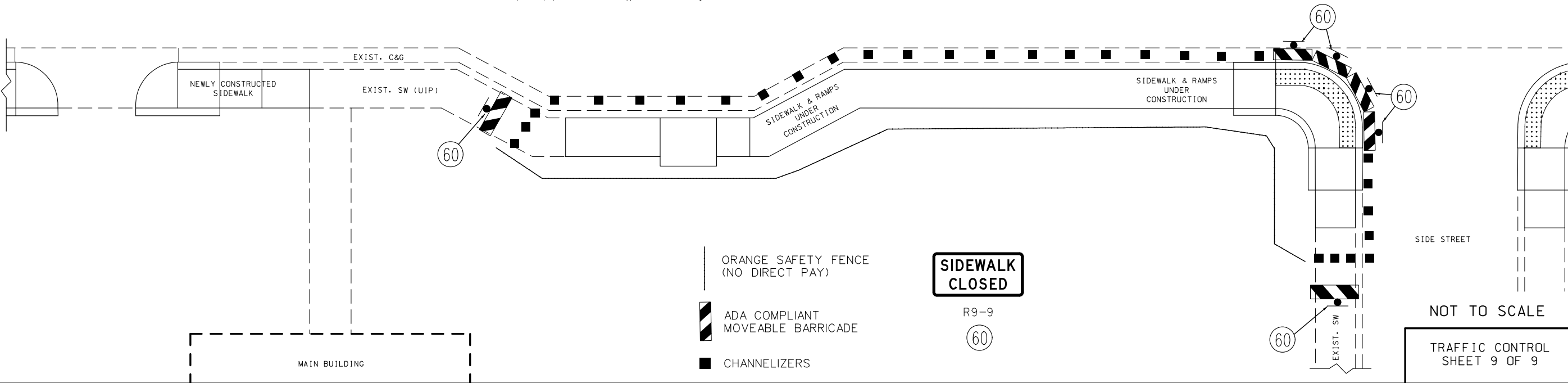


NO DIRECT PAY.  
PLASTIC SAFETY NETTING USED FOR  
BARRICADE FENCING SHALL BE  
SUPPORTED WITH T-POST, ADEQUATE  
FOUNDATIONS, AND BALLAST SO THAT  
THE FENCE REMAINS TAUT AND IN AN  
UP-RIGHT POSITION.

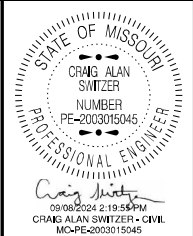
ADA COMPLIANT MOVEABLE BARRICADE



1. WARNING LIGHTS SHALL NOT BE ATTACHED TO ADA COMPLIANT BARRICADES.
2. CHEVRON RAILS ON THE ADA COMPLIANT BARRICADES MUST BE 8" WIDE MIN. AND MEET TYPE 3 RETRO-REFLECTIVE SHEETING AND COLOR CONTRAST BARRICADE RAILS AS SHOWN. THE TOP RAIL MUST PROVIDE A SMOOTH CONTINUOUS RAIL SURFACE SUITABLE FOR HAND TRAILING WITH NO SPLINTERS, BURRS, OR SHARP EDGES. A MINIMUM OF TWO 8" WIDE RAILS IS REQUIRED.
3. NO TRIPPING HAZARDS FROM THE BARRICADES ARE ALLOWED WITHIN THE PEDESTRIAN SPACE. THIS MEANS NO FEET OR BARS USED TO HOLD THE RAILS OR SUPPORT THE DEVICE ARE ALLOWED WITHIN THE WALKWAY. ALL FEET AND BALLASTS WILL NEED TO BE BEHIND THE DEVICE.
4. THE BARRICADE MUST BE THE FULL WIDTH OF THE CLOSED SIDEWALK.



REVISED: 11-19-2018



DATE PREPARED		8/12/2024
ROUTE	STATE	160 MO
DISTRICT	SHEET NO.	SW 24
COUNTY		BARTON, DADE
JOB NO.		JSR0042
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)

MoDOT

NOT TO SCALE

TRAFFIC CONTROL  
SHEET 9 OF 9

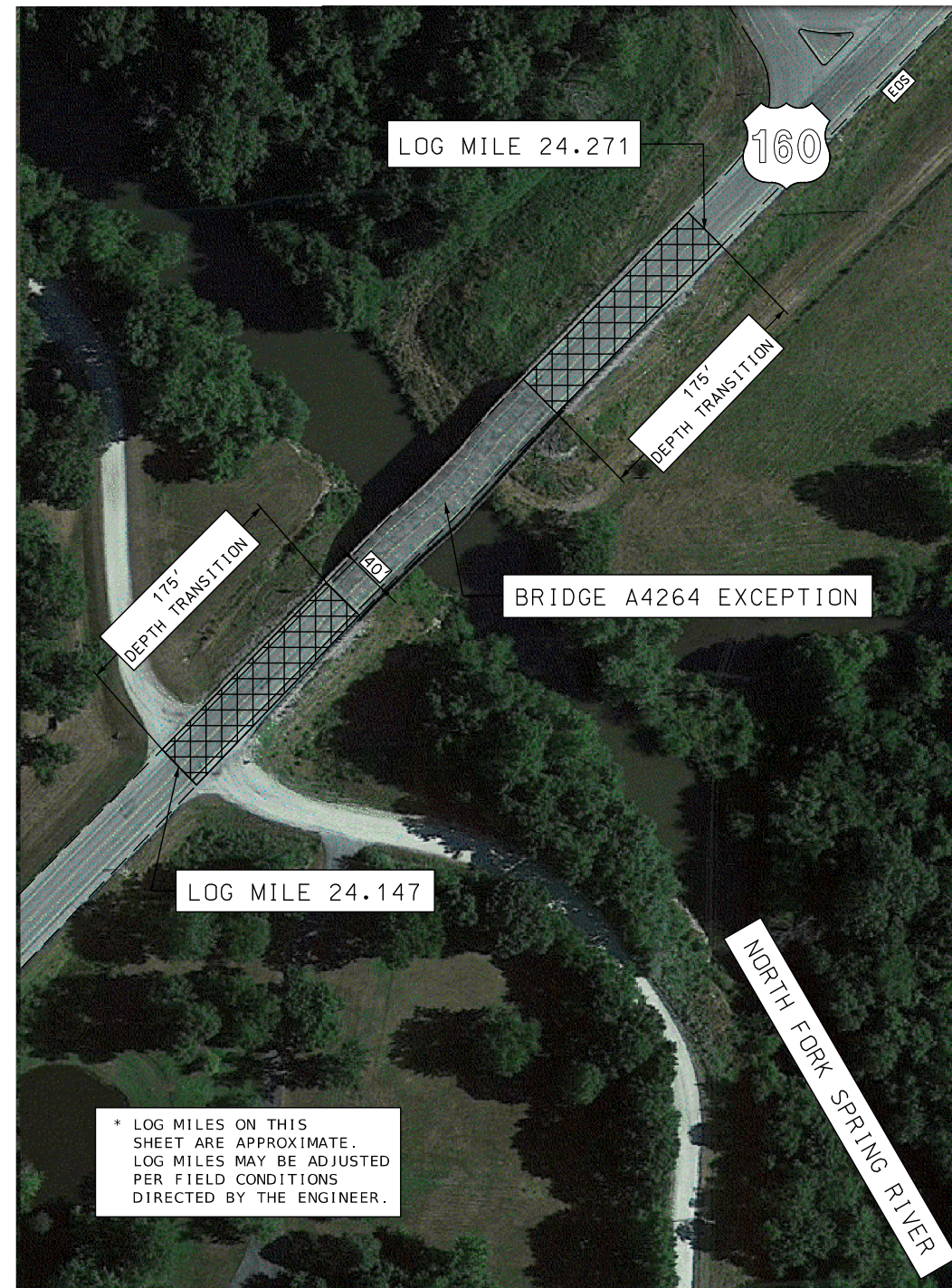






# PROJECT DEPTH TRANSITIONS

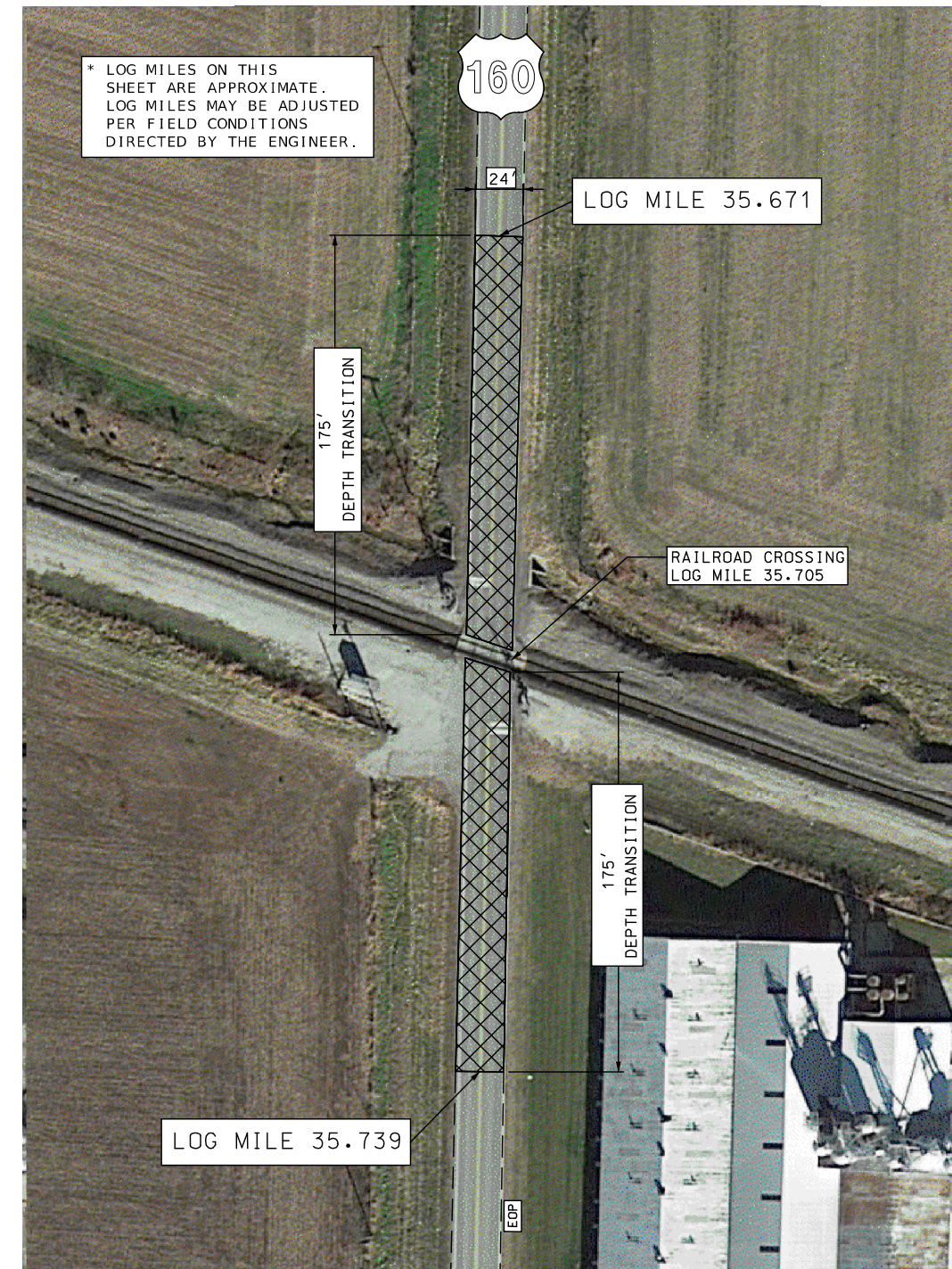
## BRIDGE A4264



NOT TO SCALE



## RAILROAD DEPTH TRANSITION



NOT TO SCALE



SPECIAL SHEET  
SHEET 2 OF 6

[illegible]

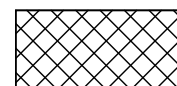


# PROJECT DEPTH TRANSITIONS

## BRIDGE TRANSITIONS



NOT TO SCALE

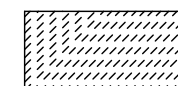


1<sup>3</sup>/<sub>4</sub>" DEPTH  
TRANSITION

## BRIDGE AND RAILROAD TRANSITIONS



NOT TO SCALE



FULL DEPTH  
COLDMILL



1<sup>3</sup>/<sub>4</sub>" DEPTH  
TRANSITION

SPECIAL SHEET  
SHEET 3 OF 6

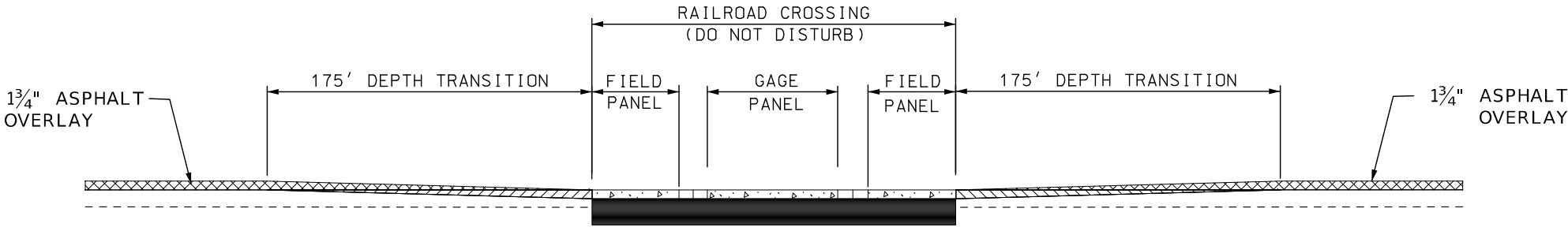
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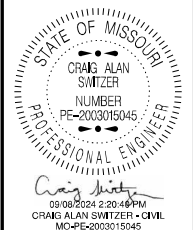
# PROJECT DEPTH TRANSITIONS



08/08/2024 2:20:49 PM  
CRAIG ALAN SWITZER - CIVIL  
MO-PE-2003015045



ROUTE 160  
LOG MILES 35.705 AND 38.559  
TYPICAL RAILROAD CROSSING  
NOT TO SCALE



DATE PREPARED  
8/12/2024

ROUTE STATE  
160 MO

DISTRICT SHEET NO.  
SW 28

COUNTY  
BARTON, DADE

JOB NO.  
JSR0042

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

DESCRIPTION

DATE

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NOT TO SCALE

SPECIAL SHEET  
SHEET 4 OF 6

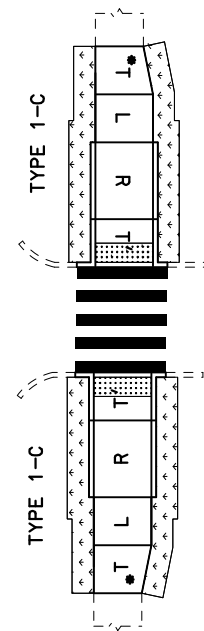




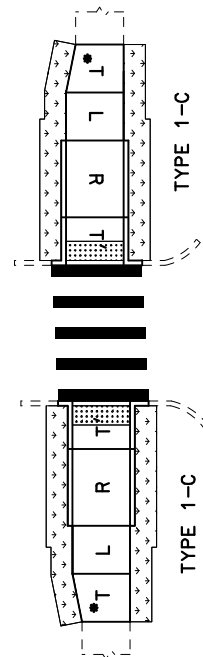
# ADA AT GOLDEN CITY ON US 160



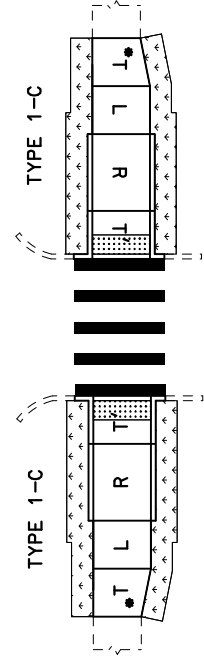
ENLARGED VIEW FROM  
CHURCH AVE



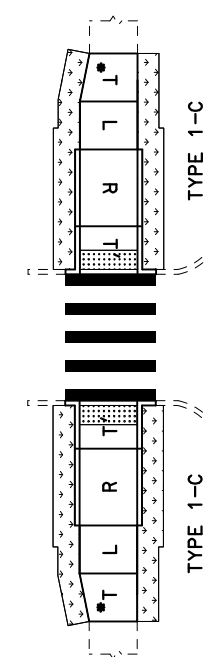
ENLARGED VIEW FROM  
MILL ST



ENLARGED VIEW FROM  
DEPOT AVE



ENLARGED VIEW FROM  
WYATT AVE



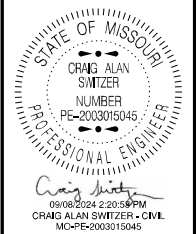
NOTES: CONTRACTOR SHALL COMPLETE ALL ADA  
WORK AT ONE INTERSECTION BEFORE MOVING  
TO ANOTHER INTERSECTION.

INSTALL MIDBLOCK CROSSINGS IN ACCORDANCE  
WITH STANDARD PLAN 620.00N.

FOR MORE DETAILS SEE TYPICAL SHEETS  
FOR PIPE DETAILS SEE SHEET 30

NOT TO SCALE

SPECIAL SHEET  
SHEET 5 OF 6



DATE PREPARED 9/4/2024	
ROUTE 160	STATE MO
DISTRICT SW	SHEET NO. 29
COUNTY BARTON, DADE	
JOB NO. JSR0042	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

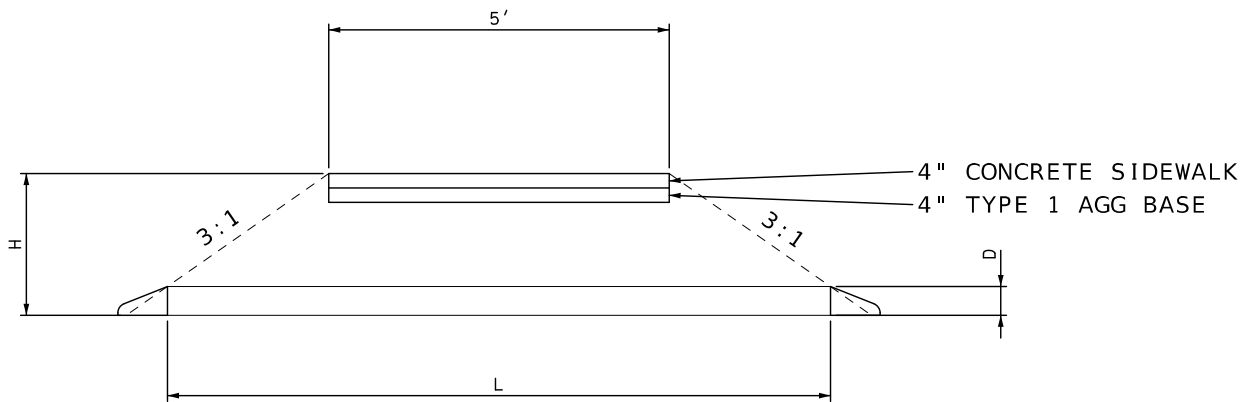
105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)



09/08/2024 2:21:04 PM  
CRAG ALAN SWITZER - CIVIL  
MO-PE-2003015045

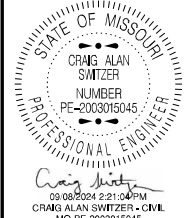


09/08/2024 2:21:04 PM  
CRAG ALAN SWITZER - CIVIL  
MO-PE-2003015045



SIDEWALK AND PIPE DETAILS

LOCATION	H (FT)	D (IN)	L (FT)	REMARKS
CHURCH AVE NE	4.2	24	19	2-24" GROUP C FES
CHURCH AVE SE	2.75	18	13	2-18" GROUP C FES
MILL ST NW	-	-	-	CROWN, NO PIPE
MILL ST SW	-	-	-	CROWN, NO PIPE
MILL ST NE	3.8	18	19	2-18" GROUP C FES
MILL ST SE	3.0	15	16	2-15" GROUP C FES
DEPOT AVE NW	1.9	15	9	2-15" GROUP C FES
DEPOT AVE SW	2.7	15	14	2-15" GROUP C FES
WYATT AVE NW	-	-	-	CROWN, NO PIPE
WYATT AVE SW	-	-	-	CROWN, NO PIPE



DATE PREPARED  
9/4/2024

ROUTE 160	STATE MO
DISTRICT SW	SHEET NO. 30

COUNTY  
BARTON, DADE

JOB NO.  
JSR0042

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

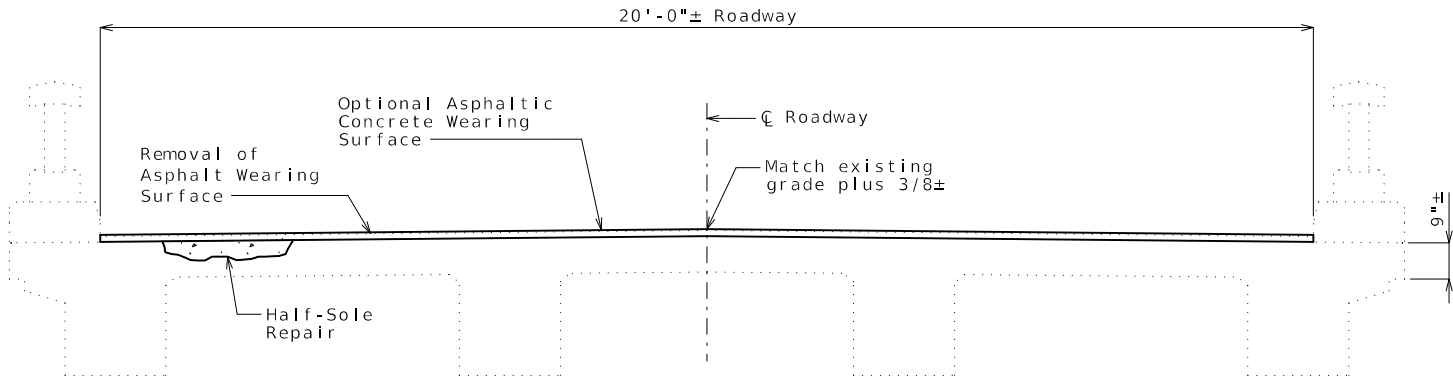


105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

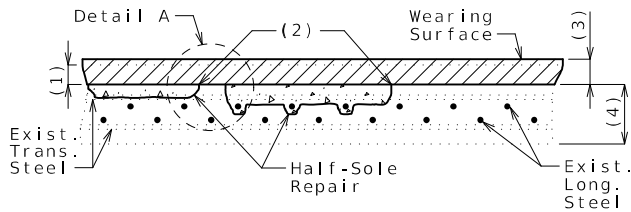
NOT TO SCALE

SPECIAL SHEET  
SHEET 6 OF 6

U.I.P. AND REHABILITATE EXISTING (50',52.5',52.5',52.5',50')  
SIMPLE REINFORCED CONCRETE DECK GIRDER SPANS



TYPICAL SECTION THRU EXISTING DECK



HALF-SOLE REPAIR

- (1) Removal of existing 1.4"± asphalt wearing surface.
- (2) 1" vertical side shall be established outside the deteriorated area.
- (3) 1 3/4" minimum asphaltic concrete wearing surface
- (4) Original depth of deck.

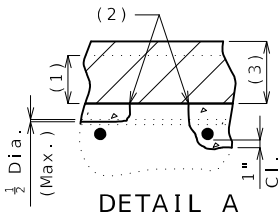
Optional Asphaltic Concrete Wearing Surface	
Type of Wearing Surface with Asphalt Binder Type	Mix Used (✓)
SP125BSM Mix with PG 76-22	
SP125BLP Mix with PG 76-22	
SP125BSM Mix with PG 70-22	
SP125CLP Mix with PG 70-22	

MoDOT construction personnel shall complete column labeled "Mix Used (✓)".

The contractor shall select one of the optional asphaltic concrete wearing surfaces listed in the table. The mixture shall be in accordance with Sec 403 and produced in accordance with Sec 404.

The area of the asphaltic concrete wearing surface will be measured and computed to the nearest square yard. This area will be measured transversely from out to out of wearing surface and longitudinally from end of slab to end of slab.

Payment for Optional Asphaltic Concrete Wearing Surface will be considered completely covered by the contract unit price per square yard.



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

Estimated Quantities		
Item		Total
Removal of Asphalt Wearing Surface	sq. foot	5250
Optional Asphaltic Concrete Wearing Surface (Bridges)	sq. yard	583
Half-Sole Repair	sq. foot	50

General Notes:

Design Specifications:

2002 AASHTO LFD (17th Ed.) Standard Specifications  
Bridge Deck Rating = 5

Design Loading:

H15 (1928), HS20-44 (New Construction)

Design Unit Stresses:

Class B-2 Concrete (Half-Sole Repair) f'c = 4,000 psi

Miscellaneous:

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

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

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

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

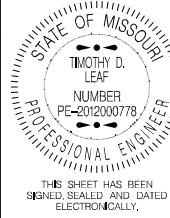
In order to maintain grade and a minimum thickness of wearing surface as shown on plans it may be necessary to use additional quantities of wearing surface at various locations throughout the structure. The cost of furnishing and installing the wearing surface will be considered completely covered in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

Traffic Handling:

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

REPAIRS TO BRIDGE: ROUTE 160  
OVER NORTH FORK OF SPRING RIVER

ROUTE 160 FROM ROUTE VV TO ROUTE U  
ABOUT 0.1 MILE SOUTH OF ROUTE VV  
BEGINNING STATION 748+50.00± (Match Existing)



DATE PREPARED  
6/28/2023

ROUTE 160 STATE MO  
DISTRICT BR SHEET NO. 1

COUNTY BARTON  
JOB NO. JSR0042  
CONTRACT ID.

PROJECT NO.

BRIDGE NO.  
H09011

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

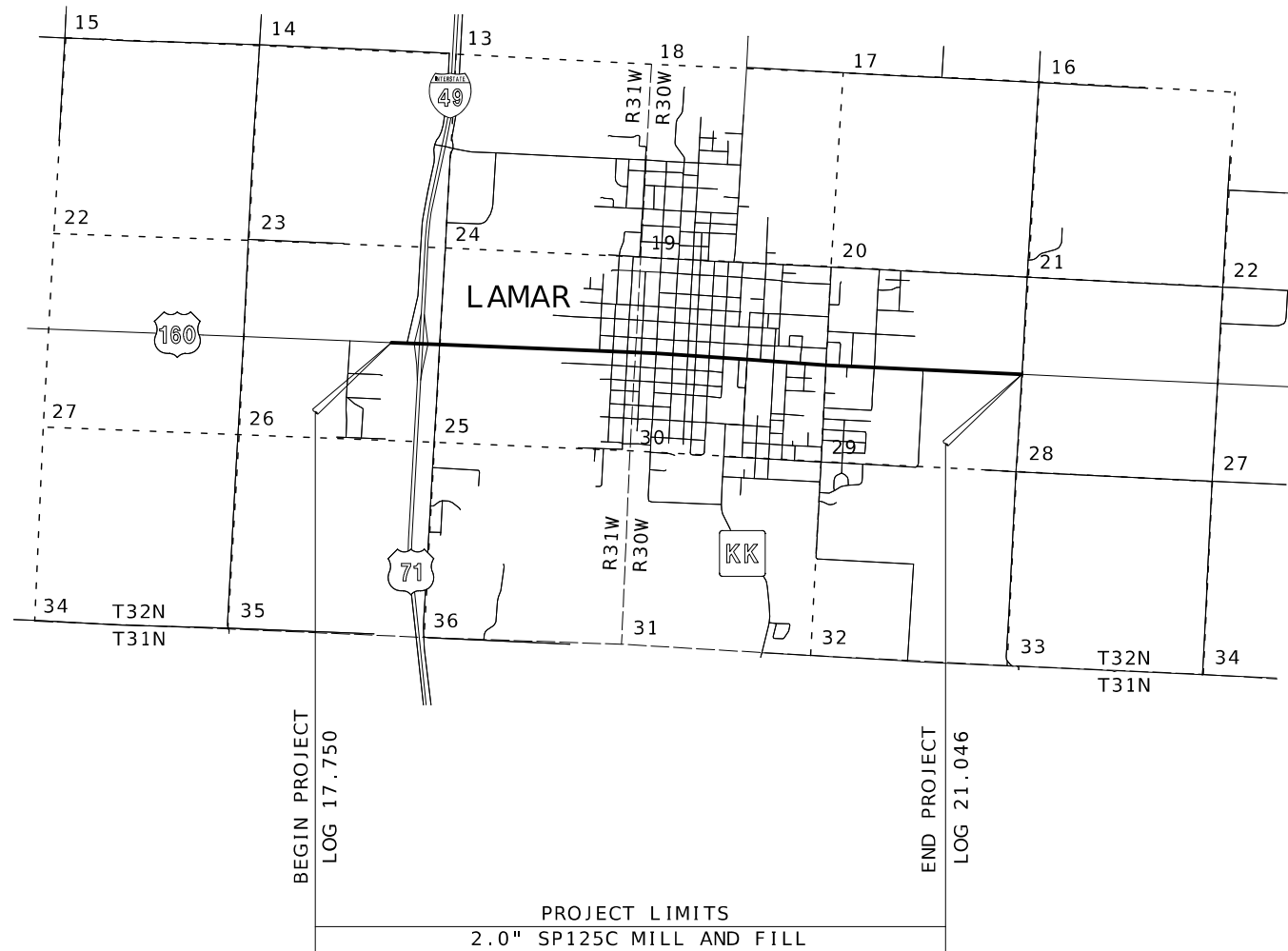
A.A.D.T. - 2023 = 7103  
A.A.D.T. - 2033 = 7139  
D.H.V. = 8.76%  
T = 8.44%  
V = 40-60 M.P.H.  
D = 50.8%

NO NEW R/W REQUIRED

	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		
FIRE HYDRANT		
WATER VALVE		
WATER METER		
DROP INLET		
DITCH BLOCK		
GROUND MOUNTED SIGN		
LIGHT POLE		
H-FRAME POWER POLE		
TELEPHONE PEDESTAL		
FENCE		
CHAIN LINK	— V —	— V —
WOVEN WIRE	— X —	— X —
GATE POST		
BENCHMARK		


NOTE: DASHED OR OPEN SYMBOLS INDICATE  
EXISTING FEATURES

**KEY MAP**  
LOCATION OF BARTON COUNTY



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

DESCRIPTION	SHEET NUMBER
TITLE SHEET -----	1
TYPICAL SECTIONS (TS) (3 SHEETS)---	2
QUANTITIES (QU) (3 SHEETS)-----	3
SPECIAL SHEETS (SS) -----	4-5
TRAFFIC CONTROL SHEETS (TC)-----	6-14

	
DATE PREPARED <b>8/26/2024</b>	
ROUTE <b>160</b>	STATE <b>MO</b>
DISTRICT <b>SW</b>	SHEET NO. <b>1</b>
COUNTY <b>BARTON</b>	
JOB NO. <b>JSR0163</b>	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	
DESCRIPTION	
DATE	

BEGINNING OF PROJECT	EB LOG MILE 17.750
END OF PROJECT	EB LOG MILE 21.046

APPARENT LENGTH	17,402.88 FEET
-----------------	----------------

EQUATIONS AND EXCEPTIONS:

BRIDGE A4108	
LM 18.280-18.335	290.40 FEET

TOTAL CORRECTIONS	290.40	FEET
NET LENGTH OF PROJECT	17,112.48	FEET
STATE LENGTH	3.241	MILES

FOR INFORMATION ONLY	
ESTIMATED DISTURBED ACRES	0 ACRES

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

**MoDOT**

105 WEST CAPITAL  
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: 3/6/2023

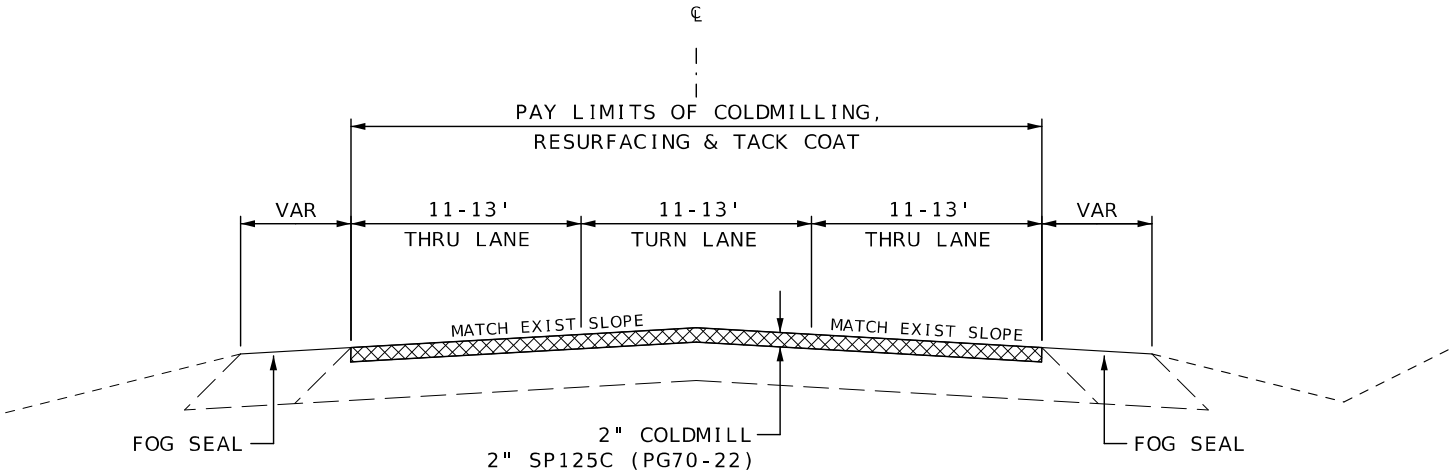
ASPHALT FACTORS

	COMBINED FACTOR	% AC
SP125C (PG70-22)	1.970 TONS/CY	5.4
FOG SEAL	0.20 GAL/SY	

TACK COAT

MILLING	0.10 GAL/SY
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IRREGULARITIES: 75 TONS/MI



ROUTE 160

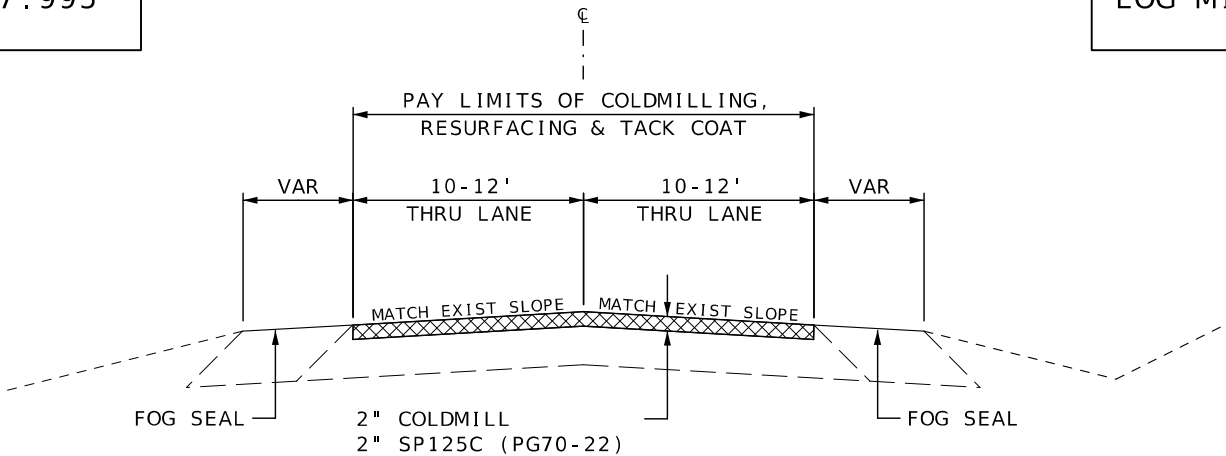
LOG MILE 17.750 TO LOG MILE 17.914  
LOG MILE 17.995 TO LOG MILE 18.255  
LOG MILE 18.550 TO LOG MILE 19.518  
LOG MILE 19.570 TO LOG MILE 20.300

CONCRETE EXCEPTION:

LOG MILE 17.914 TO LOG MILE 17.995

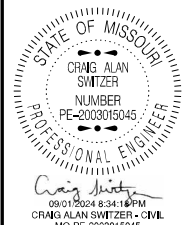
BRIDGE EXCEPTION:

LOG MILE 18.280 TO LOG MILE 18.335



ROUTE 160

LOG MILE 18.255 TO LOG MILE 18.280  
LOG MILE 18.335 TO LOG MILE 18.550  
LOG MILE 19.518 TO LOG MILE 19.570  
LOG MILE 20.300 TO LOG MILE 21.046

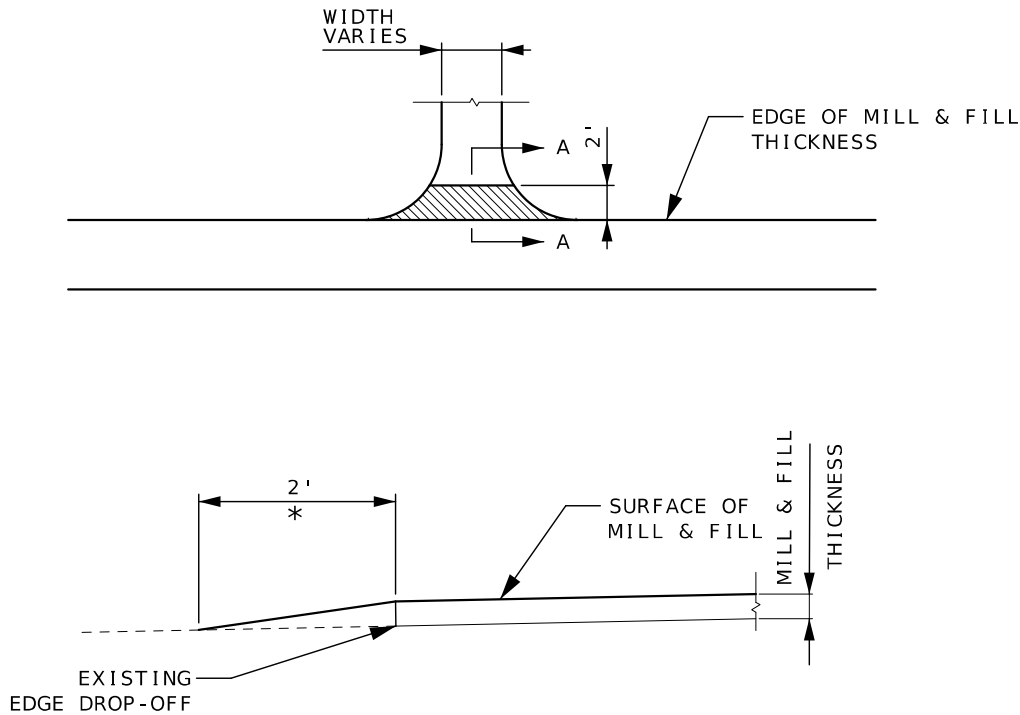


DATE PREPARED 8/12/2024	
ROUTE 160	STATE MO
DISTRICT SW	SHEET NO. 2
COUNTY BARTON	
JOB NO. JSR0163	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

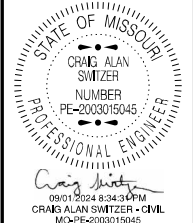
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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.



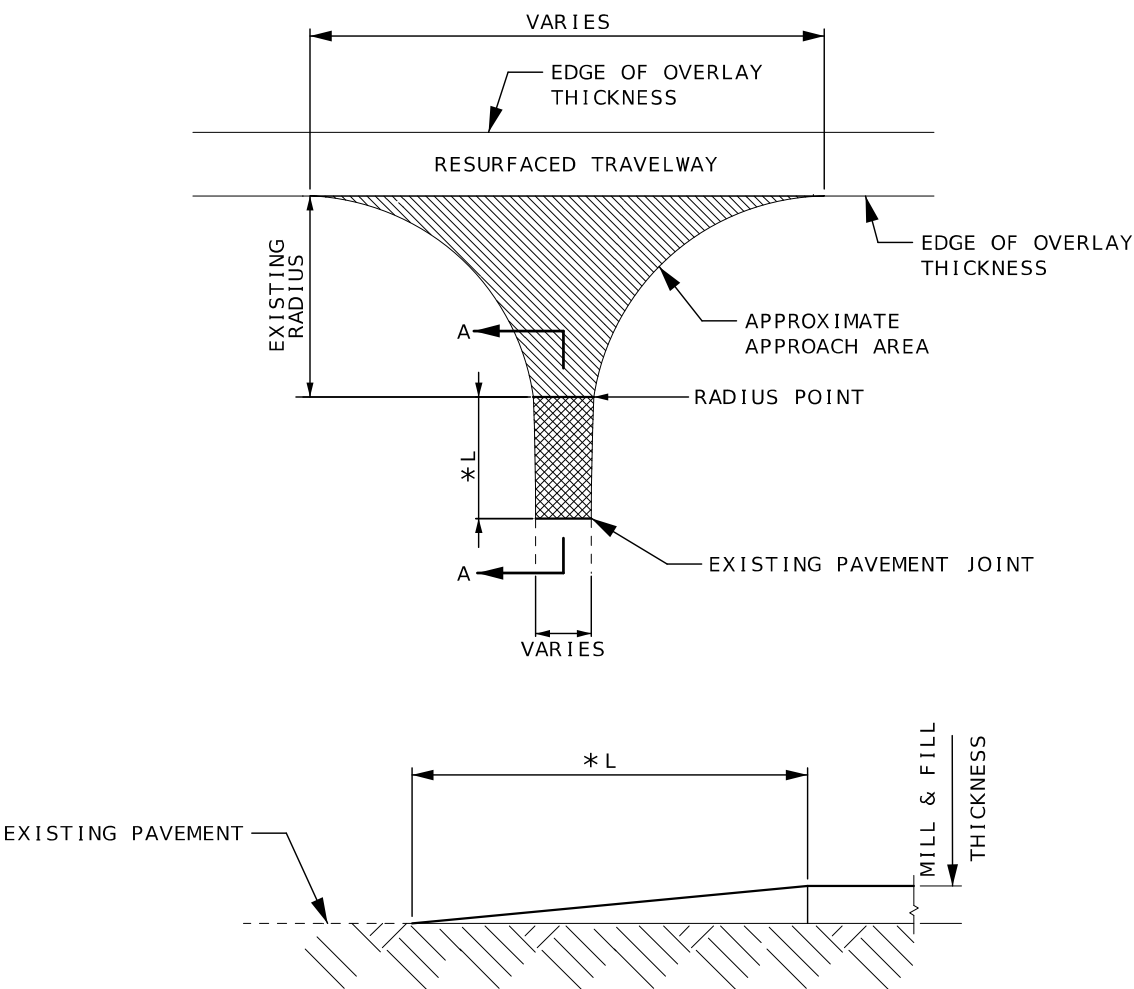
DATE PREPARED 8/12/2024	
ROUTE 160	STATE MO
DISTRICT SW	SHEET NO. 2
COUNTY BARTON	
JOB NO. JSR0163	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



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



SECTION A-A

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

- \* LENGTH FROM RADIUS POINT TO  
EXISTING PAVEMENT JOINT:
- NORTHWEST OUTER ROAD L = 0' (2" MILL & FILL SP125C PG70-22)  
SOUTHBOUND OFF RAMP L = 50' (2" MILL & FILL SP125C PG70-22)  
SOUTHBOUND ON RAMP L = 50' (2" MILL & FILL SP125C PG70-22)  
NORTHEAST OUTER ROAD L = 20' (0.75" MILL & TYPE C UBAWS)  
SOUTHEAST OUTER ROAD L = 15' (0.75" MILL & TYPE C UBAWS)  
ROUTE KK L = 0' (2" MILL & FILL SP125C PG70-22)

STATE OF MISSOURI

CRAG ALAN SWITZER

NUMBER

PE-2003015045

PROFESSIONAL ENGINEER

09/03/2024 8:30:22 AM

CRAG ALAN SWITZER - CIVIL

MOPE2003015045

DATE PREPARED

9/3/2024

ROUTE

160

DISTRICT

SW

STATE

MO

SHEET NO.

2

COUNTY

BARTON

JOB NO.

JSR0163

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)



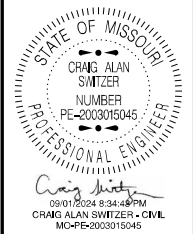
PAVEMENT MARKING																
ROUTE	LOG MILE	TO	LOG MILE	LOCATION	WATERBORNE PAINT, TYPE P BEADS				PREFORMED THERMOPLASTIC MARKING						REMARKS	
					4" INT WHITE	4" SOLID WHITE	4" INT YELLOW	4" SOLID YELLOW	24" WHITE	24" YELLOW	LEFT/RIGHT ARROW	STRAIGHT ARROW	WORD "ONLY"	RAILROAD CROSSING		30" MIDBLOCK
					LF	LF	LF	LF	LF	LF	EA	EA	EA	EA		EA
160	17.750		17.800			530.0		1060.0		52.0						
160	17.800		17.850			790.0		530.0	24		2					
160	17.850		17.875			400.0		530.0	12	54	3					
160	17.875		17.955			1270.0		840.0								
160	17.955		18.010			1160.0		580.0	24		4	2	2			
160	18.010		18.050			420.0		420.0	24		1					
160	18.050		18.200			1580.0	400.0	1580.0			2					
160	18.200		18.255			580.0		1160.0		45						
160	18.255		18.280			260.0		260.0								
160	18.280		18.335			581.0		581.0								
160	18.335		18.540			2160.0		2160.0								
160	18.540		18.575			370.0		740.0		36						
160	18.575		19.097				1380.0	5510.0			10				7	
160	19.097		19.130			170.0		350.0	24		1					
160	19.140		19.175			180.0		370.0	24		1					
160	19.175		19.480				810.0	3220.0			6			1		
160	19.480		19.535			580.0		1160.0	12	52						
160	19.540		19.595			580.0		1160.0	12	52						
160	19.595		20.260			7020.0	1760.0	7020.0			14			1		
160	20.260		20.320			630.0		1270.0		45						
160	20.320		20.820			5280.0		5280.0								
160	20.820		21.046			2390.0	300.0	1190.0								
TOTALS					0	26931	4650	36971	156	336	44	2	2	2	7	

GUARDRAIL										
ROUTE	LOG MILE	TO	LOG MILE	OFFSET	NET LENGTH	MGS BRIDGE APPR TRANSITION	MGS GUARDRAIL	TYPE A CRASHWORTHY MASH	SHAPING SLOPES CL III	REMARKS
					FT	EACH	LF	EACH	100 FT	
160	18.265	-	18.289	LT	125.0	1	37.5	1	1.6	
160	18.265	-	18.289	RT	125.0	1	37.5	1	1.6	
160	18.336	-	18.360	LT	125.0	1	37.5	1	1.6	
160	18.336	-	18.360	RT	125.0	1	37.5	1	1.6	
TOTALS						4	150.0	4	6.4	
USE						4	150	4	7	

SIGNALS		
RADAR DETECTION SYSTEM, 4 SENSOR		2
U.S. 160 AND WEST OUTER ROAD		
U.S. 160 AND EAST OUTER ROAD		

LOOP DETECTORS AT GULF STREET		
LOCATION	LF	REMARKS
THRU LANES	340	2- 6' X 6'
LEFT TURN LANES	776	2 - 6' X 30'
TOTAL	1116	
USE	1120*	

\*UNDERRUN CABLE LOOP DETECTORS IN DUCT IF NOT DAMAGED BY CONTRACTOR OPERATIONS OR IF NOT NEEDED FOR CONSTRUCTION (SEE COOPERATION BETWEEN CONTRACTORS" JSP)




DATE PREPARED 8/27/2024	
ROUTE 160	STATE MO
DISTRICT SW	SHEET NO. 3
COUNTY BARTON	
JOB NO. JSR0163	
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)





# PROJECT BEGINNING AND END OF PROJECT

\* LOG MILES ON THIS SHEET ARE APPROXIMATE. LOG MILES MAY BE ADJUSTED PER FIELD CONDITIONS DIRECTED BY THE ENGINEER.



## BEGINNING OF PROJECT



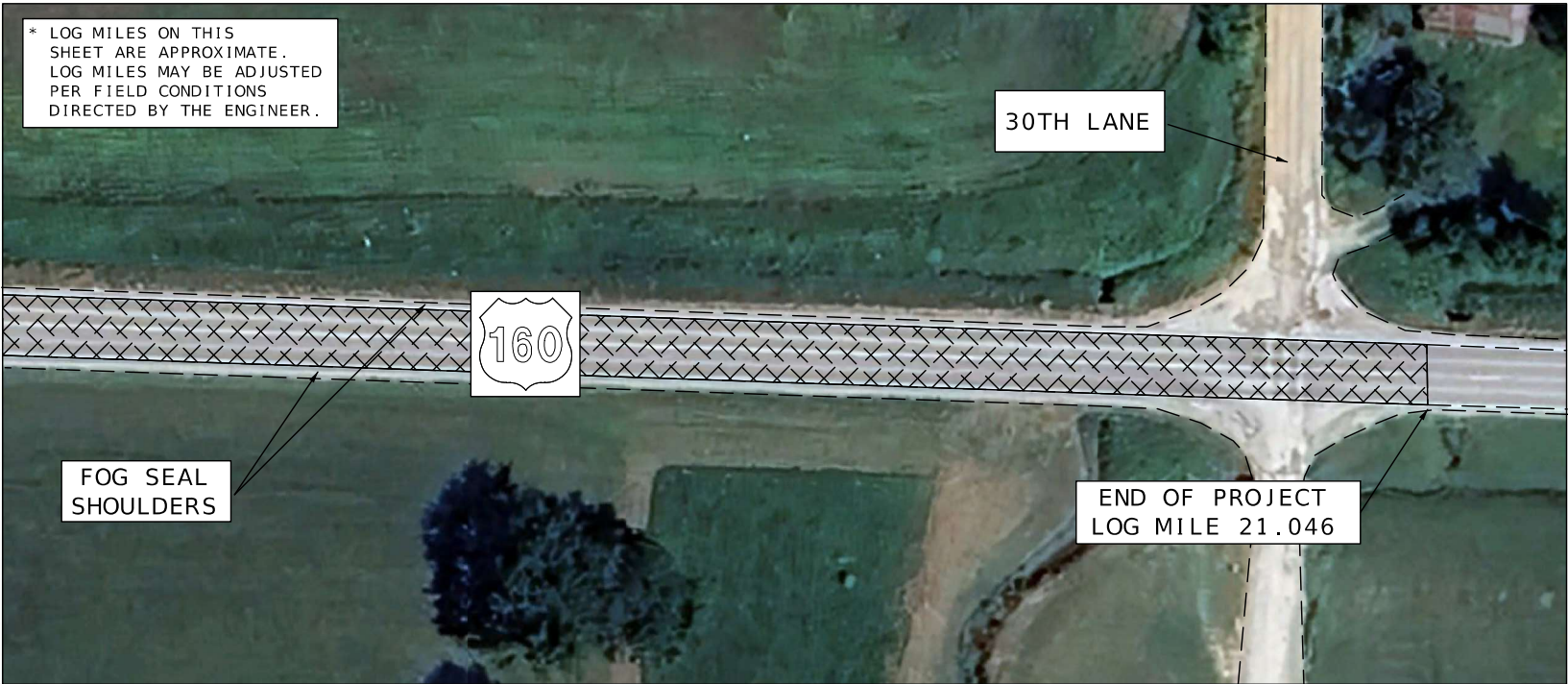
2" MILL & FILL

CONCRETE EXCEPTION  
LM 17.914-LM 17.995

NOT TO SCALE

ANY WORK INDICATED ON THE PLANS THAT EXTENDS BEYOND THE PROJECT LIMITS IS CONSIDERED INCIDENTAL TO AND A PART OF THE CONSTRUCTION OF THIS PROJECT.

\* LOG MILES ON THIS SHEET ARE APPROXIMATE. LOG MILES MAY BE ADJUSTED PER FIELD CONDITIONS DIRECTED BY THE ENGINEER.



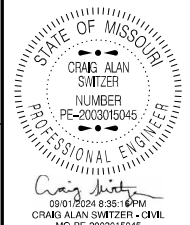
## END OF PROJECT



2" MILL & FILL

NOT TO SCALE

SPECIAL SHEET  
SHEET 1 OF 2

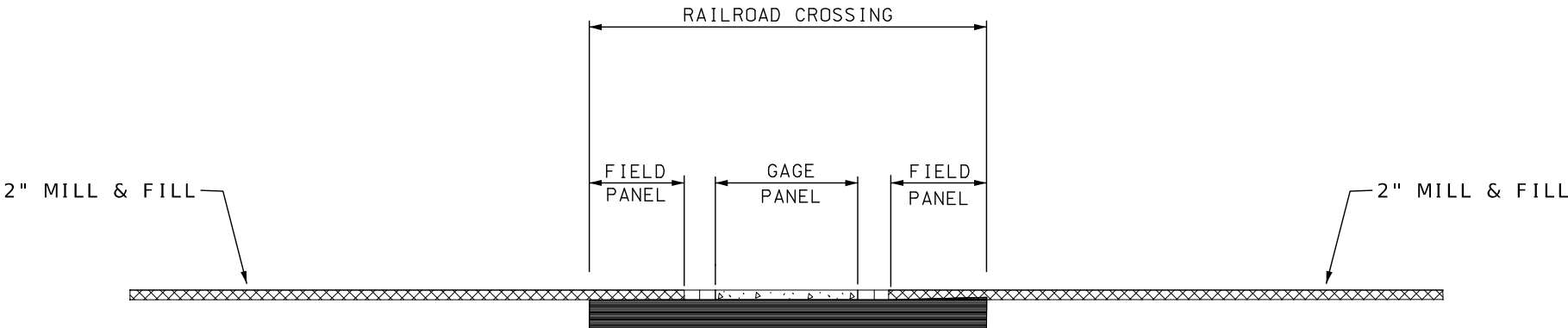
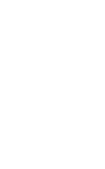


DATE PREPARED 8/26/2024	
ROUTE 160	STATE MO
DISTRICT SW	SHEET NO. 4
COUNTY BARTON	
JOB NO. JSR0163	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

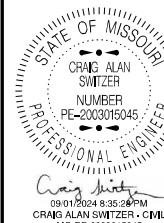
DATE	DESCRIPTION



# RAILROAD CROSSING DETAILS



ROUTE 160  
LOG MILES 19.535  
TYPICAL RAILROAD CROSSING  
NOT TO SCALE



DATE PREPARED 8/12/2024	
ROUTE 160	STATE MO
DISTRICT SW	SHEET NO. 5
COUNTY BARTON	
JOB NO. JSR0163	
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)

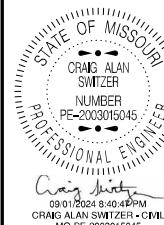
NOT TO SCALE  
SPECIAL SHEET  
SHEET 2 OF 2



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 J7S3531B.

REVISED: 4/10/2024



DATE PREPARED

8/12/2024

ROUTE STATE

160 MO

DISTRICT SHEET NO.

SW 6

COUNTY

BARTON

JOB NO.

JSR0163

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

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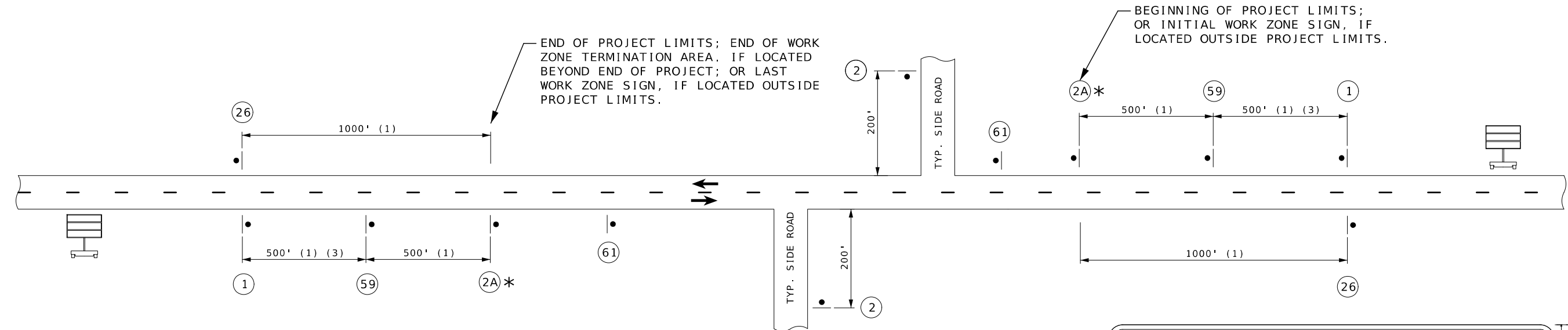
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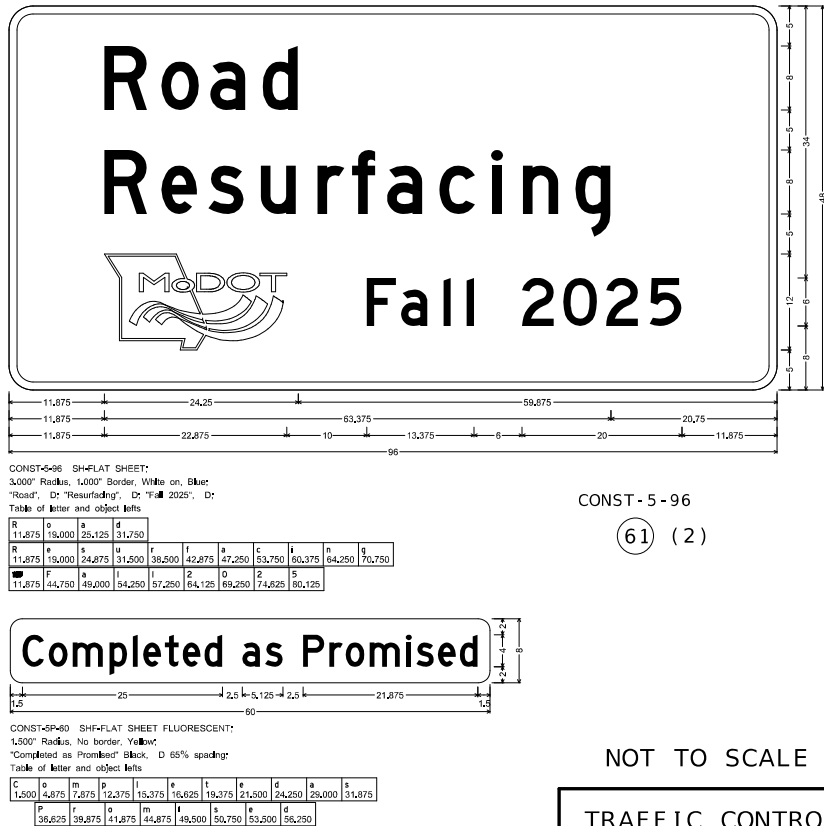
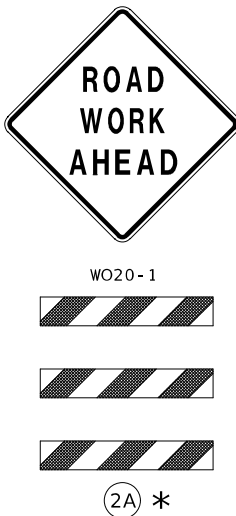
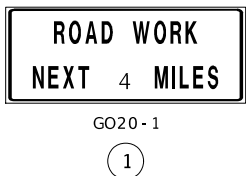
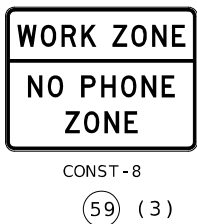
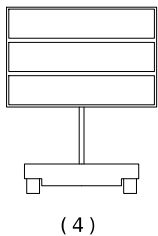
DATE

DATE



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.



\*SIGN 2A WITH AWRS MUST BE GROUND OR SKID MOUNTED.

NOT TO SCALE

TRAFFIC CONTROL  
SHEET 1 OF 9





SIDE ROADS ENTERING WORK ZONES

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

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.

■ - CHANNELIZERS

◁ - FLAGGER

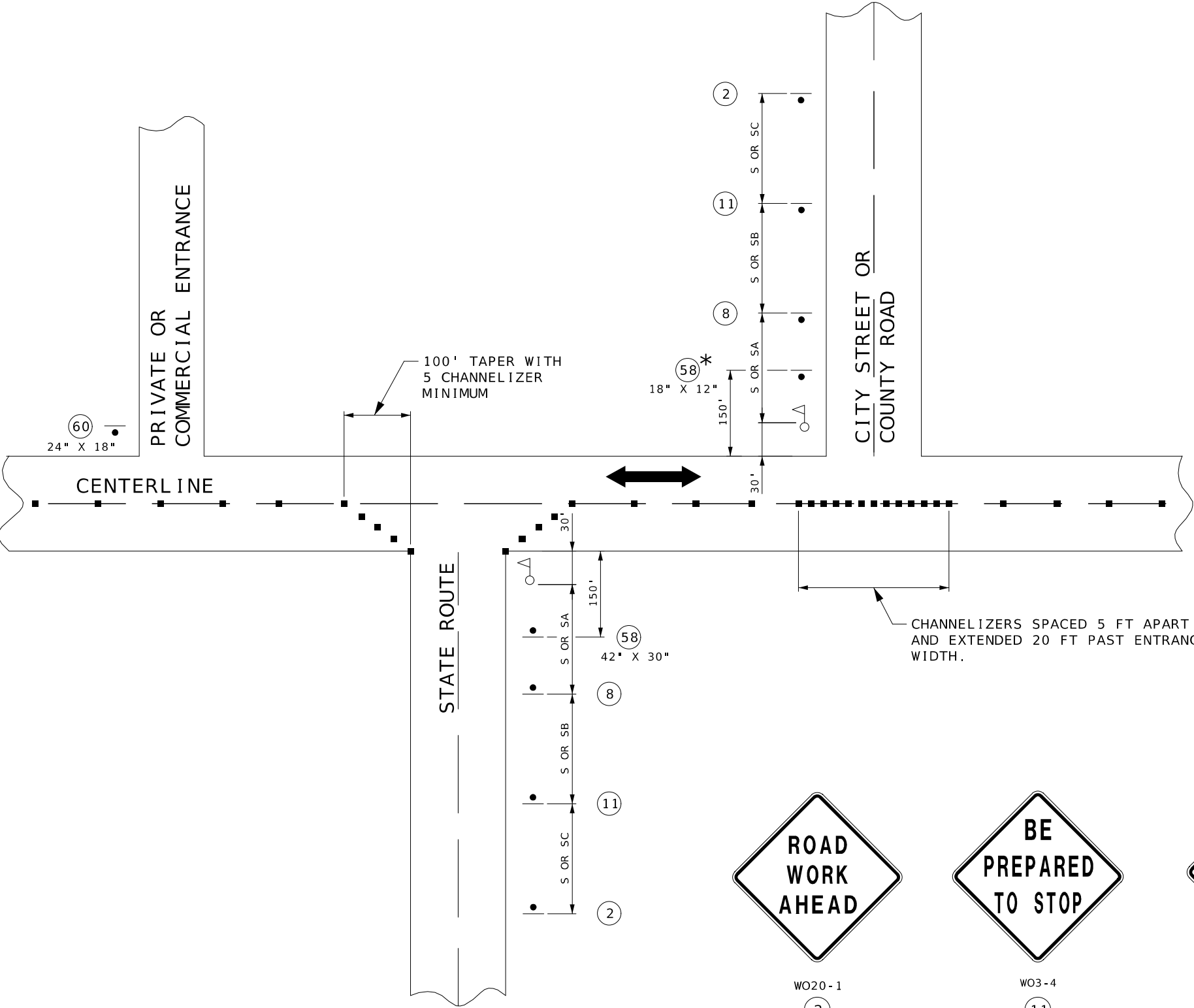
IF USED AT NIGHT, THE FLAGGER STATIONS SHALL BE ILLUMINATED WITH AN AVERAGE MAINTAINED INTENSITY OF 0.6 FOOTCANDLES (6.5 LUX).



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)

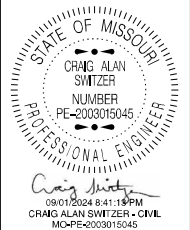


WO3-4  
(11)



WO20-7a  
(8)

NOT TO SCALE



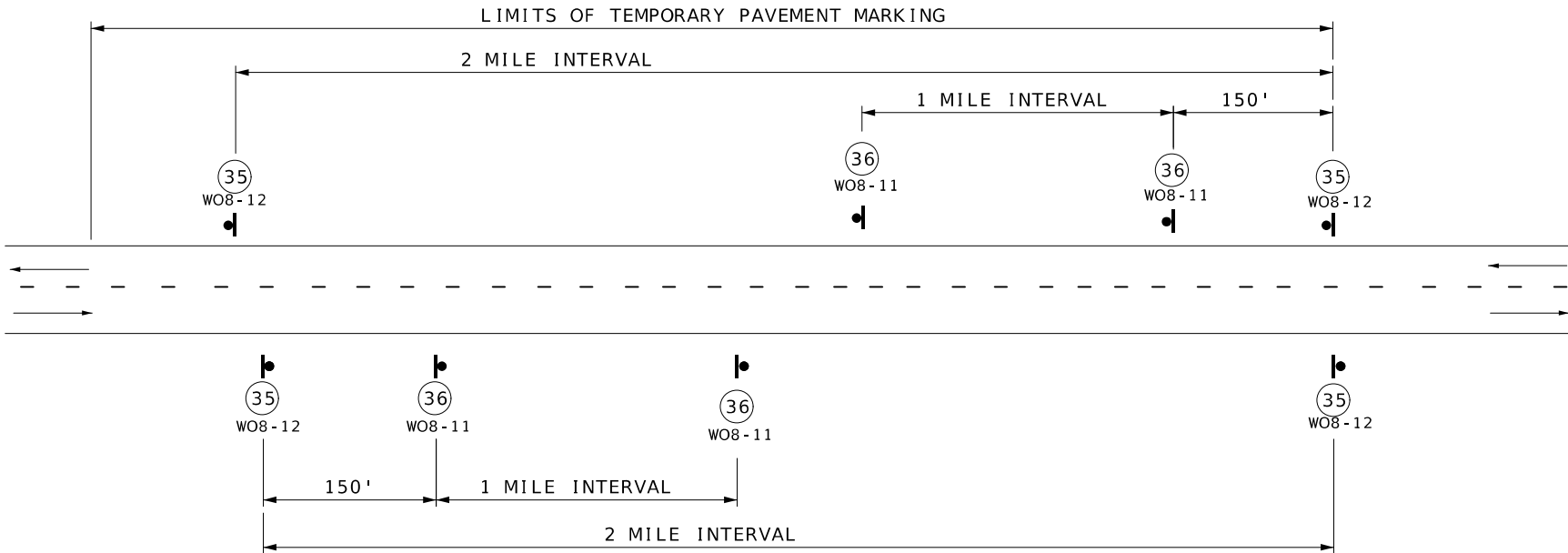
DATE PREPARED  
8/12/2024  
ROUTE  
160  
STATE  
MO  
DISTRICT  
SW  
SHEET NO.  
8  
COUNTY  
BARTON  
JOB NO.  
JSR0163  
CONTRACT ID.

PROJECT NO.  
BRIDGE NO.

DATE	DESCRIPTION

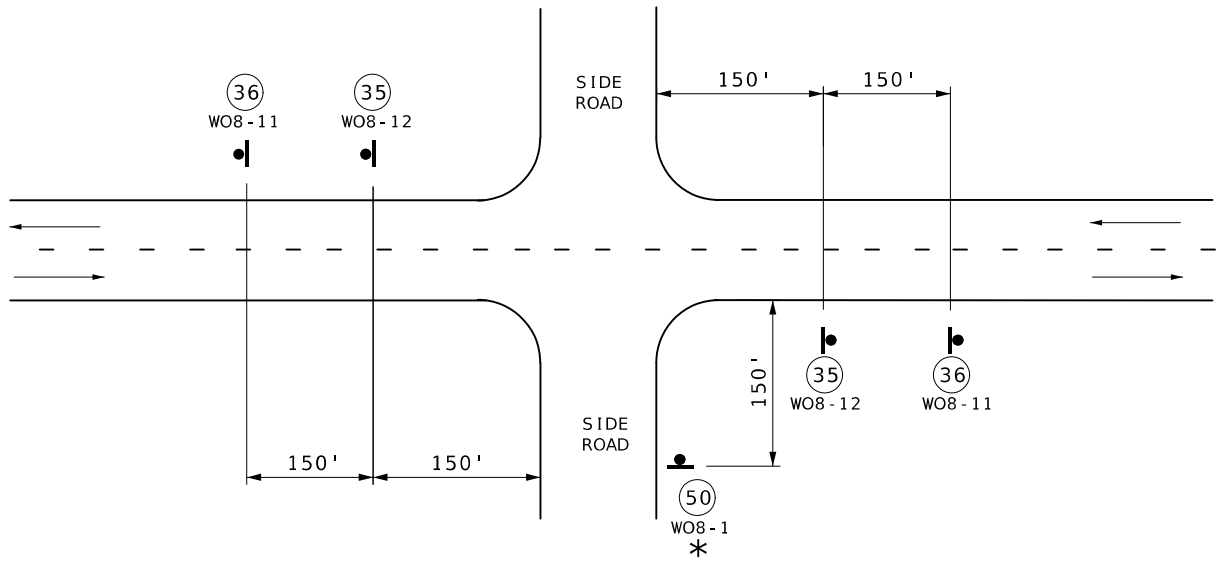
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



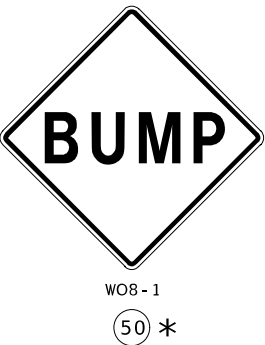
SIGN SPACING FOR MAINLINE

(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.

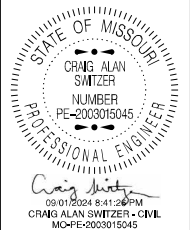
ALL SIGNS SHALL BE POST MOUNTED AND IN ACCORDANCE  
WITH STANDARD PLAN 616.10 AND 903.03.

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 9



DATE PREPARED 8/26/2024	
ROUTE 160	STATE MO
DISTRICT SW	SHEET NO. 9
COUNTY BARTON	
JOB NO. JSR0163	
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)	TAPER LENGTH (FT)		OPTIONAL	CHANNELIZER SPACING (FT)	
PERMANENT POSTED (MPH)	UNDIVIDED HIGHWAYS (S)	SHOULDER (1) (T1)	LANE (2) (T2)	BUFFER LENGTH (FT) (B)	TAPERS	BUFFER/ WORK AREAS
0-35	200	70	245	280	35	40
40-45	350	150	540	400	40	80
50-55	500	185	660	560	50	80
60-70	1000	235	840	840	60	120

NOTES:

- (1) SHOULDER TAPER LENGTH BASED ON 10 FT. (STANDARD SHOULDER WIDTH) OFFSET.  
(2) LANE TAPER LENGTH BASED ON 12 FT. (STANDARD LANE WIDTH) OFFSET.  
(3) NEXT XX MILES SIGN NOT REQUIRED FOR NARROW LANE SECTIONS LESS THAN ONE MILE.



WO20-1  
(2)



WO21-5  
(21)



WO5-1



WO7-3a

(43) \*

\* OMIT SIGN 43 FOR NO TRAVELWAY ENCROACHMENT.



GO20-5aP



R2-1



(54)  
(4)

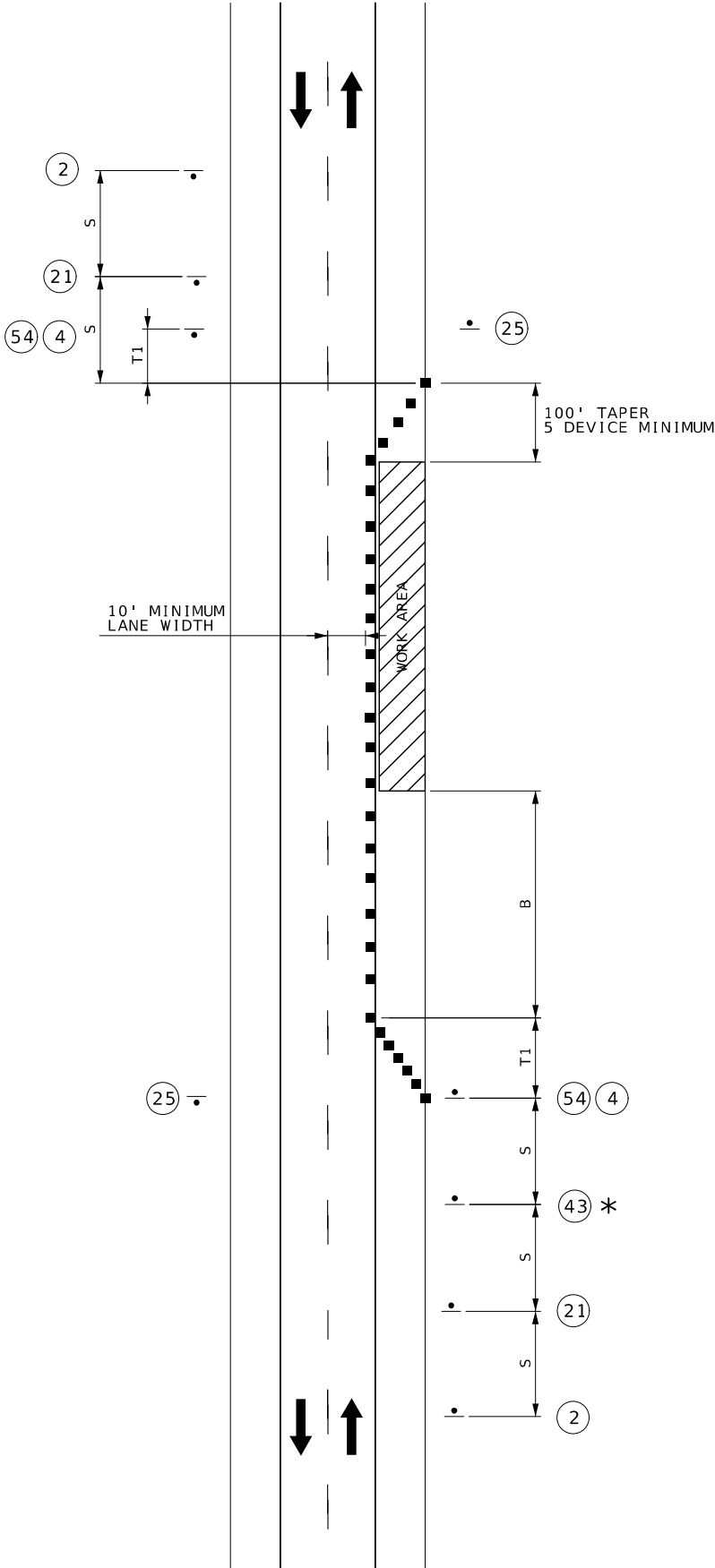


R2-1

(25)  
(NORMAL SPEED)

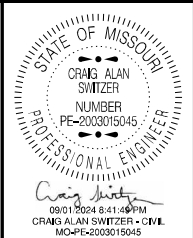
# SHOULDER WORK WITH MINOR TRAVELWAY ENCROACHMENT OR NO ENCROACHMENT (UNDIVIDED HIGHWAY)

REVISED: 1/9/2024



NOT TO SCALE

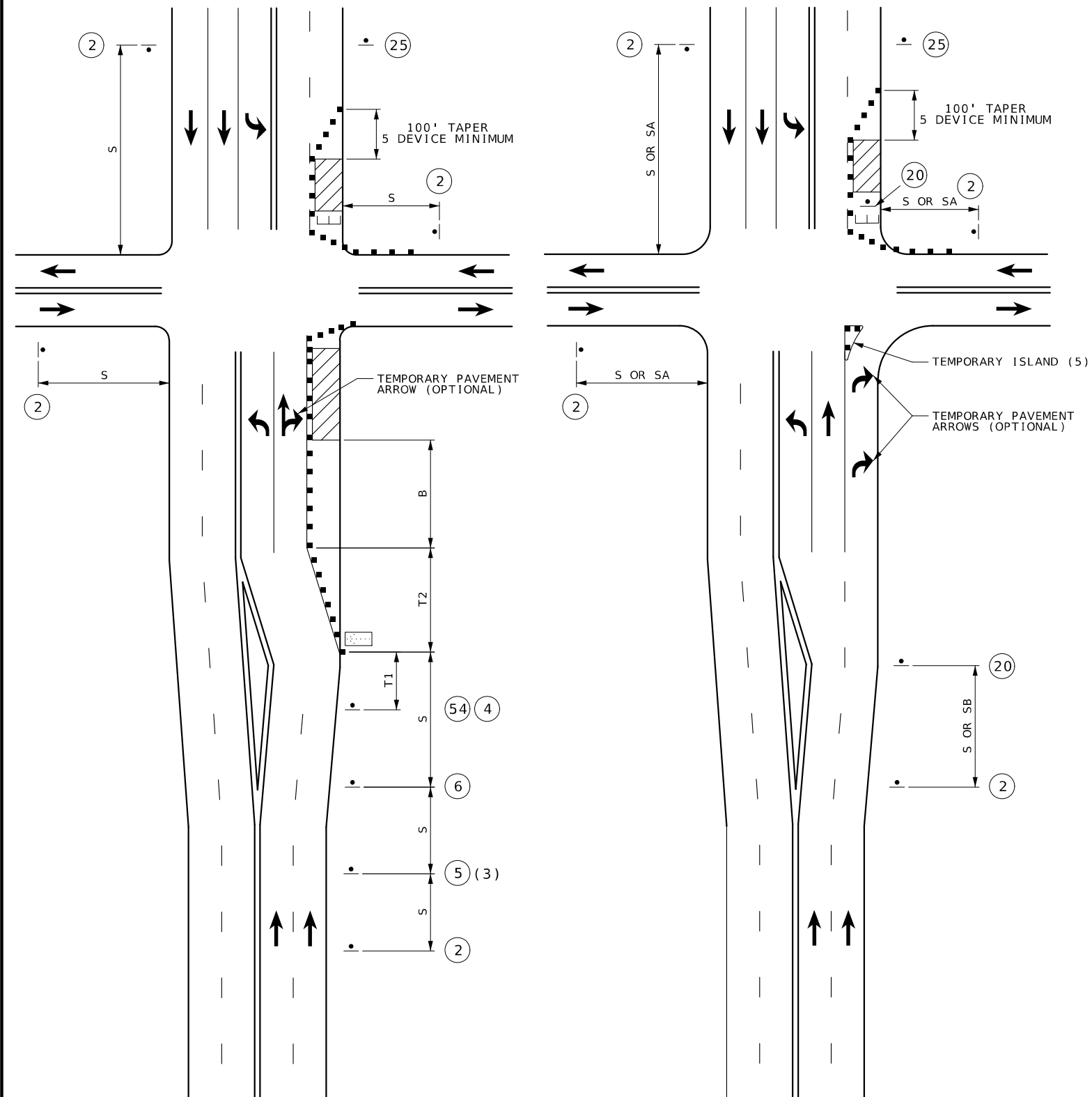
TRAFFIC CONTROL  
SHEET 6 OF 9



DATE PREPARED 8/26/2024	
ROUTE 160	STATE MO
DISTRICT SW	SHEET NO. 11
COUNTY BARTON	
JOB NO. JSR0163	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION





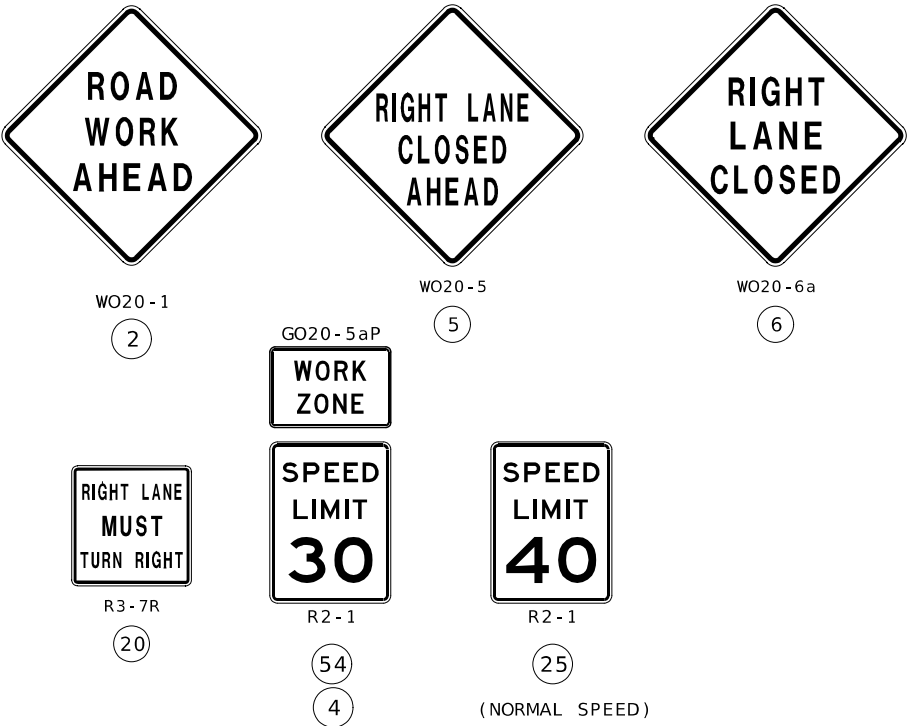
WORK ON NEAR OR FAR SIDE

WORK ON FAR SIDE ONLY (4)

RIGHT LANE CLOSURE AT INTERSECTION

SPEED	SIGN SPACING (FT)		TAPER LENGTH (FT)		OPTIONAL	CHANNELIZER SPACING ( FT)	
PERMANENT POSTED (MPH)	UNDIVIDED HIGHWAYS (S)	DIVIDED HIGHWAYS (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

- NOTES:
- (1) SHOULDER TAPER LENGTH BASED ON 10 FT. (STANDARD SHOULDER WIDTH) OFFSET.  
(2) LANE TAPER LENGTH BASED ON 12 FT. (STANDARD LANE WIDTH) OFFSET.
- 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.
- (3) RIGHT LANE CLOSED AHEAD SIGN MAY BE OMITTED IN LOW SPEED URBAN AREAS WHERE THERE IS NOT SUFFICIENT SPACE FOR THE FULL SIGN SERIES.
- (4) TYPICAL APPLICATION ONLY APPLIES WHERE A SIGNIFICANT PERCENTAGE OF THE APPROACH TRAFFIC TURNS RIGHT.
- (5) TEMPORARY ISLAND MAY BE USED TO EMPHASIZE THE MANDATORY RIGHT TURN MOVEMENT WHERE THERE IS A SUFFICIENT RIGHT TURN RADIUS.



NOT TO SCALE

STATE OF MISSOURI

CRAG ALAN SWITZER

NUMBER

PE-2003015045

PROFESSIONAL ENGINEER

Craig Switzer

09/01/2024 8:42:06 PM

CRAG ALAN SWITZER - CIVIL

MO-PE-2003015045

DATE PREPARED

8/26/2024

ROUTE

160

STATE

MO

DISTRICT

SW

SHEET NO.

12

COUNTY

BARTON

JOB NO.

JSR0163

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

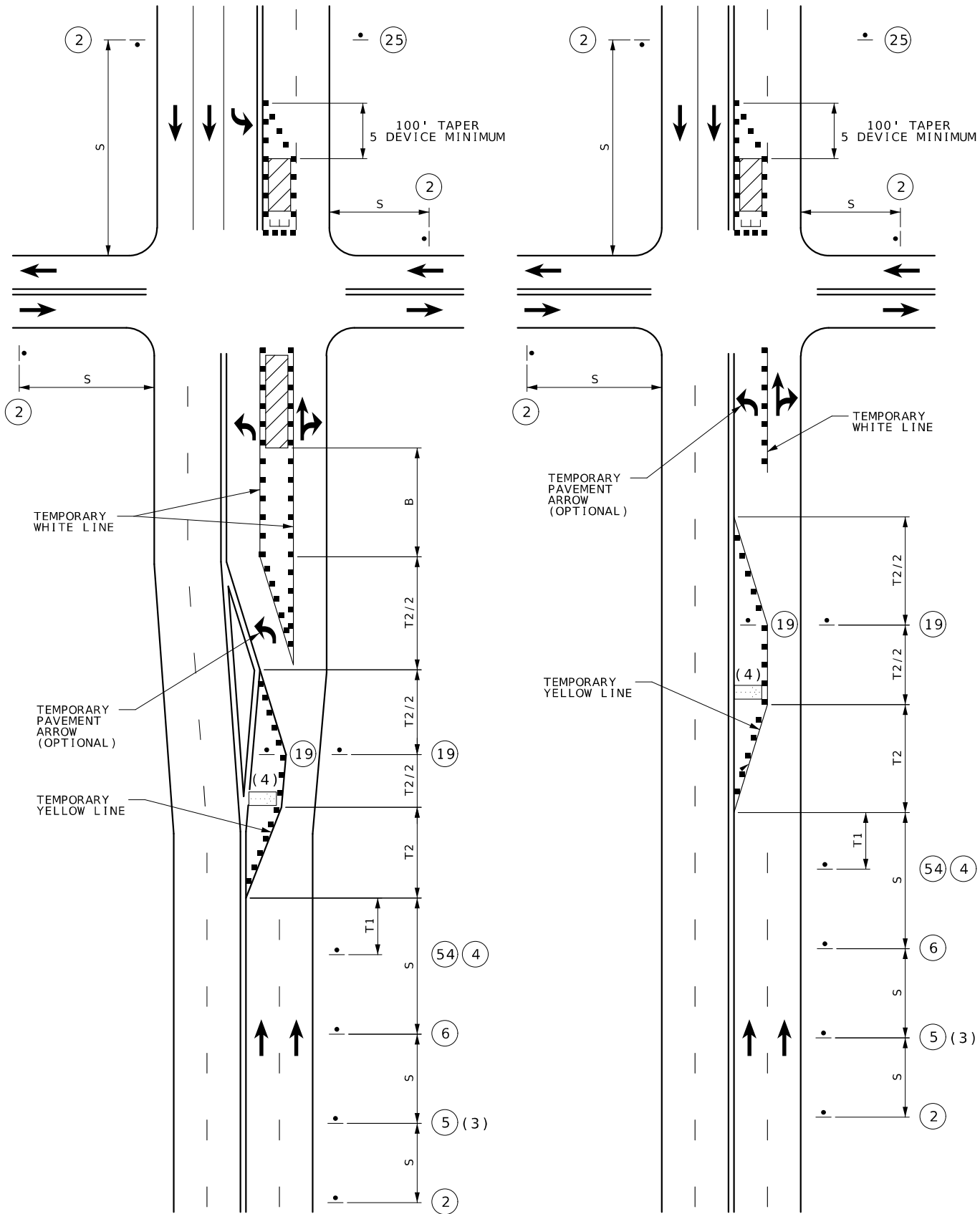
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL

JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

MODOT



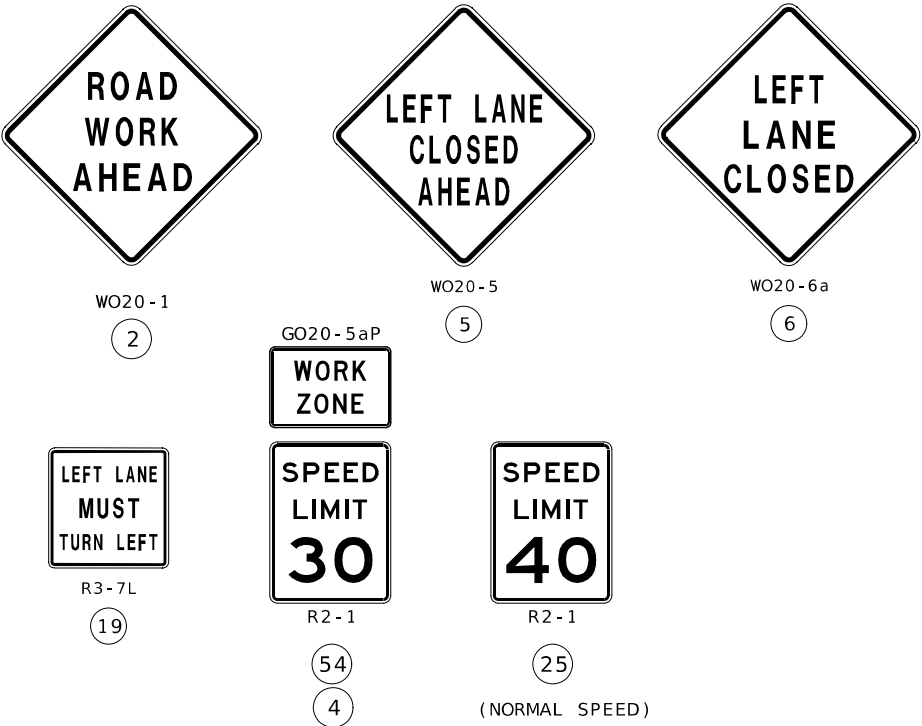
WORK ON NEAR OR FAR SIDE

WORK ON FAR SIDE ONLY

LEFT LANE CLOSURE AT INTERSECTION

SPEED	SIGN SPACING (FT)		TAPER LENGTH (FT)		OPTIONAL	CHANNELIZER SPACING (FT)	
PERMANENT POSTED (MPH)	UNDIVIDED HIGHWAYS (S)	DIVIDED HIGHWAYS (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

- NOTES:
- (1) SHOULDER TAPER LENGTH BASED ON 10 FT. (STANDARD SHOULDER WIDTH) OFFSET.  
(2) LANE TAPER LENGTH BASED ON 12 FT. (STANDARD LANE WIDTH) OFFSET.
- 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.
- (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) FLASHING ARROW BOARD SHOULD BE LOCATED AT THE BEGINNING OF THE MERGING TAPER WHEN MEDIAN WIDTH ALLOWS THIS PLACEMENT.



NOT TO SCALE

STATE OF MISSOURI

CRAG ALAN SWITZER

NUMBER

PE-2003015045

PROFESSIONAL ENGINEER

09/01/2024 8:42:10 PM

CRAG ALAN SWITZER - CIVIL

MO-PE-2003015045

DATE PREPARED

8/26/2024

ROUTE

160

STATE

MO

DISTRICT

SW

SHEET NO.

13

COUNTY

BARTON

JOB NO.

JSR0163

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

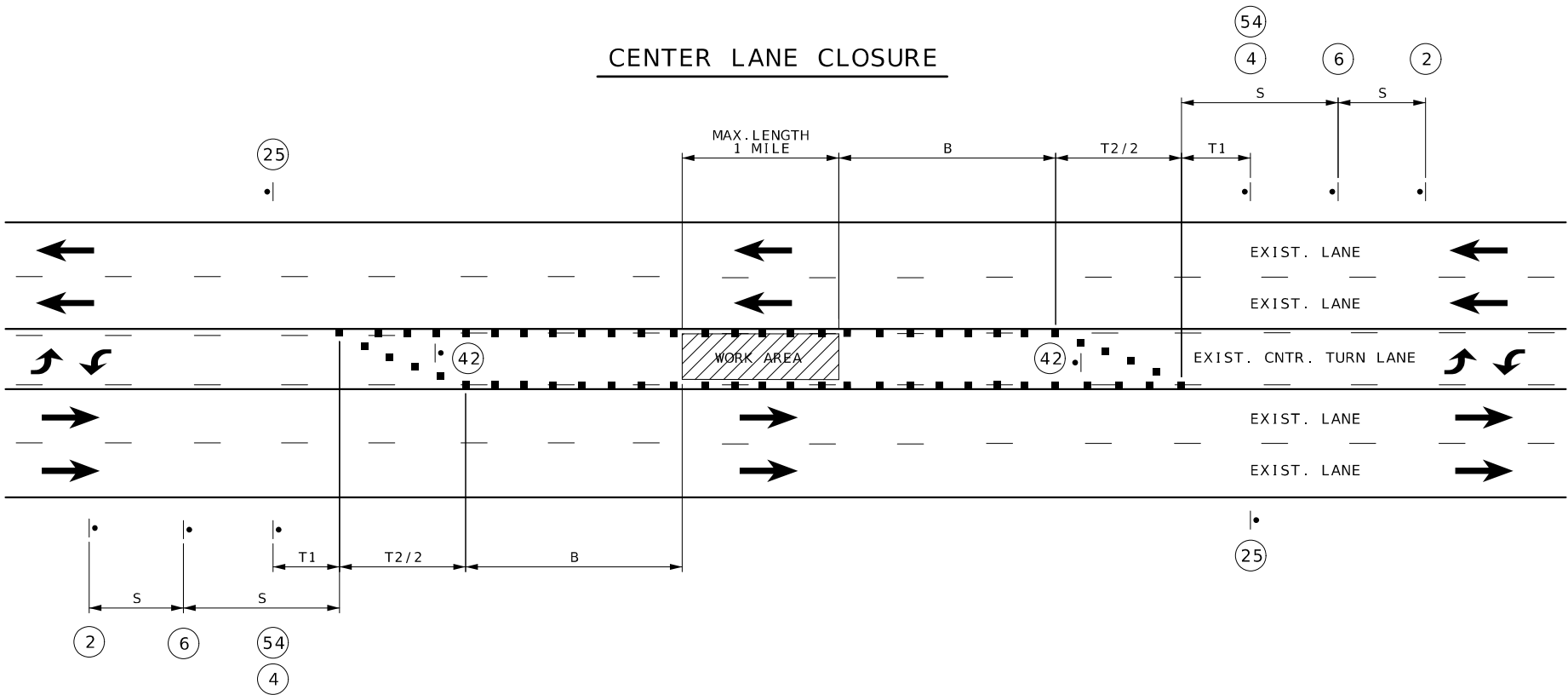
105 WEST CAPITOL

JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

MODOT





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

NOTES:

(1) SHOULDER TAPER LENGTH BASED ON 10 FT. (STANDARD SHOULDER WIDTH) OFFSET.  
(2) LANE TAPER LENGTH BASED ON 12 FT. (STANDARD LANE WIDTH) OFFSET.

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 "RATE OUR WORK ZONE", "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.



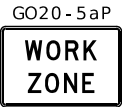
WO20-1  
2



WO20-6a  
6



R4-7a  
42



R2-1  
54  
4



R2-1  
25  
(NORMAL SPEED)

NOT TO SCALE

TRAFFIC CONTROL  
SHEET 9 OF 9

STATE OF MISSOURI

CRAIG ALAN SWITZER

NUMBER

PE-2003015045

PROFESSIONAL ENGINEER

Craig Switzer

09/01/2024 8:42:29 PM

CRAIG ALAN SWITZER - CIVIL

MO-PE-2003015045

DATE PREPARED

8/26/2024

ROUTE

160

STATE

MO

DISTRICT

SW

SHEET NO.

14

COUNTY

BARTON

JOB NO.

JSR0163

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)

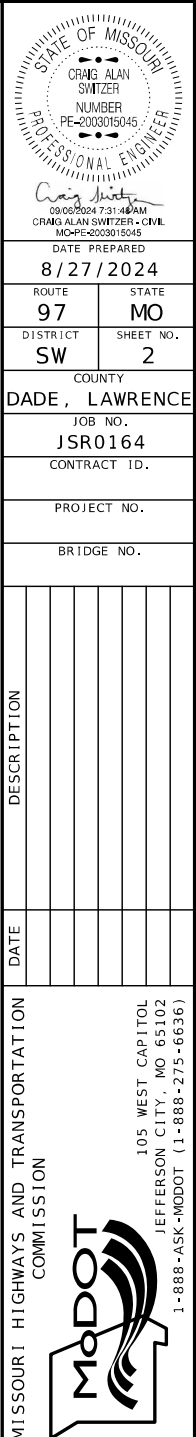


NO ADDITIONAL PAYMENT WILL BE MADE FOR ADDITIONAL  
COLD MILLING (UP TO 3") REQUIRED TO REMOVE ENTIRE  
TOP LIFT DUE TO DELAMINATION. THIS APPLIES TO  
ENTIRE PROJECT LIMITS.

IRREGULARITIES: 75 TONS/MI

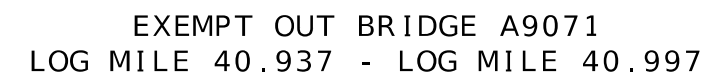


TYPICAL SECTIONS  
SHEET 1 OF 7

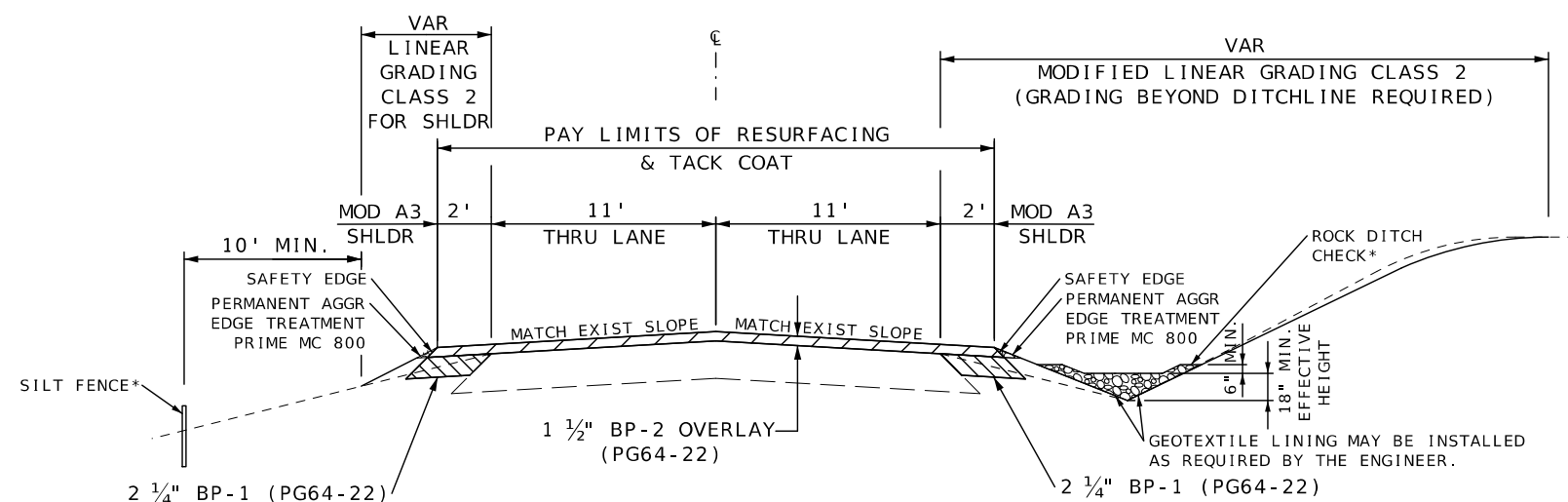


NO S.E. CORRECTION

IRREGULARITIES: 75 TONS/MI



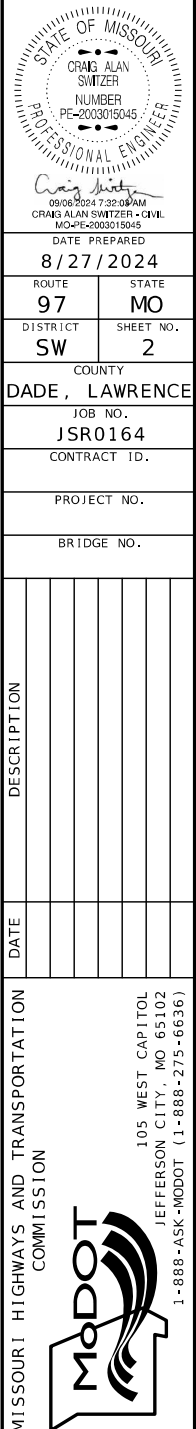
LOG MILE	32.213	TO	LOG MILE	40.937
LOG MILE	40.997	TO	LOG MILE	41.999
LOG MILE	42.735	TO	LOG MILE	43.292
LOG MILE	43.733	TO	LOG MILE	45.605



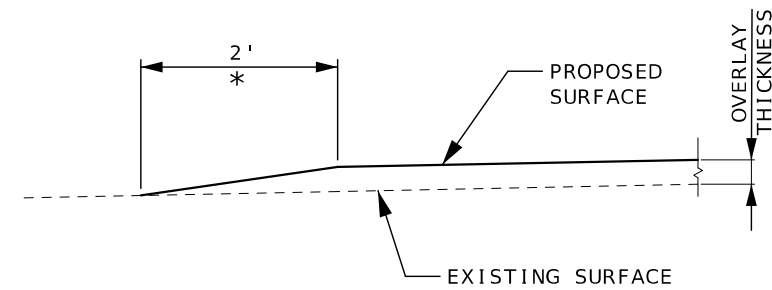
LOG MILE 41.999 TO LOG MILE 42.735  
LOG MILE 43.292 TO LOG MILE 43.733

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

TYPICAL SECTIONS  
SHEET 2 OF 7

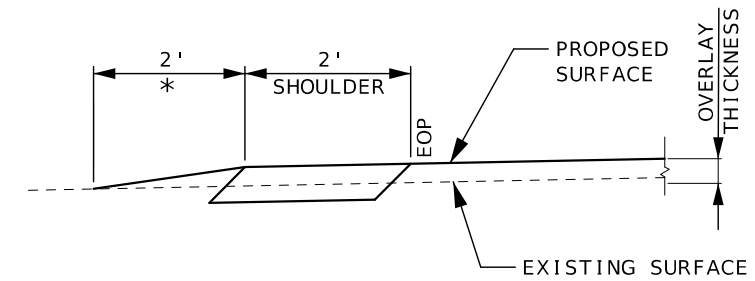






TYPICAL ENTRANCE - NO SHOULDER  
(FIELD, PRIVATE OR COUNTY ROAD)  
\*TAPER AT 1:1 FOR FIELD ENTRANCE

6 TONS CALCULATED PER COUNTY ROAD.



The diagram shows a cross-section of a road surface. A dashed line represents the 'EXISTING SURFACE'. A solid line represents the 'PROPOSED SURFACE'. The proposed surface starts at the existing surface level and rises linearly over a horizontal distance of 2 feet, marked with a dimension line and the text '2' \*'. After this transition zone, the proposed surface continues at a constant elevation. A vertical line labeled 'EOP' (End of Profile) marks the end of the transition zone. At the far right, a vertical dimension line indicates the 'OVERLAY THICKNESS' as the vertical distance between the existing and proposed surfaces.

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

6 TONS CALCULATED PER COUNTY ROAD.

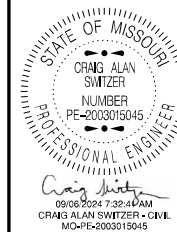
[illegible]

MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

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

REVISÉD: 3/7/2023

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.



DATE PREPARED  
8/12/2024

ROUTE	STATE
97	MO

DISTRICT	SHEET NO.
SW	2

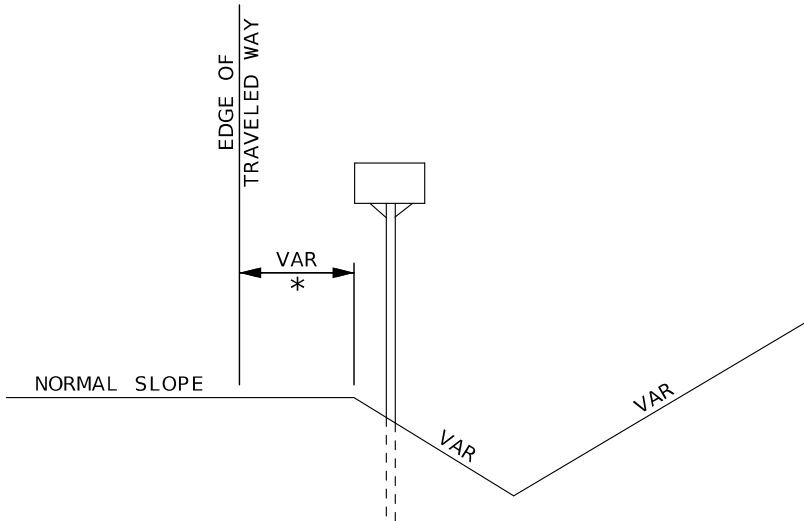
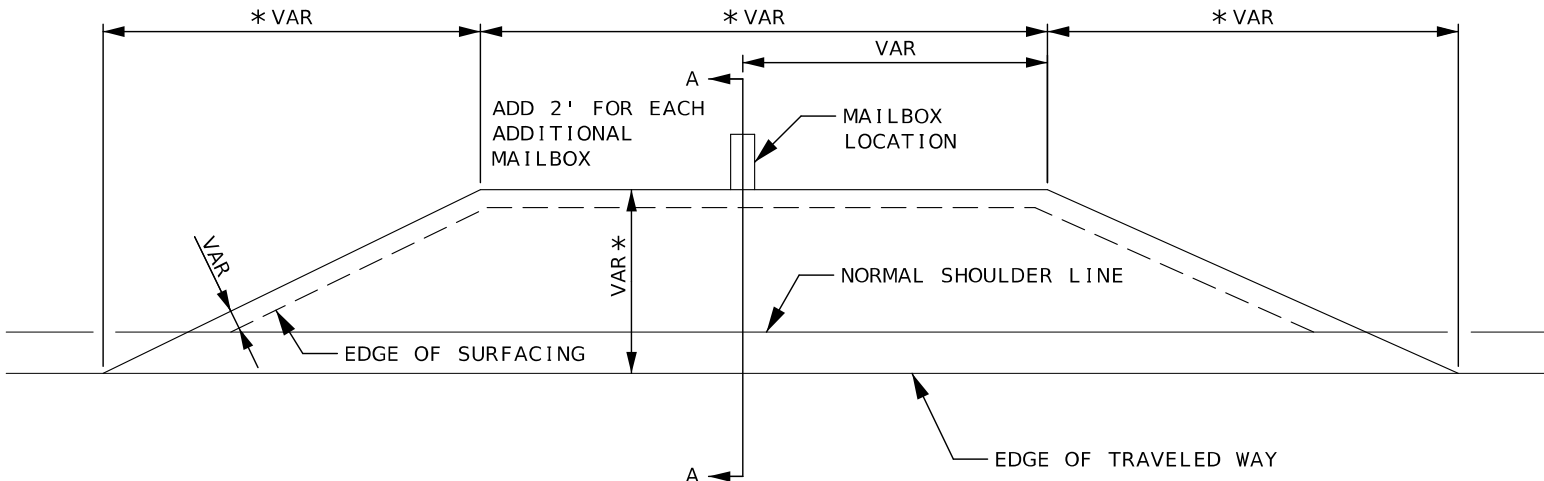
COUNTY  
DADE, LAWRENCE

JOB NO.  
JSR0164

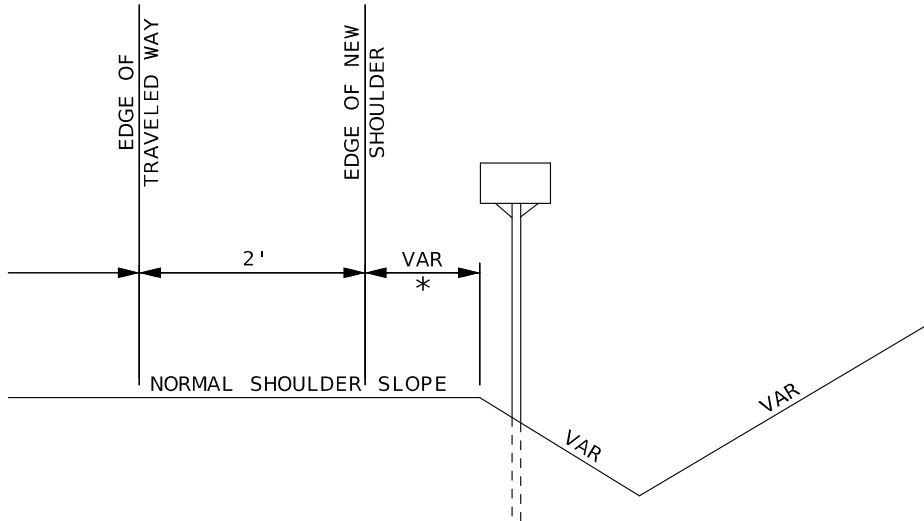
CONTRACT ID.	
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PROJECT NO.
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BRIDGE NO.
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SECTION A-A  
NO SHOULDER



SECTION A-A  
SHOULDER

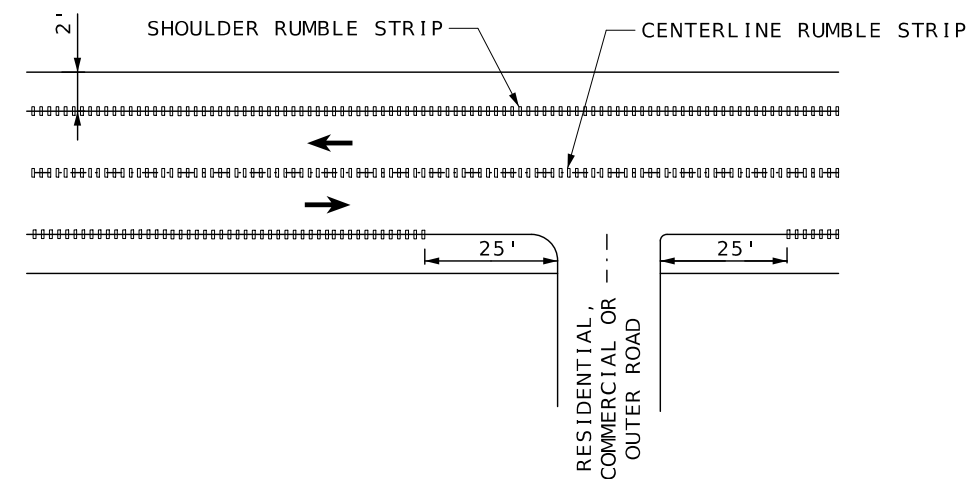
TYPICAL SECTIONS  
SHEET 5 OF 7

MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

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

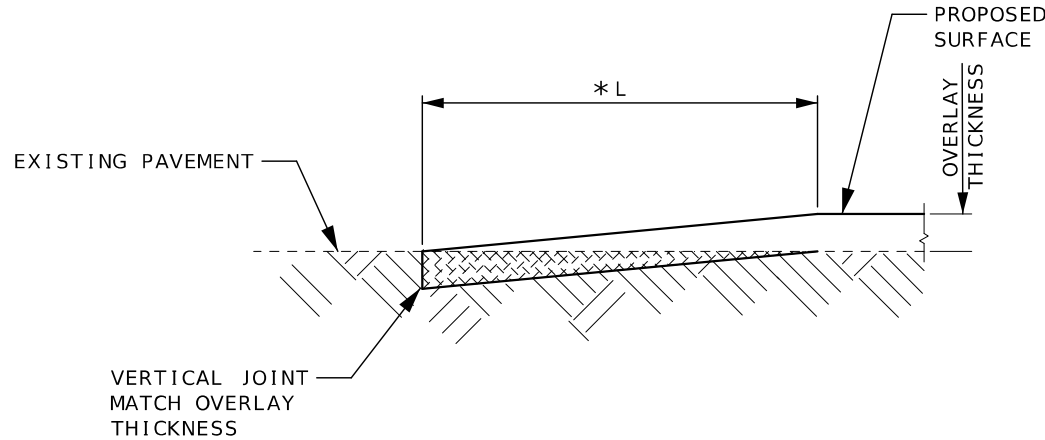
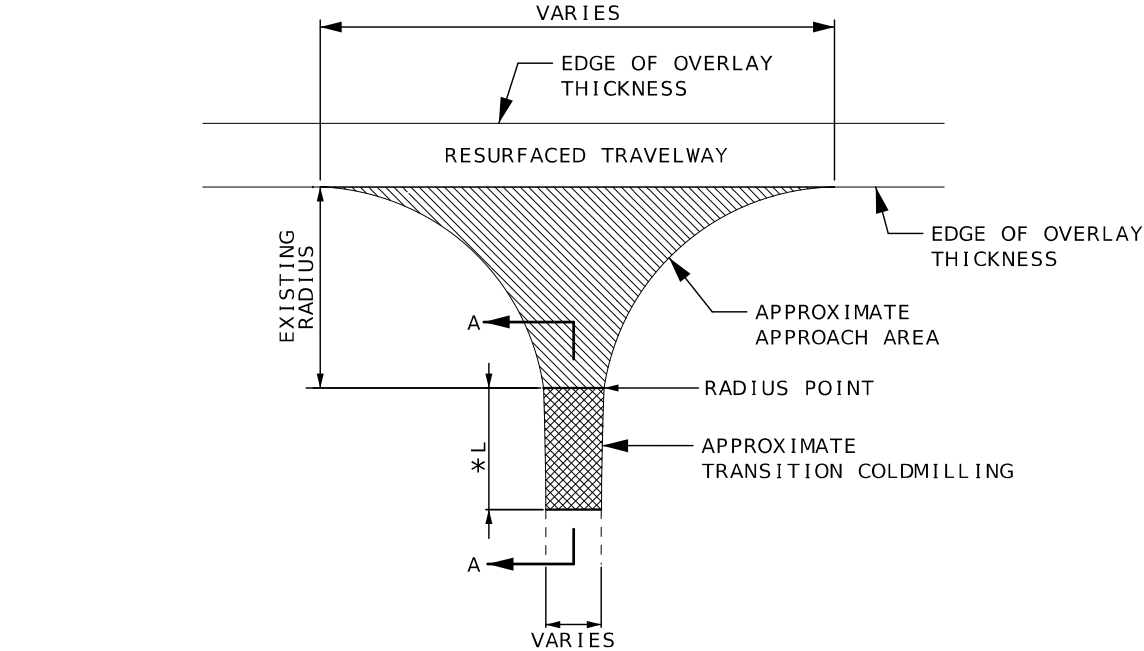
AS APPROVED BY THE ENGINEER, A 6" MINI RUMBLE STRIP  
MAY BE USED WHERE A 12" RUMBLE STRIP DOES NOT FIT.

Diagram illustrating a proposed concrete curb and gutter section. The diagram shows a cross-section of a road with an existing pavement on the left and a proposed concrete curb and gutter on the right. The curb has a top width of 12 inches and a height of 6 inches. The gutter is 6 inches wide. The existing pavement is shown as a dashed line. Labels include 'EXISTING PAVEMENT', 'EOP' (End of Pavement), 'EOS' (End of Shoulder), 'FINAL SURFACE', and 'CONCRETE OR ASPHALT'.

[illegible]



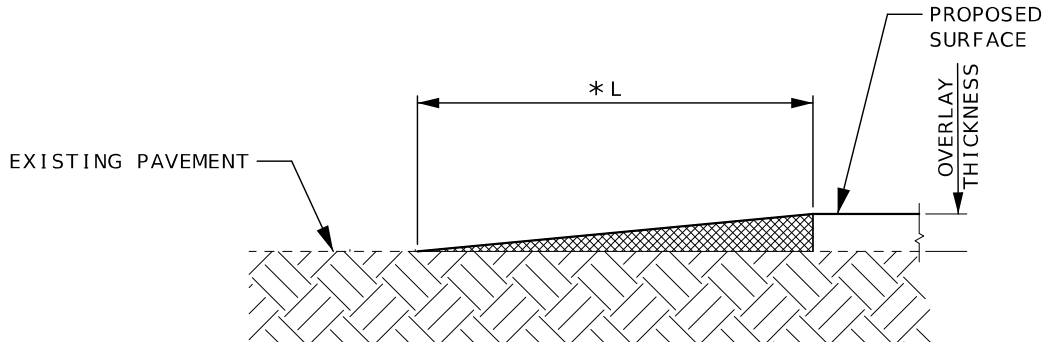
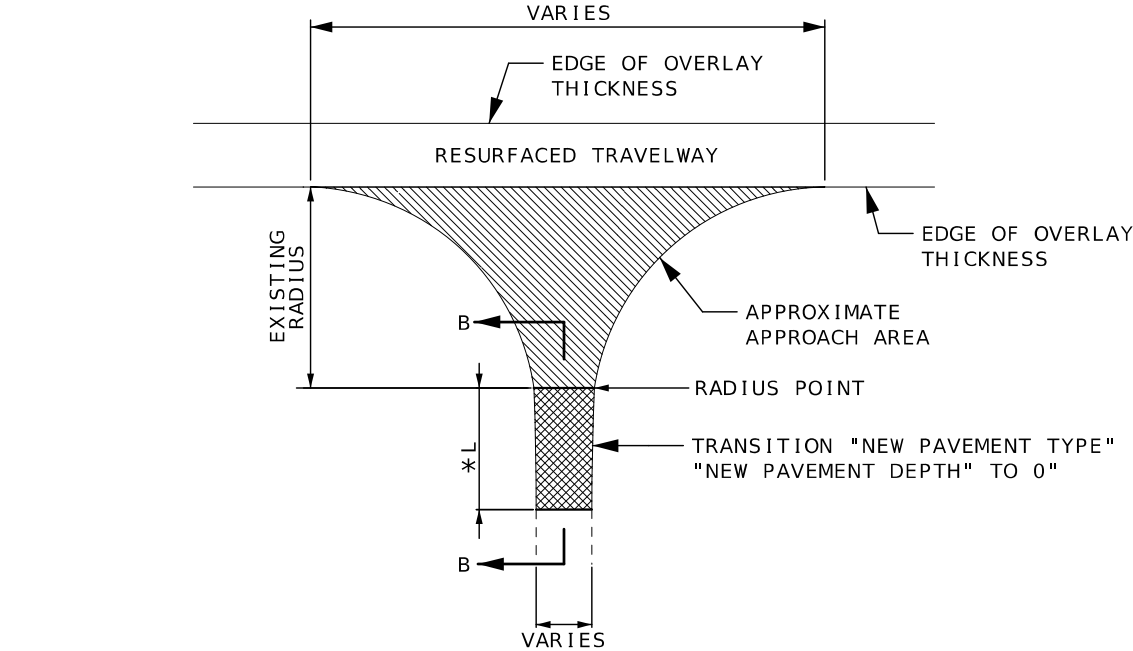
REVISÉD: 3/7/2023



SECTION A-A

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

OVERLAY THICKNESS	DEPTH TRANS. LENGTH (L)
1"	20.0'
1 1/4"	30.0'
1 1/2"	40.0'
1 3/4"	50.0'

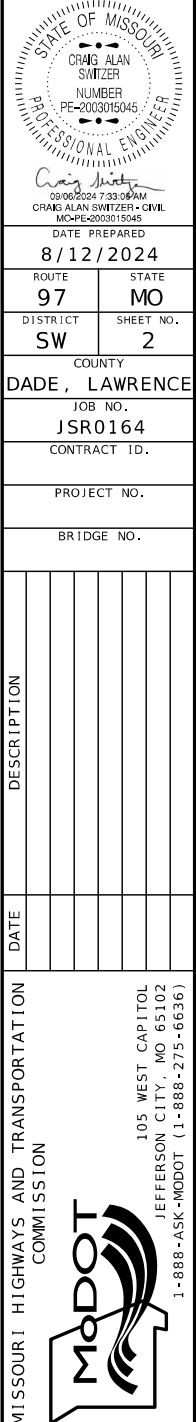


SECTION B - I

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

OVERLAY THICKNESS	DEPTH TRANS. LENGTH (L)
1 "	20.0'
1 $\frac{1}{4}$ "	30.0'
1 $\frac{1}{2}$ "	40.0'
1 $\frac{3}{4}$ "	50.0'

TYPICAL SECTIONS  
SHEET 7 OF 7



COLDMILLING BITUMINOUS PAVEMENT FOR REMOVAL OF SURFACE (3 IN. THICK OR LESS)							
ROUTE	LOG MILE	TO	LOG MILE	NET LENGTH	AVERAGE WIDTH	AREA	REMARKS
				LF	LF	SY	
97	31.680	-	31.863	966.2	24.0	2576.5	
97	31.865	-	32.110	1293.6	24.0	3449.6	
97	32.110	-	32.213	543.8	24.0	1450.1	
97	45.605	-	45.750	765.6	VAR	1812.0	COLDMILL TRANSVERSE RUMBLES TO END OF PROJECT
97	45.605	-	45.670				MILL AROUND EXIST TRANSVERSE RUMBLE STRIPS AND UIP 30'X11' CONCRETE PANELS
TOTAL						9288.2	
USE						9289	

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

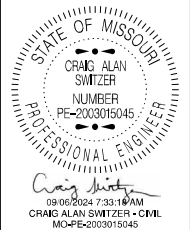
MOBILIZATION
1 LUMP SUM

MODIFIED COLDMILLING (DEPTH TRANSITIONS)							
ROUTE	LOG MILE	TO	LOG MILE	NET LENGTH	AVERAGE WIDTH	AREA	REMARKS
				LF	LF	SY	
97	32.213	-	32.241	150.0	22.0	366.7	
97	40.909	-	40.937	150.0	22.0	366.7	A9071 BRIDGE TRANSITION
97	40.997	-	41.025	150.0	22.0	366.7	A9071 BRIDGE TRANSITION
97	45.577	-	45.605	150.0	22.0	366.7	TO TRANSVERSE RUMBLES
NN	8.472	-	8.480	40.0	VAR	103.0	
TOTAL						1569.8	
USE						1570	

CONTRACTOR FURNISHED SURVEYING & STAKING
1 LUMP SUM

BITUMINOUS PAVEMENT - ROADWAY									
ROUTE	LOG MILE	TO	LOG MILE	NET LENGTH	AVERAGE WIDTH	APPROACH AREA	ROADWAY 1.5" BP-2	TACK	REMARKS
				LF	LF	SF	TONS	GAL	
97	31.680		31.863	966.2	24.0		212.0	257.7	
97	31.865	-	32.213	1837.4	24.0		403.2	490.0	
97	32.213	-	32.353	739.2	22.0		151.7	144.6	*
97	32.353	-	40.937	45323.5	22.0		9299.5	8863.3	*
97	40.997	-	45.750	25095.8	22.0		5149.2	4907.6	*
A	8.025	-	8.049	126.7	VAR	5949.0	54.4	52.9	
Z	0.004	-	0.028	126.7	VAR	5211.0	47.6	46.3	
NN	8.481	-	8.495	73.9	VAR	4779.0	43.7	42.5	
NN	8.934	-	8.958	126.7	VAR	6354.0	58.1	56.5	
YY	0.005	-	0.029	126.7	VAR	3938.4	36.0	35.0	
ENTRANCES AND IRREGULARITIES									
97	31.680	-	45.750	74289.6			1055.3		IRREGULARITIES 75 TONS/MILE
97	31.680	-	45.750			256745.7	2394.5	2282.2	ENTRANCES AND MAILBOXES
TOTALS							18905.2	17178.6	* SAFETY EDGE INCLUDED IN QUANTITY
USE							18905.2	17179	
NOTE: ANY AND ALL IRREGULARITIES MAY BE UNDERRUN AND NO ADJUSTMENT TO ANY UNIT BID COST WILL BE MADE.									

BITUMINOUS PAVEMENT - SHOULDERS													
ROUTE	LOG MILE	TO	LOG MILE	NET LENGTH	AVERAGE WIDTH	SHOULDERS 2.25" BP-1	SHOULDERS 1.5" BP-2	LINEAR GRADING CLASS 2 FOR SHOULDERS	MODIFIED LINEAR GRADING, CLASS 2	CENTER RUMBLES	SHOULDER RUMBLES	TACK	REMARKS
				LF	LF	TONS	TONS	100 FT	100 FT	STA	STA	GAL	
97	32.213	-	32.673	2428.8	4.0	134.88	90.61	48.6				86.4	*
97	32.673	-	40.937	43633.9	4.0	2423.14	1627.79	872.7		436.3	872.7	1551.4	*/BEGIN RUMBLE STRIPS SOUTH OF DADE 142
97	40.997	-	41.999	5290.6	4.0	293.80	197.37	105.8		52.9	105.8	188.1	*
97	41.999	-	42.735	3886.1	4.0	215.81	144.97		77.7	38.9	77.7	138.2	*
97	42.735	-	43.292	2941.0	4.0	163.32	109.72	58.8		29.4	58.8	104.6	*
97	43.292	-	43.733	2328.5	4.0	129.31	86.87		46.6	23.3	46.6	82.8	*
97	43.733	-	45.750	10649.8	4.0	591.42	397.30	213.0		106.5	213.0	378.7	*
TOTALS						3951.68	2654.63	1298.9	124.3	687.3	1374.6	2530.2	* SAFETY EDGE INCLUDED IN QUANTITY
USE						3951.7	2654.7	1299	124	687	1375	2531	



DATE PREPARED 9/5/2024	
ROUTE 97	STATE MO
DISTRICT SW	SHEET NO. 3
COUNTY DADE, LAWRENCE	
JOB NO. JSR0164	
CONTRACT ID.	

PROJECT NO.
BRIDGE NO.

DESCRIPTION	DATE								

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

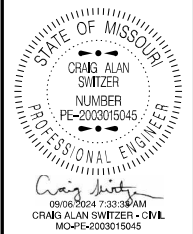
105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

PAVEMENT MARKING											
ROUTE	LOG MILE	TO	LOG MILE	LOCATION	STANDARD WATERBORNE, TYPE P BEADS PREFORMED THERMOPLASTIC MARKING						REMARKS
					4" SOLID WHITE	4" INT YELLOW	4" SOLID YELLOW	24" WHITE	RAILROAD CROSSING	30" MIDBLOCK	
					LF	LF	LF	LF	EA	EA	
97	31.680		31.710				320.0	12			
97	31.710		31.815			140.0					
97	31.730		31.730							5	
97	31.815		31.919			140.0	550.0				
97	31.825		31.825						2		
97	31.859		31.875					24			
97	31.919		32.336			550.0					
97	32.336		35.550		33940.0	4240.0					
97	35.550		35.855		3220.0	400.0	1610.0				
97	35.855		36.375		5490.0	690.0					
97	36.375		36.496		1280.0	160.0	640.0				
97	36.496		36.555		620.0	80.0					
97	36.555		36.690		1430.0	180.0	710.0				
97	36.690		38.352		17550.0	2190.0					
97	38.352		38.492		1480.0	180.0	740.0				
97	38.492		39.275		8270.0		8270.0				
97	39.275		39.393		1250.0	160.0					
97	39.393		39.454		640.0		640.0				
97	39.454		39.512		610.0	80.0	310.0				
97	39.512		39.571		620.0	80.0					
97	39.571		39.693		1290.0	160.0	640.0				
97	39.693		39.790		1020.0	130.0					
97	39.790		39.995		2160.0	270.0	1080.0				
97	39.995		40.075		840.0		840.0				
97	40.075		40.252		1870.0	230.0	930.0				
97	40.252		40.635		4040.0	510.0					
97	40.635		40.815		1900.0	240.0	950.0				
97	40.815		41.353		5680.0		5680.0				
97	41.353		41.554		2120.0	270.0	1060.0				
97	41.554		42.338		8280.0	1030.0					
97	42.338		42.517		1890.0	240.0	950.0				
97	42.517		42.817		3170.0		3170.0				
97	42.817		43.377		5910.0	740.0	2960.0				
97	43.377		43.675		3150.0	390.0					
97	43.675		44.097		4460.0	560.0	2230.0				
97	44.097		44.195		1030.0	130.0					
97	44.195		44.358		1720.0	220.0	860.0				
97	44.358		45.075		7570.0		7570.0				
97	45.075		45.435		3800.0	480.0	1900.0				
97	45.435		45.750		3330.0	420.0	3330.0	11			
TOTALS					141630	15290	48560	47	2	5	
USE					141630	63850		47	2	5	

PERMANENT AGGREGATE EDGE TREATMENT							
ROUTE	LOG MILE	TO	LOG MILE	LENGTH	AGGREGATE	PRIME MC 800	REMARKS
				MILES	200 TON/MILE*	590 GAL/MILE*	
97	32.213	-	40.937	8.724	1744.8	5147	
97	40.997	-	45.750	4.753	950.6	2804	
TOTALS					2695.4	7951	*INCLUDES 2' WIDTH BOTH SIDES OF ROADWAY

TEMPORARY EROSION CONTROL		
ITEM	QUANTITY	UNIT
ROCK DITCH CHECK	1120.0	LF
SILT FENCE	700.0	LF
SEDIMENT REMOVAL	119.0	CY
* PLACED AS DIRECTED BY THE ENGINEER		

SEEDING AND MULCHING		
ITEM	QUANTITY	UNIT
SEEDING	2.3	ACRE
MULCHING	2.3	ACRE



DATE PREPARED  
8/27/2024

ROUTE  
97

STATE  
MO

DISTRICT  
SW

SHEET NO.  
3

COUNTY  
DADE, LAWRENCE

JOB NO.  
JSR0164

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)

																EFFECTIVE: 07-01-2024			
SIGN	SIZE	AREA	QTY	TOTAL	QTY	TOTAL	SIGN									ITEM	TOTAL		
IN.	SQ.FT.	EACH	SQ.FT.	EACH	SQ.FT.	NUM.		IN.	SQ.FT.	EACH	SQ.FT.	EACH	SQ.FT.	NUM.	NUMBER	QTY	DESCRIPTION		
WARNING SIGNS								GUIDE SIGNS											
WO1-1L	48X48	16.00					TURN (SYMBOL LEFT ARROW)	E05-1	36X48	12.00					GORE EXIT	6122008		IMPACT ATTENUATOR 40 MPH (SAND BARRELS)	
WO1-1R	48X48	16.00					TURN (SYMBOL RIGHT ARROW)	E05-2	48X36	12.00					EXIT OPEN	6122009		IMPACT ATTENUATOR 45 MPH (SAND BARRELS)	
WO1-2L	48X48	16.00					CURVE (SYMBOL LEFT ARROW)	E05-2a	48X36	12.00					EXIT CLOSED	6122010		IMPACT ATTENUATOR 50 MPH (SAND BARRELS)	
WO1-2R	48X48	16.00					CURVE (SYMBOL RIGHT ARROW)	GO20-1	60X24	10.00	2	20			ROAD WORK NEXT XX MILES	6122012		IMPACT ATTENUATOR 55 MPH (SAND BARRELS)	
WO1-3L	48X48	16.00					REVERSE TURN (SYMBOL LEFT ARROW)	GO20-2	48X24	8.00	2	16			END ROAD WORK	6122014		IMPACT ATTENUATOR 60 MPH (SAND BARRELS)	
WO1-3R	48X48	16.00					REVERSE TURN (SYMBOL RIGHT ARROW)	GO20-4	36X18	4.50	2	9			PILOT CAR FOLLOW ME	6122017		IMPACT ATTENUATOR 65 MPH (SAND BARRELS)	
WO1-4L	48X48	16.00					REVERSE CURVE (SYMBOL LEFT ARROW)	GO20-4a	42X30	8.75	8	70			PILOT CAR IN USE WAIT & FOLLOW	6122019		IMPACT ATTENUATOR 70 MPH (SAND BARRELS)	
WO1-4R	48X48	16.00					REVERSE CURVE (SYMBOL RIGHT ARROW)	GO20-4a	18X12	1.50	16	24			PILOT CAR IN USE WAIT & FOLLOW	6122020		REPLACEMENT SAND BARREL	
WO1-4bL	48X48	16.00					DOUBLE ARROW REVERSE CURVE (SYMBOL LT ARROWS)	GO20-5aP	36X24	6.00					WORK ZONE (PLAQUE)	6122030		IMPACT ATTENUATOR (RELOCATION)	
WO1-4bR	48X48	16.00					DOUBLE ARROW REVERSE CURVE (SYMBOL RT ARROWS)	MO4-8a	24X18	3.00					END DETOUR	6123001		TRUCK MOUNTED ATTENUATOR (TMA)	
WO1-4cL	48X48	16.00					TRIPLE ARROW REVERSE CURVE (SYMBOL LT ARROWS)	MO4-9L	48X36	12.00					DETOUR (LEFT ARROW)	6161008	2	ADVANCED WARNING RAIL SYSTEM	
WO1-4cR	48X48	16.00					TRIPLE ARROW REVERSE CURVE (SYMBOL RT ARROWS)	MO4-9R	48X36	12.00					DETOUR (RIGHT ARROW)	6161012		BUOYS (BOATS KEEP OUT)	
WO1-6	60X30	12.50					HORIZONTAL ARROW (SYMBOL)	MO4-9P	48X12	4.00					STREET NAME (PLAQUE)	6161013		BUOYS (NO WAKE)	
WO1-6a	72X36	18.00					HORIZ. ARROW (SYMBOL ON PERMANENT BARRICADE)	MO4-10L	48X18	6.00					DETOUR (ARROW LEFT)	6161014		SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)	
WO1-7	60X30	12.50					DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)	MO4-10R	48X18	6.00					DETOUR (ARROW RIGHT)	6161025	100	CHANNELIZER (TRIM LINE)	
WO1-7a	72X36	18.00					DOUBLE HEAD HORIZ. ARROW (SYMBOL ON PERM. BARR.)	REGULATORY SIGNS								6161030		TYPE III MOVEABLE BARRICADE	
WO1-8	18X24	3.00					CHEVRON (SYMBOL)	R1-1	48X48	13.25					STOP	6161033		DIRECTION INDICATOR BARRICADE	
WO1-8a	30X36	7.50					CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)	R1-2	48TRI.	6.93					YIELD	6161040		FLASHING ARROW PANEL	
WO3-1	48X48	16.00					STOP AHEAD (SYMBOL)	R1-2a	36X36	9.00					TO ONCOMING TRAFFIC (PLAQUE)	6161047		TYPE III OBJECT MARKER	
WO3-2	48X48	16.00					YIELD AHEAD (SYMBOL)	R1-3P	30X12	2.50					ALL WAY (PLAQUE)	6161055		SEQUENTIAL FLASHING WARNING LIGHT	
WO3-3	48X48	16.00					SIGNAL AHEAD (SYMBOL)	R2-1	36X48	12.00					SPEED LIMIT XX	6161070		TUBULAR MARKER	
WO3-4	48X48	16.00	24	384			BE PREPARED TO STOP	R3-1	48X48	16.00					NO RIGHT TURN (SYMBOL)	6161095		RADAR SPEED ADVISORY SYSTEM	
WO3-5	48X48	16.00					SPEED LIMIT AHEAD	R3-2	48X48	16.00					NO LEFT TURN (SYMBOL)			CHANGEABLE MESSAGE SIGN, COMMISSION FURNISHED/RETAINED	
WO4-1L	48X48	16.00					MERGE (SYMBOL FROM LEFT)	R3-3	36X36	9.00					NO TURNS	6161096		CHANGEABLE MESSAGE SIGN W/O COMM. INTERFACE - CONTRACTOR FURNISHED/RETAINED	
WO4-1R	48X48	16.00					MERGE (SYMBOL FROM RIGHT)	R3-4	48X48	16.00					NO U-TURN (SYMBOL)			CHANGEABLE MESSAGE SIGN WITH COMM. INTERFACE - CONTRACTOR FURNISHED/RETAINED	
WO4-1aL	48X48	16.00					MERGE (ARROW SYMBOL)	R3-7L	30X30	6.25					LEFT LANE MUST TURN LEFT	6161098A		CHANGEABLE MESSAGE SIGN WITH COMM. INTERFACE - CONTRACTOR FURNISHED/RETAINED	
WO4-1aR	48X48	16.00					MERGE (ARROW SYMBOL)	R3-7R	30X30	6.25					RIGHT LANE MUST TURN RIGHT	6161099	2	INTERFACE - CONTRACTOR FURNISHED/RETAINED	
WO5-1	48X48	16.00					ROAD/BRIDGE/RAMP NARROWS	R4-1	36X48	12.00					DO NOT PASS	6162000A		WORK ZONE TRAFFIC SIGNAL SYSTEM	
WO5-3	48X48	16.00					ONE LANE BRIDGE	R4-2	36X48	12.00					PASS WITH CARE	6162002		TEMPORARY LONG-TERM RUMBLE STRIPS	
WO5-5	48X48	16.00					NARROW LANES	R4-8a	36X48	12.00					KEEP LEFT (HORIZONTAL ARROW)			TEMPORARY TRAFFIC BARRIER CONTRACTOR FURNISHED/RETAINED	
WO6-1	48X48	16.00					DIVIDED HIGHWAY (SYMBOL)	R4-7a	36X48	12.00					KEEP RIGHT (HORIZONTAL ARROW)	6173600D		TEMPORARY TRAFFIC BARRIER CONTRACTOR FURNISHED/RETAINED	
WO6-2	48X48	16.00					DIVIDED HIGHWAY END (SYMBOL)	R5-1	30X30	6.25					DO NOT ENTER			TEMPORARY TRAFFIC BARRIER CONTRACTOR FURNISHED/COMMISSION RETAINED	
WO6-3	48X48	16.00					TWO WAY TRAFFIC (SYMBOL)	R5-1a	36X24	6.00					WRONG WAY	6173602B		CONTRACTOR FURNISHED/COMMISSION RETAINED	
WO7-3a	30X24	5.00					NEXT XX MILES (PLAQUE)	R6-1L	54X18	6.75					ONE WAY ARROW (LEFT)	6174000A		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION	
WO8-1	48X48	16.00					BUMP	R6-1R	54X18	6.75					ONE WAY ARROW (RIGHT)	6175010A		RELOCATING TEMPORARY TRAFFIC BARRIER	
WO8-2	48X48	16.00					DIP	R6-2L	24X30	5.00					ONE WAY (LEFT)			TEMPORARY TRAFFIC BARRIER	
WO8-3	48X48	16.00					PAVEMENT ENDS	R6-2R	24X30	5.00					ONE WAY (RIGHT)	6176000B		COMMISSION FURNISHED/RETAINED	
WO8-4	48X48	16.00					SOFT SHOULDER	R9-9	24X12	2.00					SIDEWALK CLOSED			TEMP. TRAFFIC BARRIER HEIGHT TRANSITION	
WO8-5	48X48	16.00					SLIPPERY WHEN WET (SYMBOL)	R9-11L	24X18	3.00					SIDEWALK CLOSED AHEAD, (ARROW LEFT) CROSS HERE	6177000B		COMMISSION FURNISHED/RETAINED	
WO8-6	48X48	16.00					TRUCK CROSSING	R9-11R	24X18	3.00					SIDEWALK CLOSED AHEAD, (ARROW RIGHT) CROSS HERE	6208064A		TEMPORARY RAISED PAVEMENT MARKER	
WO8-6c	48X48	16.00					TRUCK ENTRANCE	R10-6	24X36	6.00					STOP HERE ON RED (45° ARROW)	9029400		TEMPORARY TRAFFIC SIGNALS	
WO8-7	36X36	9.00					LOOSE GRAVEL	R11-2	48X30	10.00					ROAD CLOSED	9029401		TEMPORARY TRAFFIC SIGNALS AND LIGHTING	
WO8-7a	36X36	9.00					FRESH OIL/LOOSE GRAVEL												
WO8-9	48X48	16.00					LOW SHOULDER												
WO8-11	48X48	16.00	28	448			UNEVEN LANES												
WO8-12	48X48	16.00	14	224			NO CENTER LINE												
WO8-15	48X48	16.00					GROOVED PAVEMENT												
WO8-15P	30X24	5.00					MOTORCYCLE (PLAQUE)												
WO8-17L	48X48	16.00					SHOULDER DROP-OFF (SYMBOL LEFT)												
WO8-17R	30X24	5.00	2	10			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																			

STATE OF MISSOURI

CRAG ALAN SWITZER

NUMBER

PE-2003015045

PROFESSIONAL ENGINEER

Craig Switzer

03/06/2024 7:38:54AM

CRAG ALAN SWITZER - CIVIL

MO-PE-2003015045

DATE PREPARED

8/27/2024

ROUTE

97

STATE

MO

DISTRICT

SW

SHEET NO.

3

COUNTY

DADE, LAWRENCE

JOB NO.

JSR0164

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)



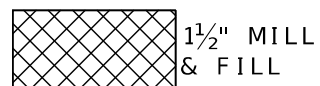
# PROJECT BEGINNING AND ENDING

ANY WORK INDICATED ON THE PLANS THAT EXTENDS BEYOND THE PROJECT LIMITS IS CONSIDERED INCIDENTAL TO AND A PART OF THE CONSTRUCTION OF THIS PROJECT.

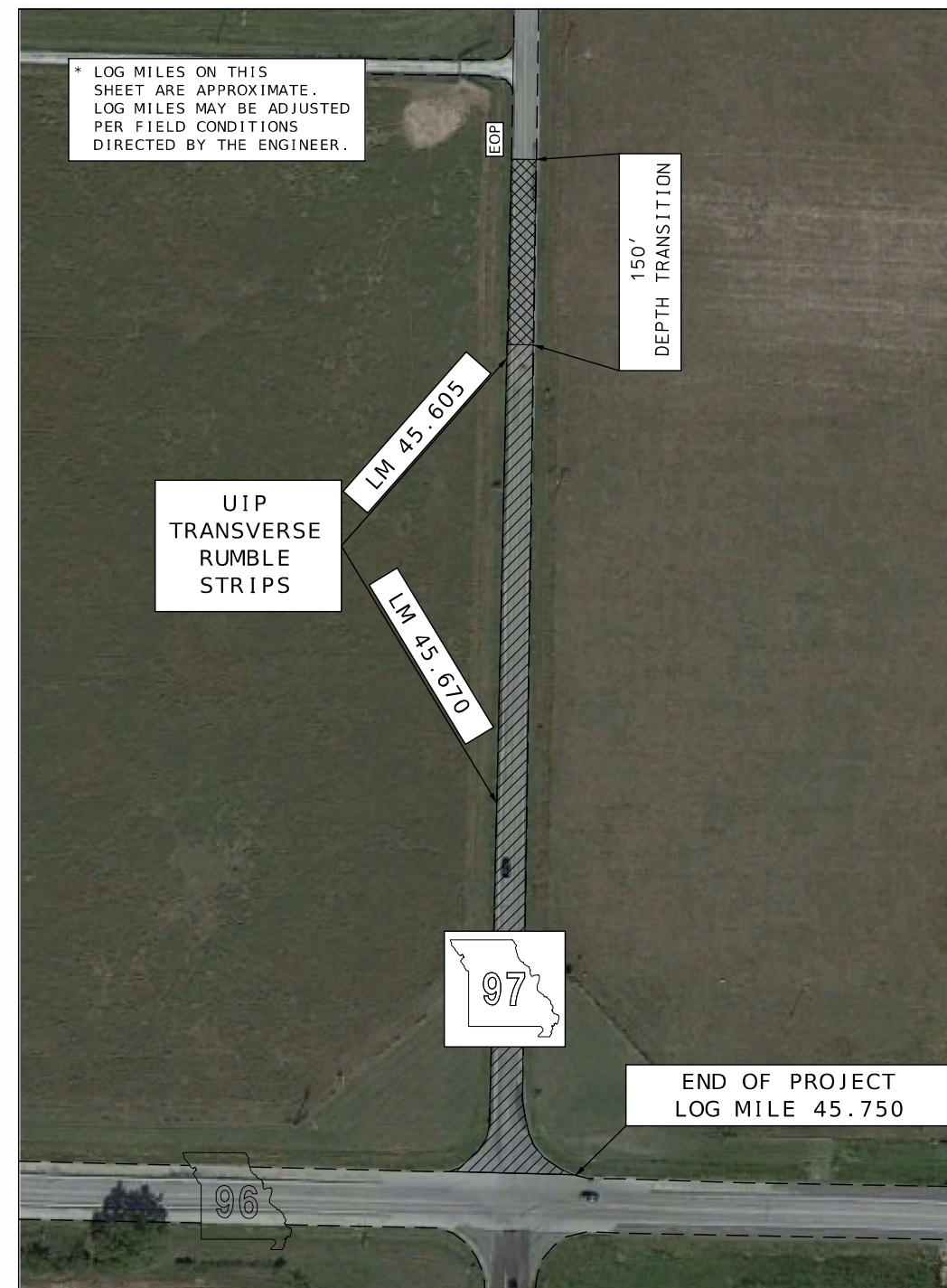
BEGINNING OF PROJECT



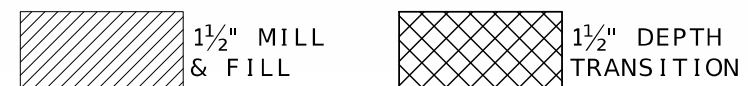
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END OF PROJECT



NOT TO SCALE

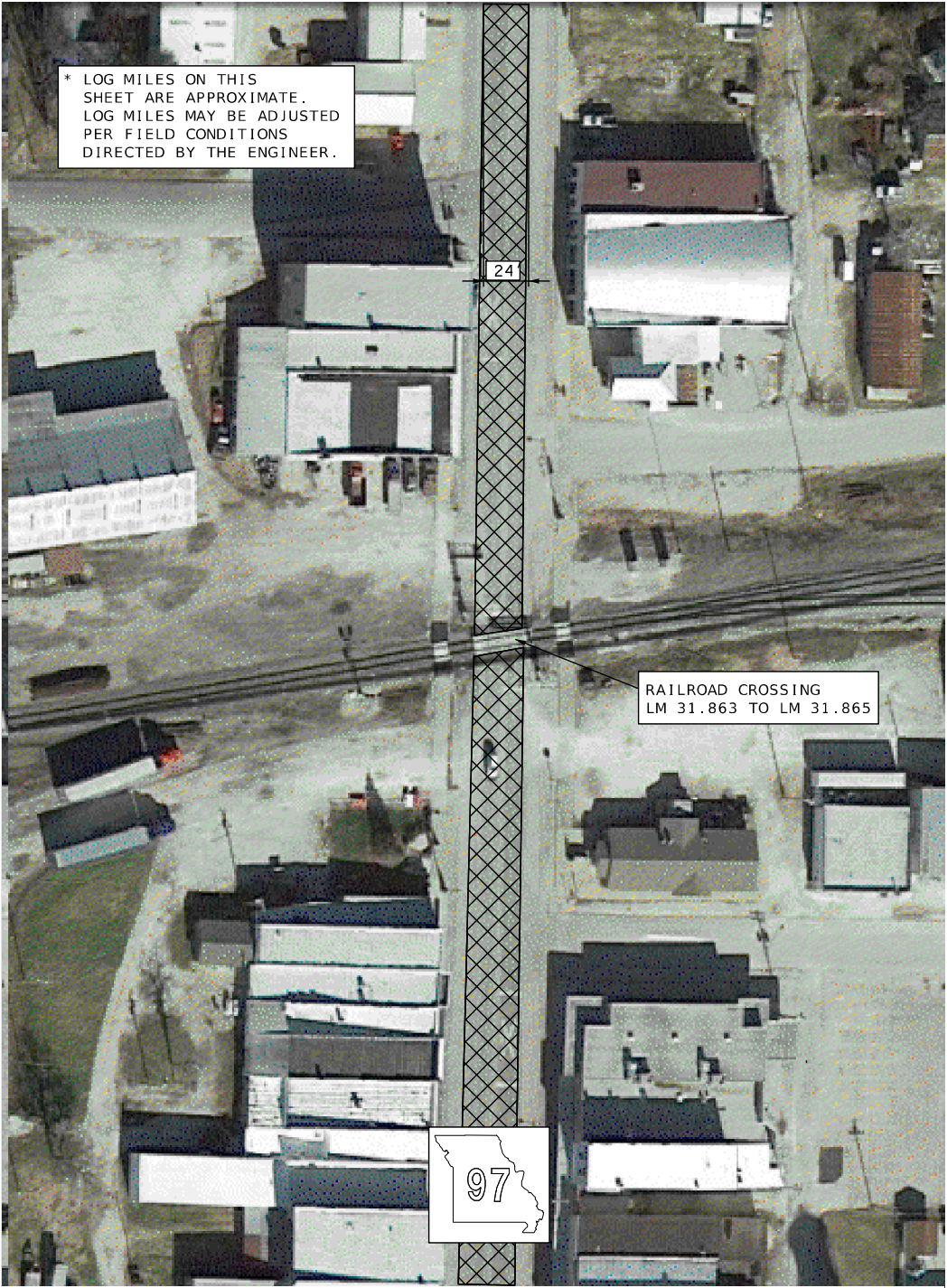


SPECIAL SHEET  
SHEET 1 OF 3

[illegible]



RAILROAD



1 1/2" MILL  
& FILL

NOT TO SCALE

SPECIAL SHEET  
SHEET 2 OF 3

STATE OF MISSOURI

CRAIG ALAN SWITZER

NUMBER

PE-2003015045

PROFESSIONAL ENGINEER

09/08/2024 7:37:19 AM

CRAIG ALAN SWITZER - CIVIL

MO-PE-2003015045

DATE PREPARED

8/27/2024

ROUTE

97

DISTRICT

SW

STATE

MO

SHEET NO.

5

COUNTY

DADE, LAWRENCE

JOB NO.

JSR0164

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

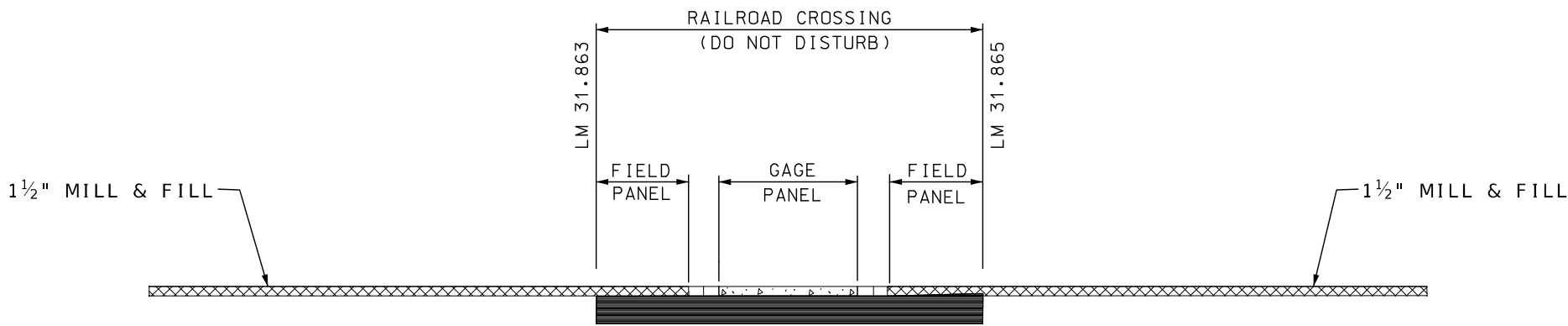
DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

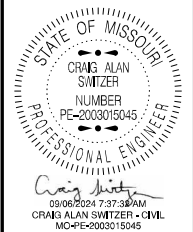
105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)



# RAILROAD CROSSING



ROUTE 97  
LOG MILE 31.864  
BNSF RAILROAD CROSSING  
NOT TO SCALE



DATE PREPARED  
8/27/2024

ROUTE 97 STATE MO

DISTRICT SW SHEET NO. 6

COUNTY  
DADE, LAWRENCE

JOB NO.  
JSR0164

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)

NOT TO SCALE

SPECIAL SHEET  
SHEET 3 OF 3



STATE OF MISSOURI

CRAIG ALAN  
SWITZER

NUMBER  
PE-2003015045

PROFESSIONAL ENGINEER

*Craig Switzer*

09/06/2024 7:37:56AM  
CRAIG ALAN SWITZER - CIVIL  
MO-PE-2003015045

8 / 12 / 2024

97	MO
CLUB LOG	CLUB LOG

3W	8
COUNTY	

JOB NO.

CONTRACT ID.

BRIDGE NO.

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DESCRIPTION

DATE \_\_\_\_\_

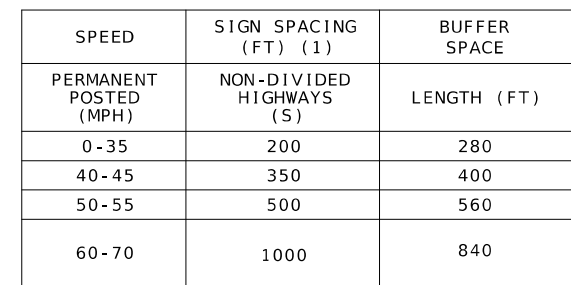


MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

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



MoDOT  
1-888-ASK-MO  
JEFF



## MOVING FLAGGER OPERATION (UNDIVIDED HIGHWAY)

TRAFFIC CONTROL  
SHEET 2 OF 5

TRAFFIC CONTROL  
SHEET 3 OF 5

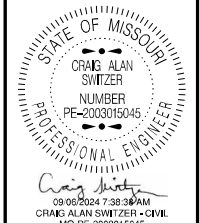


MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

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



REVISÉD: 2/5/2024



DATE PREPARED

8 / 12 / 2024

ROUTE	STATE
07	MO

97	MO
DISTRICT	SHEET NO.

SW	11
----	----

COUNTY

DADE, LAWRENCE

JOB NO.

JSR0164

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

[illegible]MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

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

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.

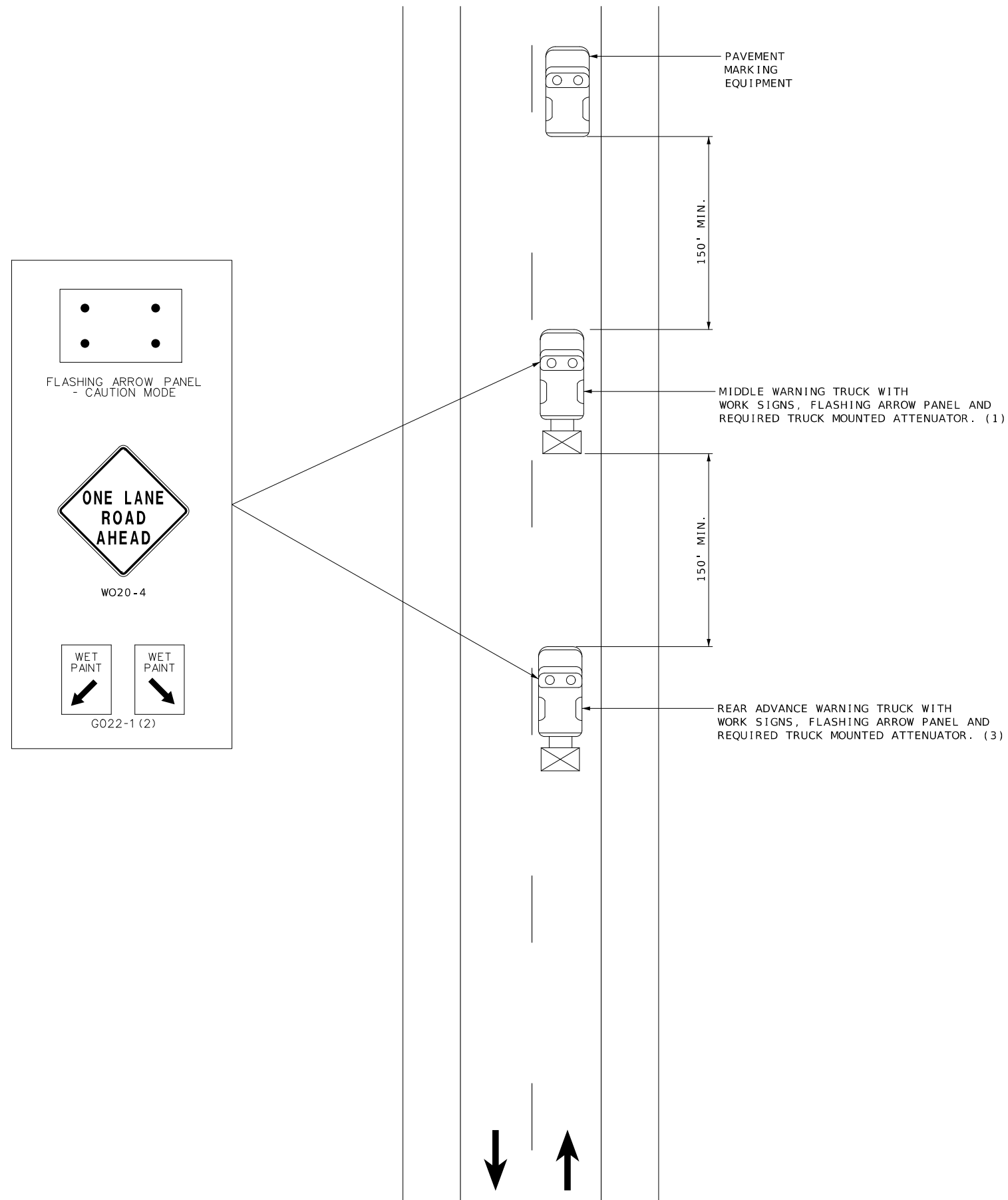
VEHICLE-MOUNTED SIGNS SHALL BE MOUNTED IN A MANNER SUCH THAT THEY ARE NOT OBSCURED BY EQUIPMENT OR SUPPLIES. SIGN LEGENDS ON VEHICLE-MOUNTED SIGNS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS.

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

(1) 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.



## STRIPING ON TWO-LANE HIGHWAY

NOT TO SCALE

TRAFFIC CONTROL  
SHEET 5 OF 5