MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
PLANS FOR PROPOSED
STATE HIGHWAY

GREENE COUNTY

SECTION 04 T29N R22W

DESIGN DESIGNATION

MELVILLE ROAD/COUNTY ROAD 127

A.A.D.T. - 2025 = 2,182
A.A.D.T. - 2045 = 2,411
D.H.V. = 50%/50%
T = 11.00%
V = 35 M.P.H
D = 7.43%

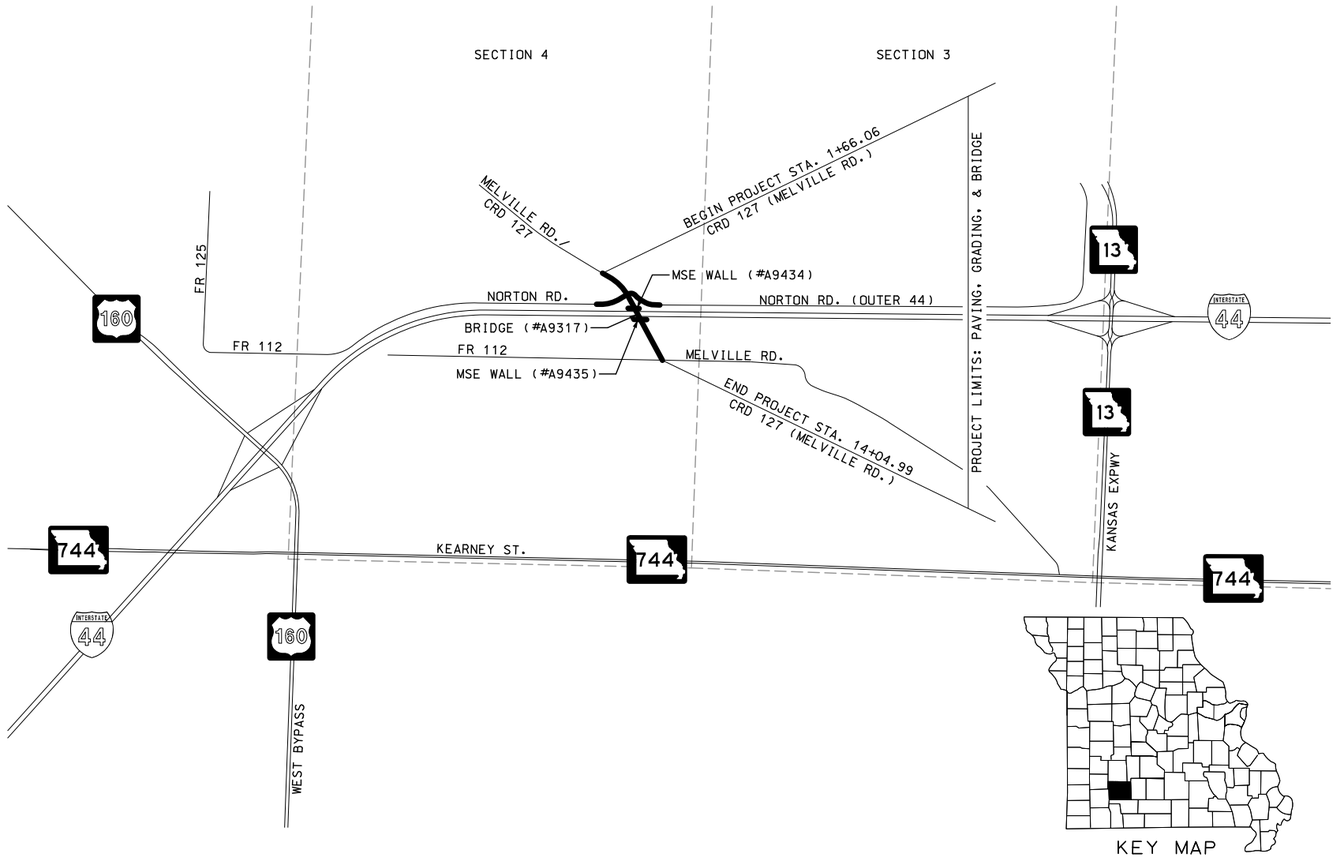
FUNCTIONAL CLASSIFICATION:
MELVILLE RD. - MAJOR COLLECTOR
CRD 127/NORTON RD. - LOCAL

NORMAL RIGHT OF WAY

CONVENTIONAL SYMBOLS
(USED IN PLANS)

	EXISTING	NEW
BUILDINGS AND STRUCTURES		
GUARD RAIL		
GUARD CABLE		
CONCRETE RIGHT-OF-WAY MARKER		
STEEL RIGHT-OF-WAY MARKER		
LOCATION SURVEY MARKER		
UTILITIES		
FIBER OPTICS	-FO-	~~FO~~
OVERHEAD CABLE TV	-OTV-	~~OTV~~
UNDERGROUND CABLE TV	-UTV-	~~UTV~~
OVERHEAD TELEPHONE	-OT-	~~OT~~
UNDERGROUND TELEPHONE	-UT-	~~UT~~
OVERHEAD POWER	-OE-	~~OE~~
UNDERGROUND POWER	-UE-	~~UE~~
SANITARY SEWER	-S-	S
STORM SEWER	-SS-	~~SS~~
GAS	-G-	~~G~~
WATER	-W-	~~W~~
MANHOLE	SAN	
FIRE HYDRANT	HYD	
WATER VALVE	WV	
WATER METER	WM	
DROP INLET	D	
DITCH BLOCK		
GROUND MOUNTED SIGN	SIGN	
LIGHT POLE		
H-FRAME POWER POLE		
TELEPHONE PEDESTAL	PED	
FENCE		
CHAIN LINK	-V-	
WOVEN WIRE	-X-	
GATE POST		
BENCHMARK	BM	
REMOVE	(R)	
USE IN PLACE	(UIP)	
ADJUST TO GRADE	(ATG)	
DO NOT DISTURB	(DND)	
BY OTHERS	(BO)	
TO BE ABANDONED	(TBA)	
GRADING LIMITS	----------	

NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES



THE EXISTENCE AND APPROXIMATE LOCATION OF UTILITY FACILITIES KNOWN TO EXIST, AS SHOWN ON THE PLANS, ARE BASED ON THE BEST INFORMATION AVAILABLE TO THE COMMISSION AT THIS TIME. THIS INFORMATION IS PROVIDED BY THE COMMISSION "AS-IS" AND THE COMMISSION EXPRESSLY DISCLAIMS ANY REPRESENTATION OR WARRANTY AS TO THE COMPLETENESS, ACCURACY, OR SUITABILITY OF THE INFORMATION FOR ANY USE. RELIANCE UPON THIS INFORMATION IS DONE AT THE RISK AND PERIL OF THE USER, AND THE COMMISSION SHALL NOT BE LIABLE FOR ANY DAMAGES THAT MAY ARISE FROM ANY ERROR IN THE INFORMATION.

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INDEX OF SHEETS

LENGTH OF PROJECT

MELVILLE RD.

BEGINNING OF PROJECT	STA. 1+66.06
END OF PROJECT	STA. 14+04.99
APPARENT LENGTH	1,238.93 FEET
EQUATIONS AND EXCEPTIONS:	0.00 FEET
TOTAL PROJECT CORRECTIONS	0.00 FEET
NET LENGTH OF PROJECT	1,238.93 FEET
STATE LENGTH	0.235 MILES

NORTON RD.

BEGINNING OF PROJECT	STA. 874+76.64
END OF PROJECT	STA. 883+58.98
APPARENT LENGTH	882.34 FEET
EQUATIONS AND EXCEPTIONS:	0.00 FEET
TOTAL PROJECT CORRECTIONS	0.00 FEET
NET LENGTH OF PROJECT	882.34 FEET
STATE LENGTH	0.167 MILES

FOR INFORMATION ONLY
ESTIMATED DISTURBED ACRES 3.557 ACRES

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/20/2024
ROUTE CRD 127 | STATE MO
DISTRICT SW | SHEET NO. 1
COUNTY GREENE
JOB NO. J8S3156
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

REV.	DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

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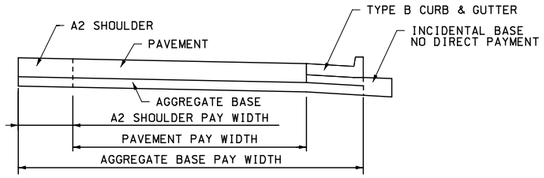
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

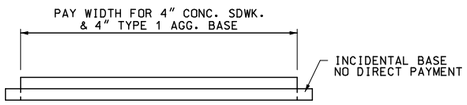
MELVILLE RD.			
OPTIONAL PAVEMENT		ASPHALT FACTORS	
OPTION A – HMA	OPTION B – PCCP		COMBINED FACTOR
2″ BP-1 W/ PG64-22 8″ BB W/ PG64-22 6″ TYPE 1 OR 5 AGG. BASE	8″ PCCP 15′ JOINTS 1.25″ DOWELS 6″ TYPE 1 OR 5 AGG. BASE	BP-1 W/ PG64-22 BB W/ PG64-22	1.990 TONS/CY 2.000 TONS/CY

NORTON RD.			
OPTIONAL PAVEMENT		ASPHALT FACTORS	
OPTION A – HMA	OPTION B – PCCP		COMBINED FACTOR
2″ BP-1 W/ PG64-22 8″ BB W/ PG64-22 6″ TYPE 1 OR 5 AGG. BASE	8″ PCCP 15′ JOINTS 1.25″ DOWELS 6″ TYPE 1 OR 5 AGG. BASE	BP-1 W/ PG64-22 BB W/ PG64-22	1.990 TONS/CY 2.000 TONS/CY

TACK COAT APPLICATION RATES		
SURFACE TYPE	UNDILUTED	20% DILUTED
NEW ASPHALT SURFACES	0.05 GAL/SY	0.06 GAL/SY
EXISTING ASPHALT OR CONCRETE SURFACES	0.08 GAL/SY	0.10 GAL/SY
COLDMILLED ASPHALT OR CONCRETE SURFACES	0.10 GAL/SY	0.13 GAL/SY



PAVEMENT



SIDEWALK

NOTES:

1. SEE PLAN SHEETS FOR SAWCUT LOCATIONS. NO DIRECT PAY FOR PAVEMENT SAWCUTS.

2. WHEN CONCRETE OPTIONAL PAVEMENT IS USED, CONTRAST PAVEMENT MARKINGS ARE REQUIRED. NO DIRECT PAYMENT WILL BE MADE FOR CONTRAST MARKINGS.

3. THE THINNER PAVEMENT OPTION OF EACH OPTIONAL PAIR WAS USED IN THE COMPUTATION OF EARTHWORK FOR THIS PROJECT.

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

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DATE PREPARED
12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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MELVILLE RD./NORTON RD.

TYPICAL SECTIONS
SHEET 1 OF 12

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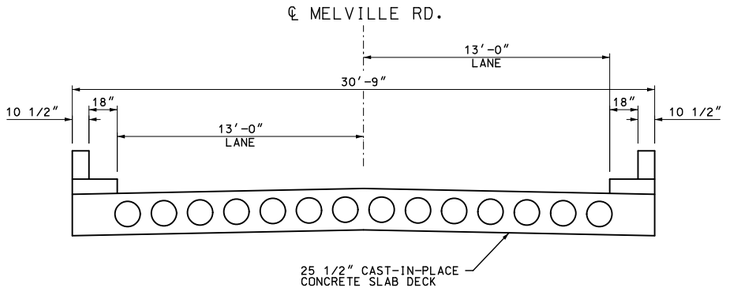
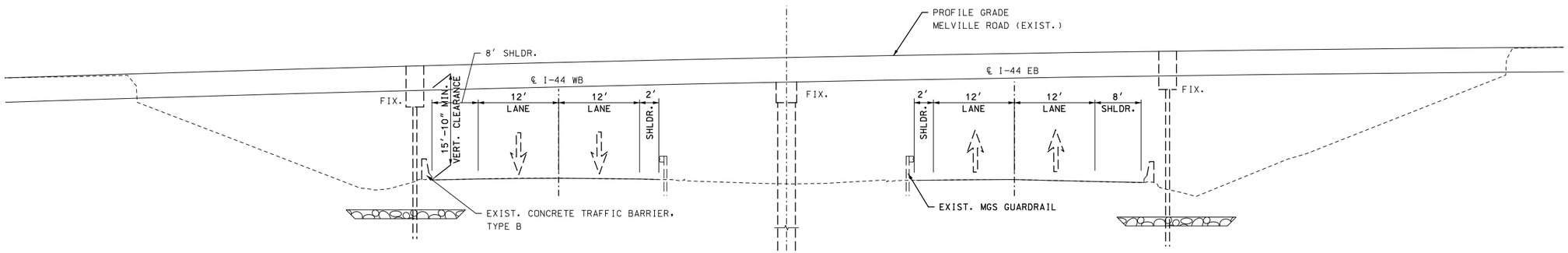
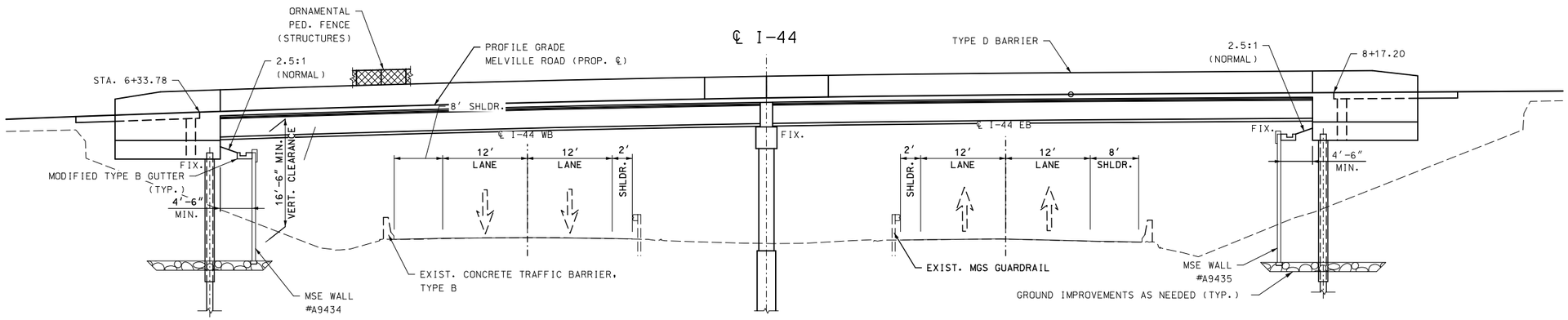


1 EXISTING MELVILLE RD. BRIDGE



2 I-44 UNDER BRIDGE (A0441) - EXISTING
STA. 880+20.16



2A I-44 UNDER PROPOSED BRIDGE (A9317) - NON-ULTIMATE
STA. 880+20.16

MELVILLE RD.

TYPICAL SECTIONS
SHEET 2 OF 12

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
J8S3156

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BRIDGE NO.

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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
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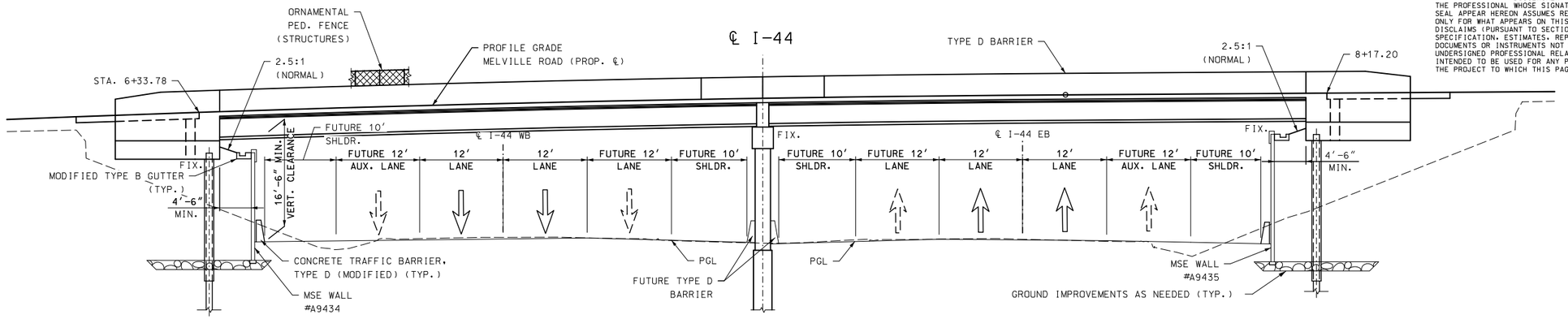
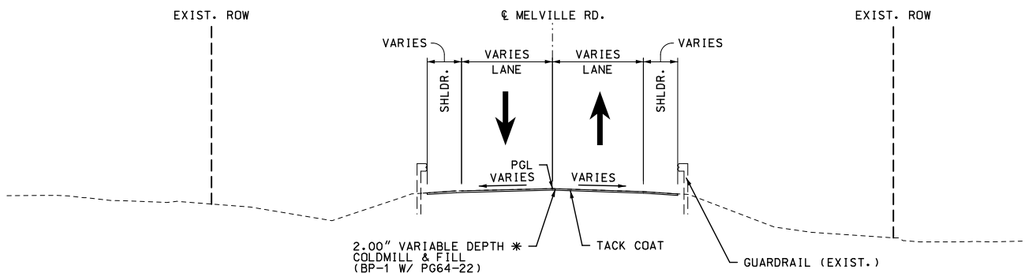


2B I-44 UNDER PROPOSED BRIDGE (A9317) - ULTIMATE
STA. 880+20.16



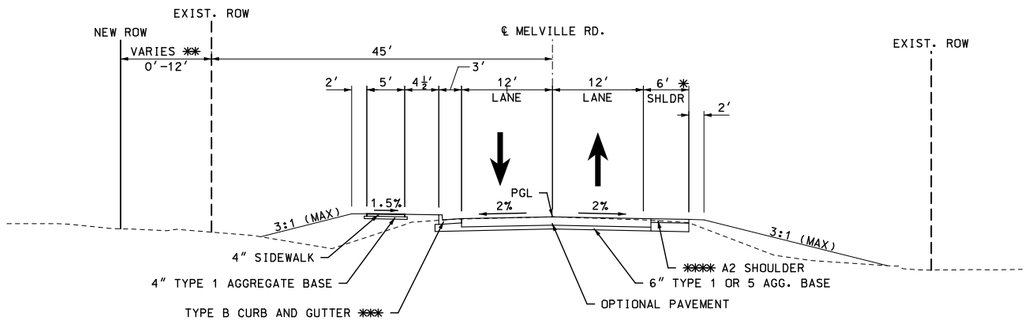
✳ NO ADDITIONAL PAYMENT WILL BE MADE FOR ADDITIONAL COLDMILLING (UP TO 3") REQUIRED TO REMOVE ENTIRE TOP LIFT DUE TO DELAMINATION. THIS APPLIES TO ENTIRE PROJECT LIMITS.

SUPERELEVATION TABLE MELVILLE RD
CURVE PR_MELVILLE_1

-5.47% | -5.47%	STA. 0+47.10
-6.40% | -6.40%	STA. 0+74.64
-6.40% | -6.40%	STA. 3+53.98
-2% | -2%	STA. 4+38.60
2% | -2%	STA. 6+84.24

3 MELVILLE RD.
STA. 1+66.06 TO STA. 3+65.73

INTERSECTION OMISSION FROM STA. 3+65.73 TO STA. 5+01.69



✳ TAPERS FROM 6' TO 5' FROM STA.8+29.42 TO STA. 8+67.62

✳✳ VARIES FROM 0' TO 12' FROM STA.9+98.04 TO STA. 11+21.79

✳✳ NEW R/W ENDS STA.11+21.79

✳✳✳ "TIPPED UP" CURB FROM STA.4+89.94 TO STA. 5+82.08

✳✳✳✳ FULL DEPTH SHOULDER FROM STA.5+04.04 TO STA. 6+13.78

4 MELVILLE RD.
STA. 5+04.04 TO STA. 6+13.78
STA. 8+37.20 TO STA. 10+02.84

INTERSECTION OMISSION FROM STA. 3+65.73 TO STA. 5+04.04
BRIDGE OMISSION FROM STA. 6+13.78 TO STA. 8+37.20

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RYAN STEHN
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PROFESSIONAL ENGINEER

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DATE PREPARED
12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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REV.	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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MELVILLE RD.
TYPICAL SECTIONS
SHEET 3 OF 12

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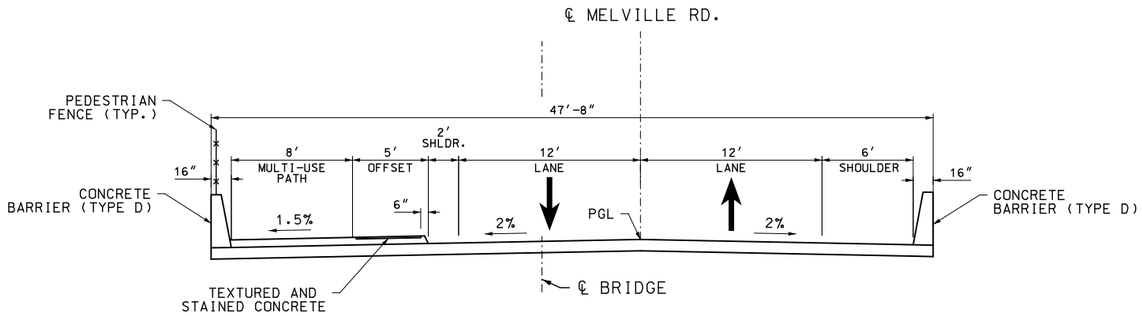
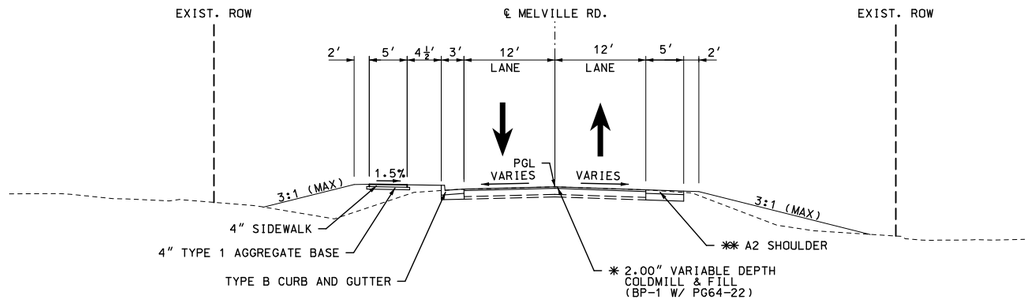


5 MELVILLE RD. BRIDGE
STA. 6+33.21 TO STA. 8+17.77

BRIDGE APPROACH SLAB OMISSION
FROM STA. 6+13.78 TO STA. 6+33.21
AND FROM STA. 8+17.77 TO STA. 8+37.20



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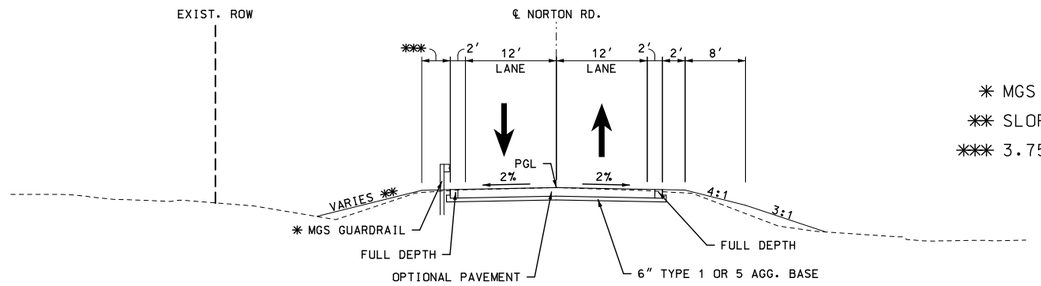
6 MELVILLE RD.
STA. 10+02.84 TO STA. 13+50.24

INTERSECTION OMISSION FROM STA. 13+50.24 TO STA. 14+04.99

SUPERELEVATION TABLE NORTON
CURVE PR_NORTON_1

2%	-2%
STA. 874+83.53	
2%	2%
STA. 875+66.29	
6.75%	6.75%
STA. 876+65.18	
2%	2%
STA. 878+46.83	



✳ MGS GUARDRAIL FROM STA. 879+93.24 TO 880+90.31
✳✳ SLOPE 2:1 FROM STA. 879+93.24 TO 880+90.31
✳✳✳ 3.75′ FROM STA. 879+93.24 TO 880+90.31

7 NORTON RD.
STA. 874+76.64 TO STA. 883+58.98

INTERSECTION OMISSION FROM STA. 878+43.30 TO STA. 879+93.24

MELVILLE RD./NORTON RD.
TYPICAL SECTIONS
SHEET 4 OF 12

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/20/2024
ROUTE CRD 127 | STATE MO
DISTRICT SW | SHEET NO. 2
COUNTY GREENE
JOB NO. J8S3156
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DATE	DESCRIPTION

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

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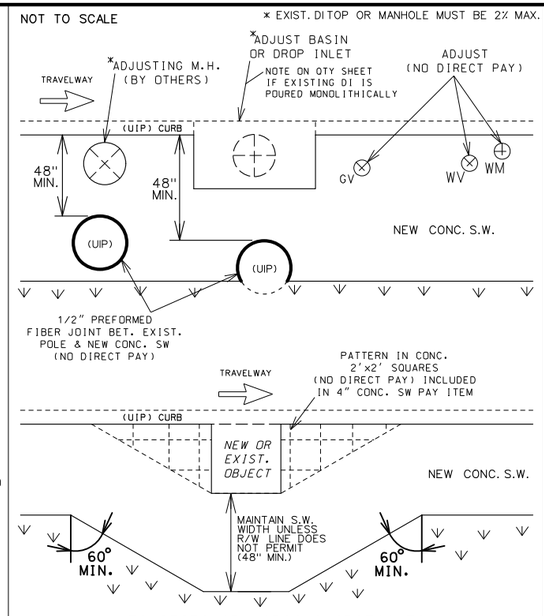
1. CONCRETE SIDEWALK, CURB RAMP AND DETECTABLE WARNING DEVICE (TRUNCATED DOMES) DETAILS SHALL CONFORM TO ADA REQUIREMENTS UNLESS NOTED OTHERWISE IN THESE PLANS. FOR SIDEWALK JOINT AND CURB DETAILS, SEE STANDARD PLAN 609.00.
2. TINTED CONCRETE SHALL NOT BE USED. TRUNCATED DOMES SHALL BE OF A COLOR CONTRASTING 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.

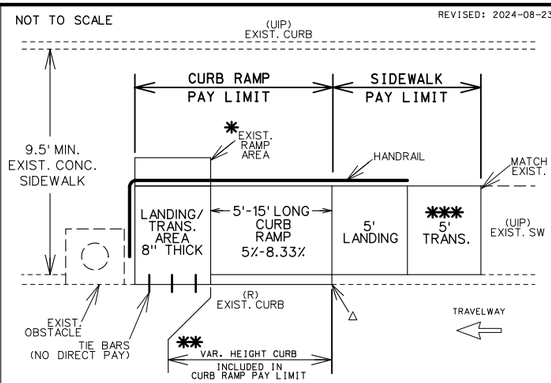
NOT TO SCALE



UTILITIES OR VARIOUS OBSTACLES

NO UTILITY POLES ARE ALLOWED IN THE RAMP LIMITS, BUT ARE PERMITTED IN THE LANDING AREAS AND SIDEWALK WITH A MINIMUM OF 4' CLEARANCE AROUND THE POLE

NOT TO SCALE — REVISED: 2024-08-23



△ MATCH EXIST CURB

* FILL IN WHERE EXIST. RAMP WAS. SIZE WILL VARY. (SEE TYPICAL SHEET)

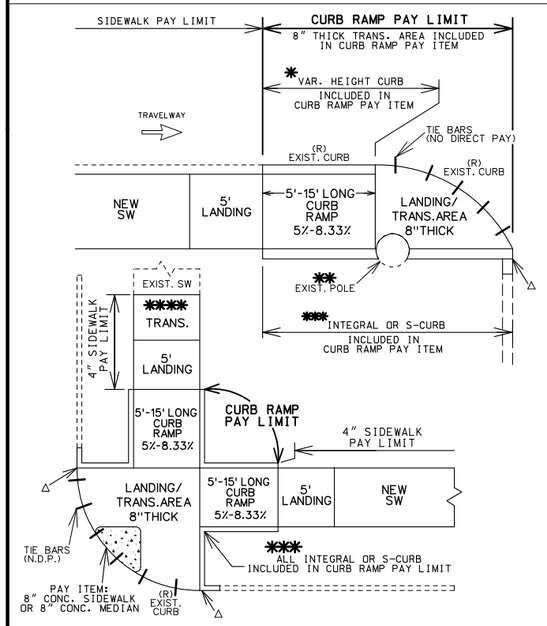
** VAR. HEIGHT CURB ALONG ROADSIDE MAY BE CONSTRUCTED MONOLITHIC OR SEPERATE DEPENDING ON CONST. OPERATIONS.

*** TRANSITION PANEL(S) TO BLEND CROSS SLOPE DISCREPENCY WARP RATE NOT TO EXCEED 0.5% PER FT

HANDRAIL 2' OFF E.O.P (SEE HANDRAIL STANDARDS)

CURB RAMP - IN EXISTING 9.5'+ WIDE SW

PAY LIMITS



△ MATCH EXIST CURB HEIGHT, OPTIONAL 1' TIE-IN TO EXIST CURB

* VAR. HEIGHT CURB ALONG ROADSIDE MAY BE CONST. MONOLITHIC OR SEP. DEPENDING ON CONST. OPERATIONS.

** NO UTILITY POLES ARE ALLOWED IN THE RAMP LIMITS, BUT ARE PERMITTED IN THE LANDING AND TRANSITION AREAS.

*** TYPE OF CURB WILL DEPEND ON FIELD CONDITIONS.

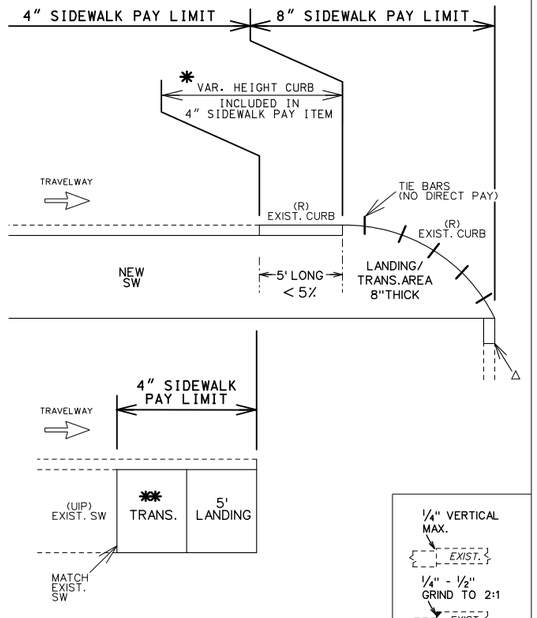
*** TRANSITION PANEL(S) TO BLEND CROSS SLOPE DISCREPENCY WARP RATE NOT TO EXCEED 0.5% PER FT

CURB RAMP

PAY LIMITS

WHEN RAMP AREA IS LONGER THAN 5'AND BETW. 5%-8.33% GRADE, IT IS CONSIDERED A CURB RAMP

NOT TO SCALE



△ MATCH EXIST CURB HEIGHT (1' TAPER FROM SIDEWALK UP TO EXIST CURB HEIGHT)

* VAR. HEIGHT CURB ALONG ROADSIDE MAY BE CONSTRUCTED MONOLITHIC OR SEPERATE DEPENDING ON CONST. OPERATIONS. DOWEL TO EXIST. GUTTER/PAVEMENT (NO DIRECT PAY).

** TRANSITION PANEL(S) TO BLEND CROSS SLOPE DISCREPENCY WARP RATE NOT TO EXCEED 0.5% PER FT

SIDEWALK

PAY LIMITS

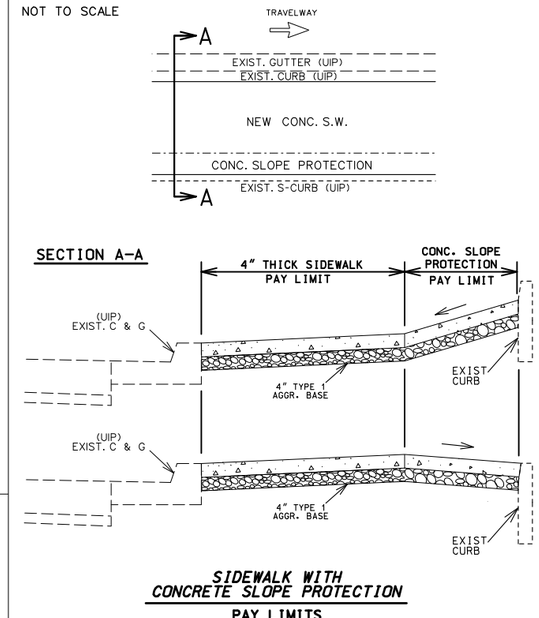
WHEN RAMP AREA IS LESS THAN 5% GRADE, IT IS CONSIDERED SIDEWALK

NOT TO SCALE

JOINT GRINDING

TRIP HAZARDS 622-99.03

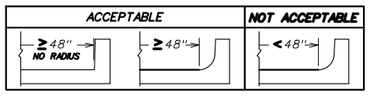
NOT TO SCALE



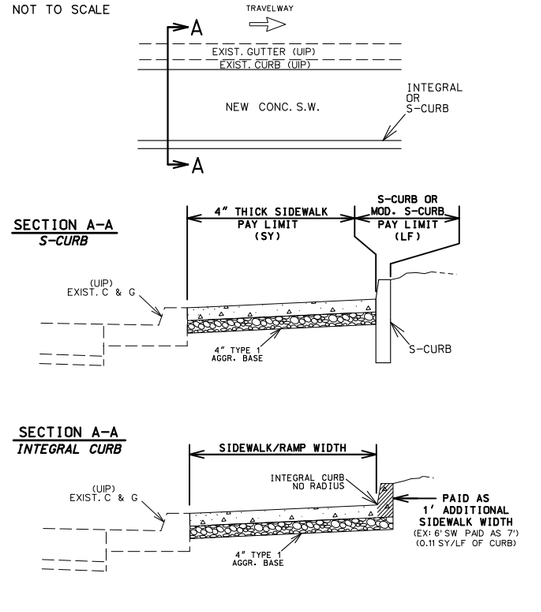
SIDEWALK WITH CONCRETE SLOPE PROTECTION

PAY LIMITS

INTEGRAL CURB RADIUS



NOT TO SCALE



SECTION A-A INTEGRAL CURB WITH RADIUS

SIDEWALK & RAMP WITH CURB

PAY LIMITS

ADA LIBRARY TYPICAL

TYPICAL SHEET
SHEET 5 OF 12

REV. DESCRIPTION DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

STATE OF MISSOURI — RYAN STEHN — NUMBER PE-2020000086 — PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	2

COUNTY: GREENE

JOB NO.: J8S3156

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.:

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

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1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

PERPENDICULAR – TYPE 1

TYPE 1-A

LENGTH (LF)	8			12			16			REMARKS
WIDTH (LF)	4	5	6	4	5	6	4	5	6	
TRUNCATED DOMES SF	–	10.0	12.0	–	10.0	12.0	–	10.0	12.0	
CURB RAMP SY	–	8.2	12.8	–	10.8	12.7	–	13.5	15.8	
CONC. SIDEWALK SY	–	5.6	6.4	–	5.6	6.4	–	4.9	6.4	
TYPE 1 AGGREGATE SY	–	13.8	16.0	–	16.4	19.1	–	18.3	22.2	
ADA LINEAR GRADING LF	–	22.0	22.0	–	27.5	27.5	–	30.0	30.5	
SODDING SY	–	5.8	5.7	–	6.8	6.9	–	7.5	7.9	

TYPE 1-B

LENGTH (LF)	8			12			16			REMARKS
WIDTH (LF)	4	5	6	4	5	6	4	5	6	
TRUNCATED DOMES SF	–	22.0	24.0	–	22.0	24.0	–	22.0	24.0	
CURB RAMP SY	–	10.9	13.1	–	13.6	16.3	–	16.2	19.3	
CONC. SIDEWALK SY	–	5.6	6.3	–	5.6	6.4	–	4.9	5.7	
TYPE 1 AGGREGATE SY	–	16.5	19.4	–	19.2	22.7	–	21.1	25.0	
ADA LINEAR GRADING LF	–	28.0	28.0	–	34.5	34.5	–	38.0	38.0	
SODDING SY	–	7.4	7.8	–	8.4	8.7	–	9.1	9.5	

TYPE 1-C

LENGTH (LF)	8			12			16			REMARKS
WIDTH (LF)	4	5	6	4	5	6	4	5	6	
TRUNCATED DOMES SF	–	10.0	12.0	–	10.0	12.0	–	10.0	12.0	
CURB RAMP SY	–	8.8	10.3	–	11.5	13.4	–	14.1	16.5	
CONC. SIDEWALK SY	–	5.6	6.4	–	5.6	6.4	–	4.9	5.7	
TYPE 1 AGGREGATE SY	–	14.4	16.7	–	17.1	19.8	–	19.0	22.1	
ADA LINEAR GRADING LF	–	22.0	22.0	–	26.5	26.5	–	30.0	30.0	
SODDING SY	–	11.5	11.7	–	13.5	13.5	–	15.0	15.2	

TYPE 1-D

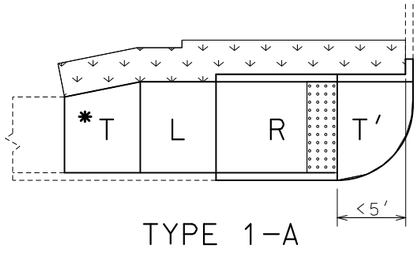
LENGTH (LF)	8			12			16			REMARKS
WIDTH (LF)	4	5	6	4	5	6	4	5	6	
TRUNCATED DOMES SF	–	18.0	24.0	–	18.0	24.0	–	18.0	24.0	
CURB RAMP SY	–	18.6	22.8	–	24.0	29.0	–	29.3	35.3	
CONC. SIDEWALK SY	–	11.2	12.8	–	11.2	12.8	–	9.8	11.4	
TYPE 1 AGGREGATE SY	–	29.8	35.6	–	35.2	41.8	–	39.1	46.7	
ADA LINEAR GRADING LF	–	42.0	50.0	–	57.0	61.0	–	67.0	72.0	
SODDING SY	–	11.0	11.3	–	13.0	13.3	–	14.5	14.9	

TYPE 1-E

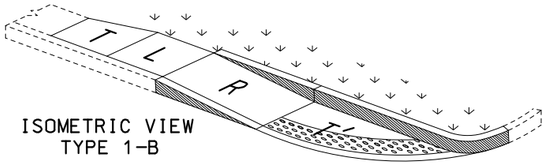
LENGTH (LF)	8			12			16			REMARKS
WIDTH (LF)	4	5	6	4	5	6	4	5	6	
TRUNCATED DOMES SF	–	18.0	24.0	–	18.0	24.0	–	18.0	24.0	
CURB RAMP SY	–	14.8	19.0	–	20.1	25.2	–	25.5	31.4	
CONC. SIDEWALK SY	–	11.2	12.8	–	11.2	12.8	–	9.8	11.4	
TYPE 1 AGGREGATE SY	–	26.0	31.8	–	31.3	38.0	–	35.3	42.8	
ADA LINEAR GRADING LF	–	43.0	46.0	–	52.0	55.0	–	59.0	62.0	
SODDING SY	–	13.3	13.6	–	16.0	16.9	–	18.6	19.3	

TYPE 1-F

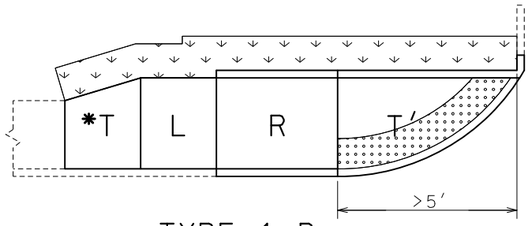
LENGTH (LF)	8			12			16			REMARKS
WIDTH (LF)	4	5	6	4	5	6	4	5	6	
TRUNCATED DOMES SF	–	14.0	16.0	–	14.0	16.0	–	14.0	16.0	
CURB RAMP SY	–	15.5	19.0	–	20.8	25.2	–	26.2	31.4	
CONC. SIDEWALK SY	–	11.2	12.8	–	11.2	12.8	–	9.8	11.4	
TYPE 1 AGGREGATE SY	–	26.7	31.8	–	32.0	38.0	–	36.0	42.8	
ADA LINEAR GRADING LF	–	43.0	46.0	–	52.0	55.0	–	59.0	62.0	
SODDING SY	–	18.4	18.8	–	22.4	22.8	–	25.6	25.9	



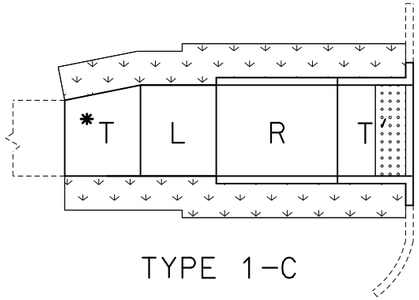
TYPE 1-A



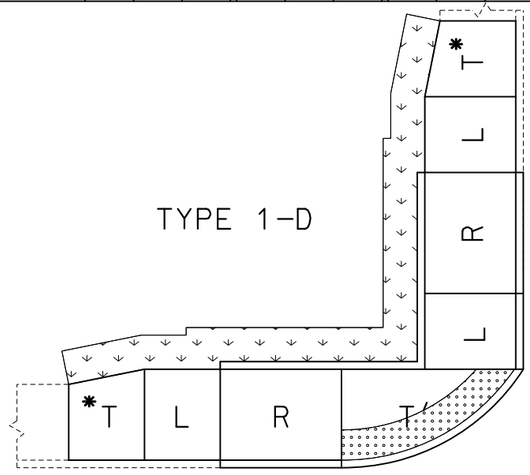
ISOMETRIC VIEW
TYPE 1-B



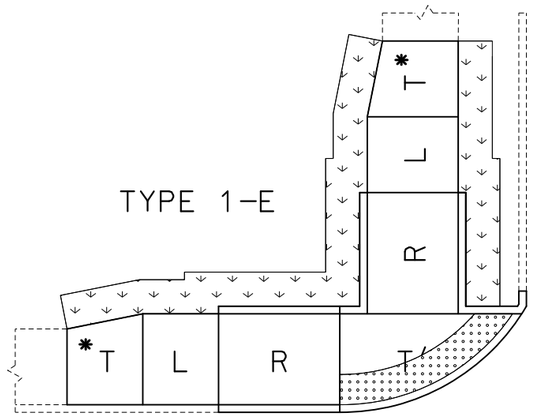
TYPE 1-B



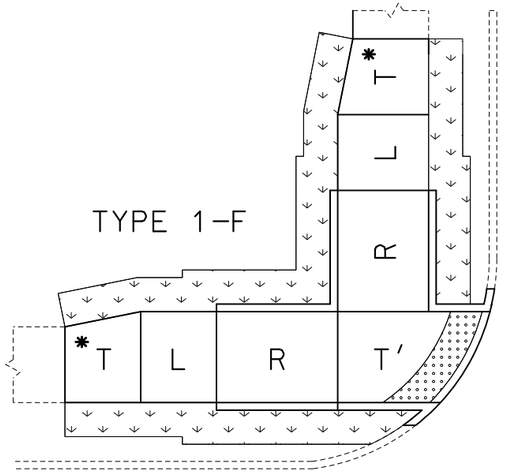
TYPE 1-C



TYPE 1-D



TYPE 1-E



TYPE 1-F

REVISED: 2022-05-18

T′- IS TO BE 8" THICK AT ALL PAVED APPROACHES AND STREETS IF WITHIN THE RADIUS. PAID FOR AS CONCRETE CURB RAMP

T – TRANSITION TO EXISTING SW OR PAVED APPROACH (LANDING PREFERED AT PAVED APPROACH 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 INTO 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

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

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

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ENGINEERING CORPORATION - 000631

ADA LIBRARY TYPICAL

TYPE 1

PERPENDICULAR CURB RAMPS

TYPICAL SHEET 6 OF 12

REV.

PARALLEL – TYPE 2

TYPE 2-A

LENGTH (LF)	8			12			16			REMARKS
WIDTH (LF)	4	5	6	4	5	6	4	5	6	
TRUNCATED DOMES SF	–	10.0	10.0	–	10.0	10.0	–	10.0	10.0	
CURB RAMP SY	–	9.1	10.6	–	11.8	13.7	–	14.4	16.8	
CONC. SIDEWALK SY	–	5.6	6.4	–	4.9	5.7	–	4.9	5.7	
TYPE 1 AGGREGATE SY	–	14.7	17.0	–	16.7	19.4	–	19.3	22.5	
ADA LINEAR GRADING LF	–	26.0	26.0	–	29.0	29.0	–	33.0	33.0	
SODDING SY	–	8.0	8.3	–	8.6	8.8	–	9.6	9.8	

TYPE 2-B

LENGTH (LF)	8			12			16			REMARKS
WIDTH (LF)	4	5	6	4	5	6	4	5	6	
TRUNCATED DOMES SF	–	10.0	10.0	–	10.0	10.0	–	10.0	10.0	
CURB RAMP SY	–	11.8	13.3	–	14.5	16.4	–	17.2	19.5	
CONC. SIDEWALK SY	–	5.6	6.4	–	4.9	5.7	–	4.9	5.7	
TYPE 1 AGGREGATE SY	–	17.4	19.7	–	19.4	22.1	–	22.1	25.2	
ADA LINEAR GRADING LF	–	26.0	26.0	–	29.0	29.0	–	33.0	33.0	
SODDING SY	–	13.8	14.1	–	15.1	15.5	–	17.1	17.5	

TYPE 2-C

LENGTH (LF)	8			12			16			REMARKS
WIDTH (LF)	4	5	6	4	5	6	4	5	6	
TRUNCATED DOMES SF	–	10.0	10.0	–	10.0	10.0	–	10.0	10.0	
CURB RAMP SY	–	16.4	18.7	–	21.7	24.9	–	27.0	31.2	
CONC. SIDEWALK SY	–	11.2	12.8	–	9.8	11.4	–	9.8	11.4	
TYPE 1 AGGREGATE SY	–	27.6	31.5	–	31.5	36.3	–	36.8	42.6	
ADA LINEAR GRADING LF	–	41.0	41.0	–	47.0	47.0	–	55.0	55.0	
SODDING SY	–	12.3	12.5	–	13.6	13.9	–	15.6	15.9	

TYPE 2-D

LENGTH (LF)	8			12			16			REMARKS
WIDTH (LF)	4	5	6	4	5	6	4	5	6	
TRUNCATED DOMES SF	–	10.0	10.0	–	10.0	10.0	–	10.0	10.0	
CURB RAMP SY	–	16.8	19.2	–	22.2	25.4	–	27.5	31.6	
CONC. SIDEWALK SY	–	11.2	12.8	–	9.8	11.4	–	9.8	11.4	
TYPE 1 AGGREGATE SY	–	28.0	32.0	–	32.0	36.8	–	37.3	43.0	
ADA LINEAR GRADING LF	–	41.0	41.0	–	47.0	47.0	–	55.0	55.0	
SODDING SY	–	20.2	20.3	–	22.4	23.2	–	26.4	27.2	

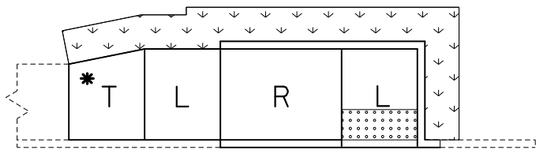
TYPE 2-E

LENGTH (LF)	8			12			16			REMARKS
WIDTH (LF)	4	5	6	4	5	6	4	5	6	
TRUNCATED DOMES SF	–	10.0	10.0	–	10.0	10.0	–	10.0	10.0	
CURB RAMP SY	–	10.8	11.5	–	13.2	14.4	–	15.7	17.3	
CONC. SIDEWALK SY	–	5.6	6.7	–	5.0	6.0	–	5.0	6.0	
TYPE 1 AGGREGATE SY	–	16.4	18.2	–	18.2	20.4	–	20.7	23.3	
ADA LINEAR GRADING LF	–	22.5	22.5	–	26.5	26.5	–	30.5	30.5	
SODDING SY	–	–	–	–	–	–	–	–	–	
HANDRAIL LF	–	–	–	–	–	–	–	–	–	SEE STANDARDS FOR LENGTH

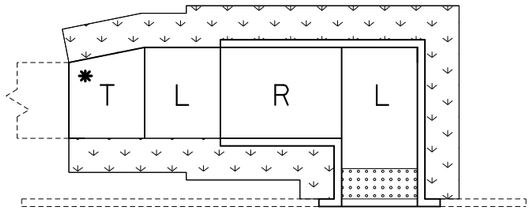
TYPE 2-F

LENGTH (LF)	8			12			16			REMARKS
WIDTH (LF)	4	5	6	4	5	6	4	5	6	
TRUNCATED DOMES SF	–	10.0	10.0	–	10.0	10.0	–	10.0	10.0	
CURB RAMP SY	–	15.5	17.1	–	20.4	23.1	–	25.5	28.9	
CONC. SIDEWALK SY	–	11.2	13.4	–	10.0	12.0	–	10.0	12.0	
TYPE 1 AGGREGATE SY	–	26.7	30.5	–	30.4	35.1	–	35.5	40.9	
ADA LINEAR GRADING LF	–	39.0	39.0	–	47.0	47.0	–	55.0	55.0	
SODDING SY	–	–	–	–	–	–	–	–	–	
HANDRAIL LF	–	–	–	–	–	–	–	–	–	SEE STANDARDS FOR LENGTH

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



TYPE 2-A



TYPE 2-B

** 3.5' LANDING EXTENSION REQ'D. FOR INSTALLATION OF FUTURE OR NEW PED. PUSH BUTTON

NOTE: SEE STANDARDS FOR ALL PED. PUSH BUTTON LOCATIONS

– TRUNCATED DOMES

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

T – TRANSITION TO EXISTING SW

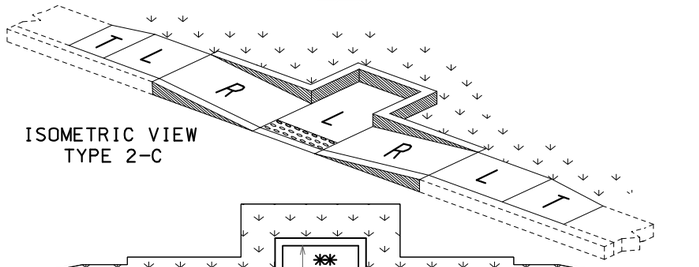
* – T IS STILL NEEDED EVEN IF THE EXISTING SIDEWALK IS THE SAME WIDTH AS THE NEW SIDEWALK.(IT WILL BLEND THE EXIST XSLOPE INTO THE NEW LANDING XSLOPE)

L – LANDING

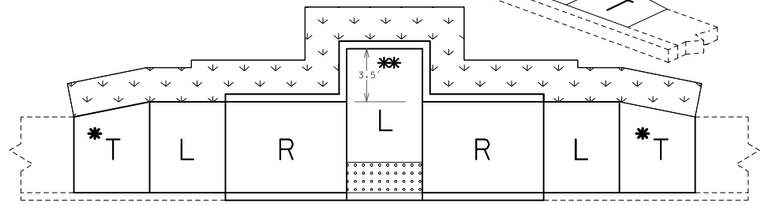
R – RAMP

– SOD SLOPE 6:1 MIN.

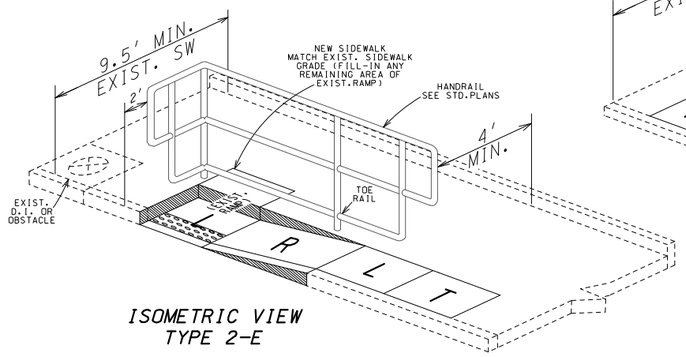
– CURB RAMP PAY LIMITS



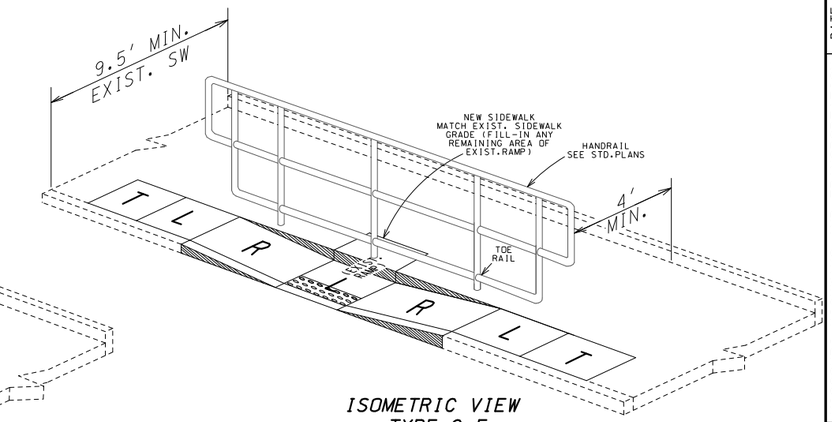
ISOMETRIC VIEW
TYPE 2-C



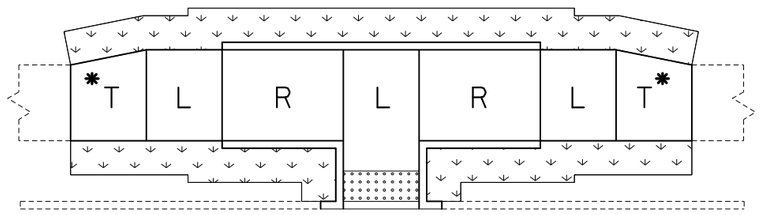
TYPE 2-C



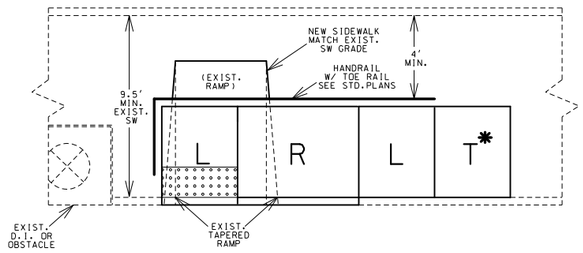
ISOMETRIC VIEW
TYPE 2-E



ISOMETRIC VIEW
TYPE 2-F



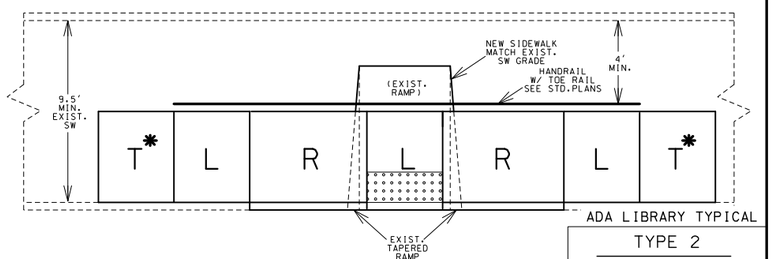
TYPE 2-D



TYPE 2-E

USE ONLY WHEN TYPE 2-F IS UNABLE TO BE CONSTRUCTED DUE TO AN EXIST. D.I. OR OTHER OBSTACLE

SEE STANDARDS FOR HANDRAIL SPECS



TYPE 2-F

SEE STANDARDS FOR HANDRAIL SPECS

ADA LIBRARY TYPICAL

TYPE 2
PARALLEL CURB RAMPS

TYPICAL SHEET 7 OF 12

REVISED: 2022-05-18

RYAN STEHN
NUMBER PE-2020000086
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	2

COUNTY: GREENE
JOB NO.: J8S3156
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DATE	DESCRIPTION	REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

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SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION – 000631

PARALLEL – TYPE 2 (cont'd.)

TYPE 2-G

LENGTH (LF)	8			12			16			REMARKS
WIDTH (LF)	4	5	6	4	5	6	4	5	6	
TRUNCATED DOMES SF	–	12.0	12.0	–	10.0	10.0	–	10.0	10.0	
CURB RAMP SY	–	15.7	18.0	–	20.8	23.7	–	25.8	30.2	
CONC. SIDEWALK SY	–	21.4	25.0	–	17.6	20.3	–	15.2	17.5	
TYPE 1 AGGREGATE SY	–	37.1	43.0	–	38.4	44.0	–	41.0	47.7	
ADA LINEAR GRADING LF	–	52.0	52.0	–	54.0	54.0	–	58.0	58.0	
SODDING SY	–	13.6	13.6	–	13.7	13.5	–	14.5	14.9	

TYPE 2-H

LENGTH (LF)	8			12			16			REMARKS
WIDTH (LF)	4	5	6	4	5	6	4	5	6	
TRUNCATED DOMES SF	–	12.0	12.0	–	10.0	10.0	–	10.0	10.0	
CURB RAMP SY	–	15.7	18.0	–	21.0	24.5	–	26.9	31.4	
CONC. SIDEWALK SY	–	13.2	16.0	–	12.0	14.2	–	12.0	14.4	
TYPE 1 AGGREGATE SY	–	28.9	34.0	–	33.0	38.6	–	38.9	45.8	
ADA LINEAR GRADING LF	–	42.0	42.0	–	49.0	49.0	–	55.0	55.0	
SODDING SY	–	11.1	11.2	–	12.5	12.5	–	14.5	14.9	

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

T – TRANSITION TO EXISTING SW

L – LANDING

R – RAMP

– SOD SLOPE 6:1 MIN.

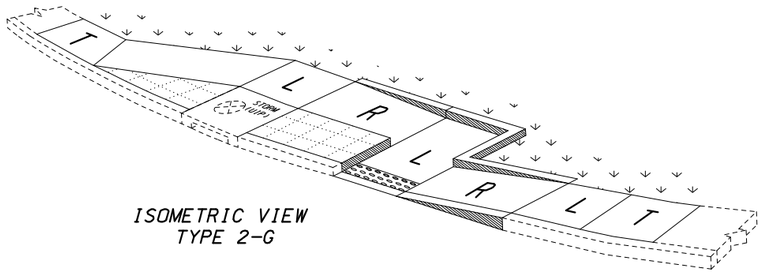
– TRUNCATED DOME LOCATION, IF DIST. IS <5' OR > 5'

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

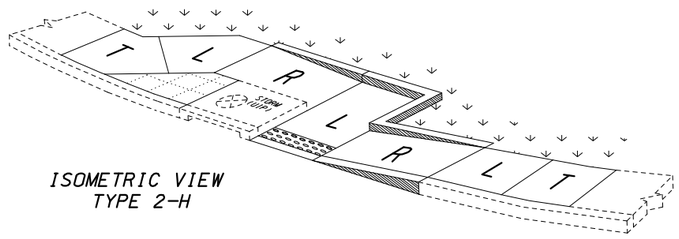
– CURB RAMP PAY LIMITS

– INCLUDED IN 4" CONC. SIDEWALK PAY LIMIT

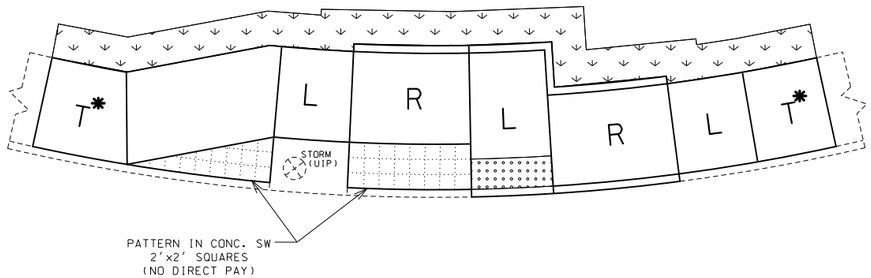
NOTE:
QUANTITIES ARE CALCULATED BY AREA AND MAY NOT MATCH EXACT FIELD CONDITIONS.



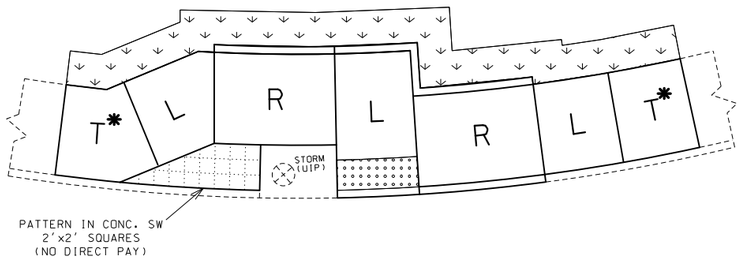
ISOMETRIC VIEW
TYPE 2-G



ISOMETRIC VIEW
TYPE 2-H



TYPE 2-G



TYPE 2-H

REVISED: 2022-05-18

ADA LIBRARY TYPICAL

TYPE 2

PARALLEL CURB RAMPS

TYPICAL SHEET 8 OF 12

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 12/20/2024

ROUTE: CRD 127 | STATE: MO

DISTRICT: SW | SHEET NO.: 2

COUNTY: GREENE

JOB NO.: J8S3156

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

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1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

DIAGONAL – TYPE 3

TYPE 3-A

LENGTH (LF)	8			12			16			REMARKS
WIDTH (LF)	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
WIDTH (LF)	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
WIDTH (LF)	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	

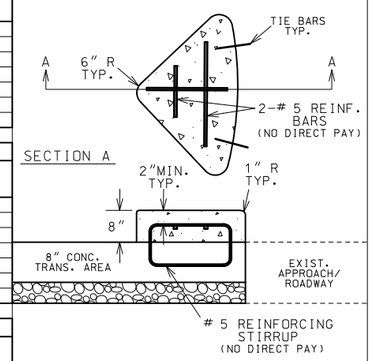
TYPE 3-D

LENGTH (LF)	8			12			16			REMARKS
WIDTH (LF)	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
WIDTH (LF)	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	

– DETAIL – 8" SIDEWALK OR 8" MEDIAN STRIP



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 PREFERED 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

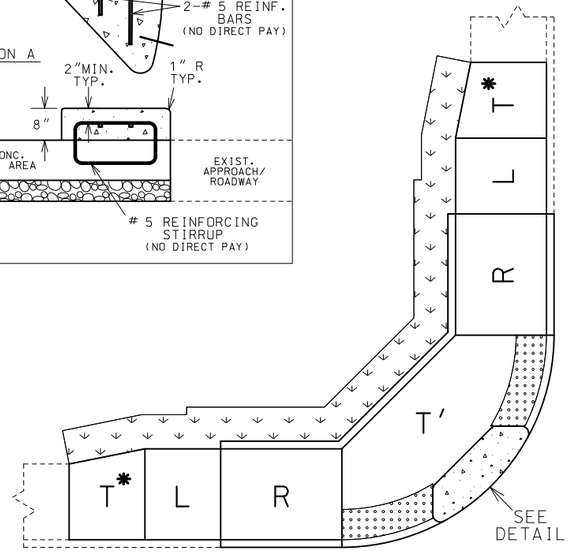
R – RAMP

– CURB RAMP PAY LIMITS

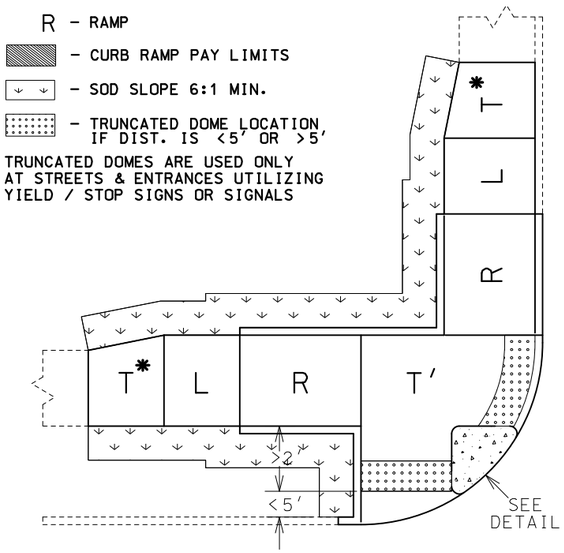
– SOD SLOPE 6:1 MIN.

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

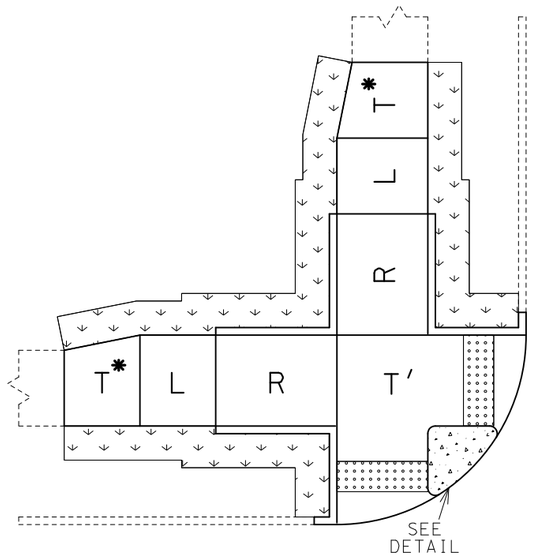
TRUNCATED DOMES ARE USED ONLY AT STREETS & ENTRANCES UTILIZING YIELD / STOP SIGNS OR SIGNALS



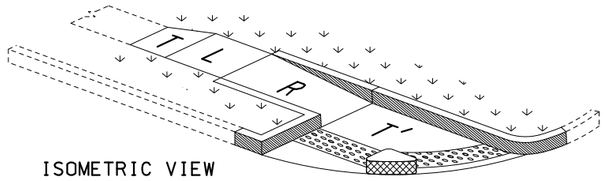
TYPE 3-A



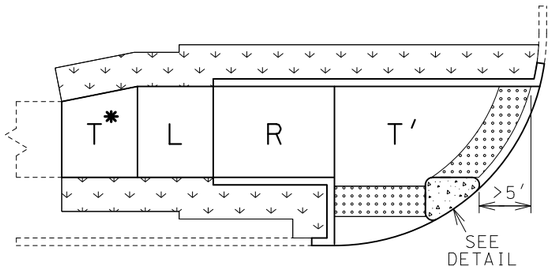
TYPE 3-B



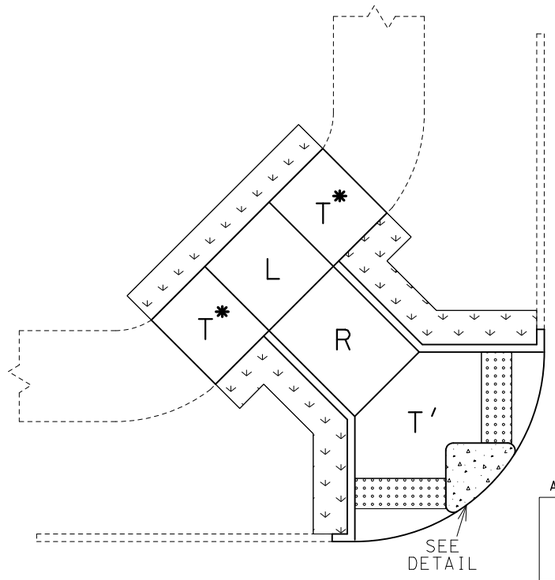
TYPE 3-C



ISOMETRIC VIEW
TYPE 3-D



TYPE 3-D



TYPE 3-E

ADA LIBRARY TYPICAL

TYPE 3
DIAGONAL CURB RAMPS

TYPICAL SHEET 9 OF 12

REVISED: 2022-05-18

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	2

COUNTY GREENE

JOB NO. J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION	REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

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SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

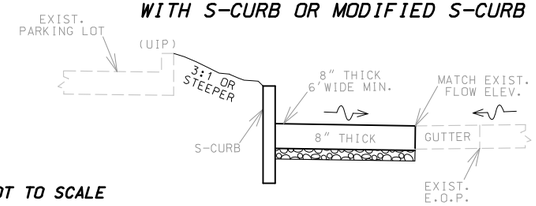
REVISED: 2022-05-16

NOTES FOR MODIFIED SIDEWALK:

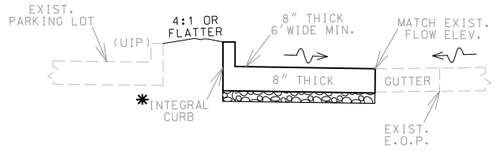
1. REMOVE EXIST. CURB & RAISED ISLAND WITHIN LIMITS SHOWN.
2. AREA INSIDE FINAL CURB TO BE REPAIRED OR REPLACED WITH EXISTING SURFACE MATERIAL. GRADE TO DRAIN.
3. CONSTRUCT 8" THICK CONC. SIDEWALK FLUSH WITH EXIST. CONC. PAVED APPROACH.
4. CONSTRUCT CURB ADJACENT TO MODIFIED SIDEWALK.
5. MODIFIED SIDEWALK 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)

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



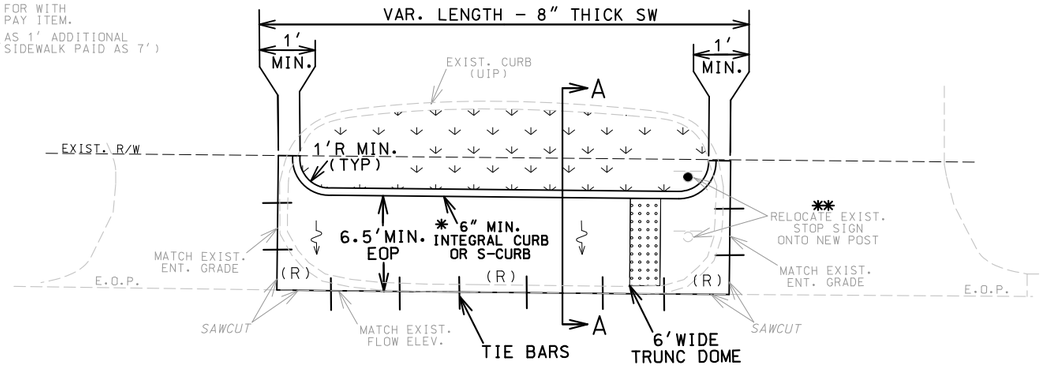
SECTION A-A
WITH INTEGRAL CURB



NOT TO SCALE

TYPICAL
MODIFIED SIDEWALK
8" THICK

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

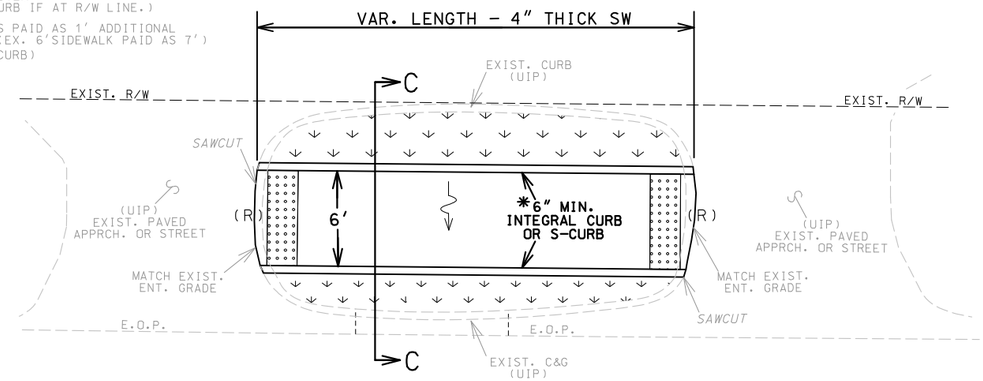


NOTES FOR CUT-THRU SIDEWALK:

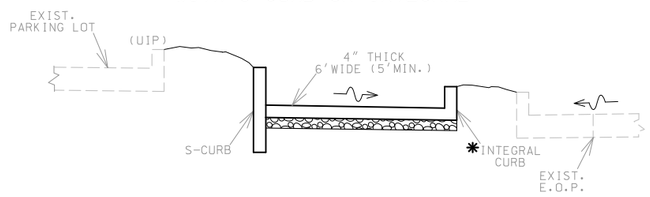
1. REMOVE EXIST. CURB & RAISED ISLAND WITHIN LIMITS SHOWN.
2. AREA INSIDE FINAL CURB TO BE REPAIRED OR REPLACED WITH EXISTING SURFACE MATERIAL. GRADE TO DRAIN.
3. CONSTRUCT 4" THICK CONC. SIDEWALK FLUSH WITH EXIST. CONC. PAVED APPROACH.
4. CONSTRUCT CURB ON BOTH SIDES ADJACENT TO SIDEWALK.
5. CUT-THRU 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)

TYPICAL
CUT-THRU SIDEWALK



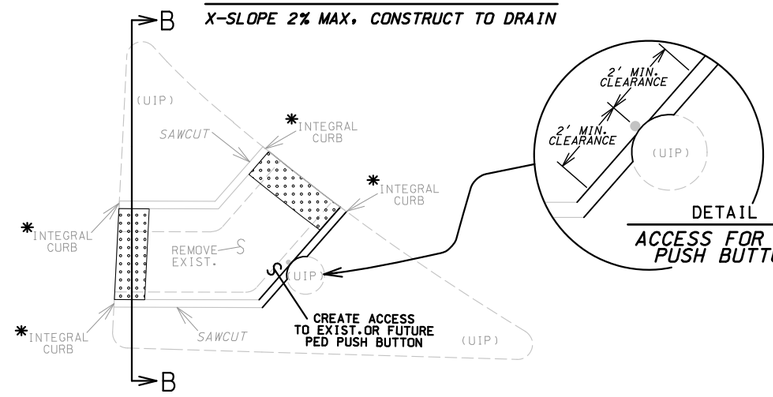
SECTION C-C
WITH S-CURB OR INTEGRAL



NOT TO SCALE

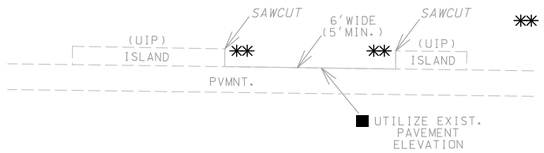
NOT TO SCALE

TYPICAL
ISLAND CUT-THRU SIDEWALK
X-SLOPE 2% MAX. CONSTRUCT TO DRAIN



DETAIL
ACCESS FOR PED PUSH BUTTON

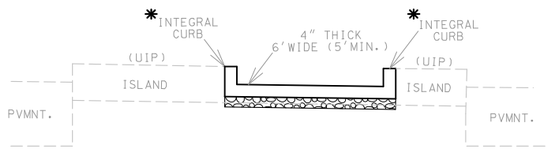
SECTION B-B
ISLAND CUT-THRU SIDEWALK FOR EXISTING 'PINNED-ON' ISLAND



■ 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'

SECTION B-B
ISLAND CUT-THRU SIDEWALK



✱ 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-THRUs

TYPICAL SHEET 10 OF 12

STATE OF MISSOURI — RYAN STEHN — NUMBER PE-2020000086 — PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 12/20/2024
ROUTE: CRD 127 | STATE: MO
DISTRICT: SW | SHEET NO.: 2
COUNTY: GREENE
JOB NO.: J8S3156
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

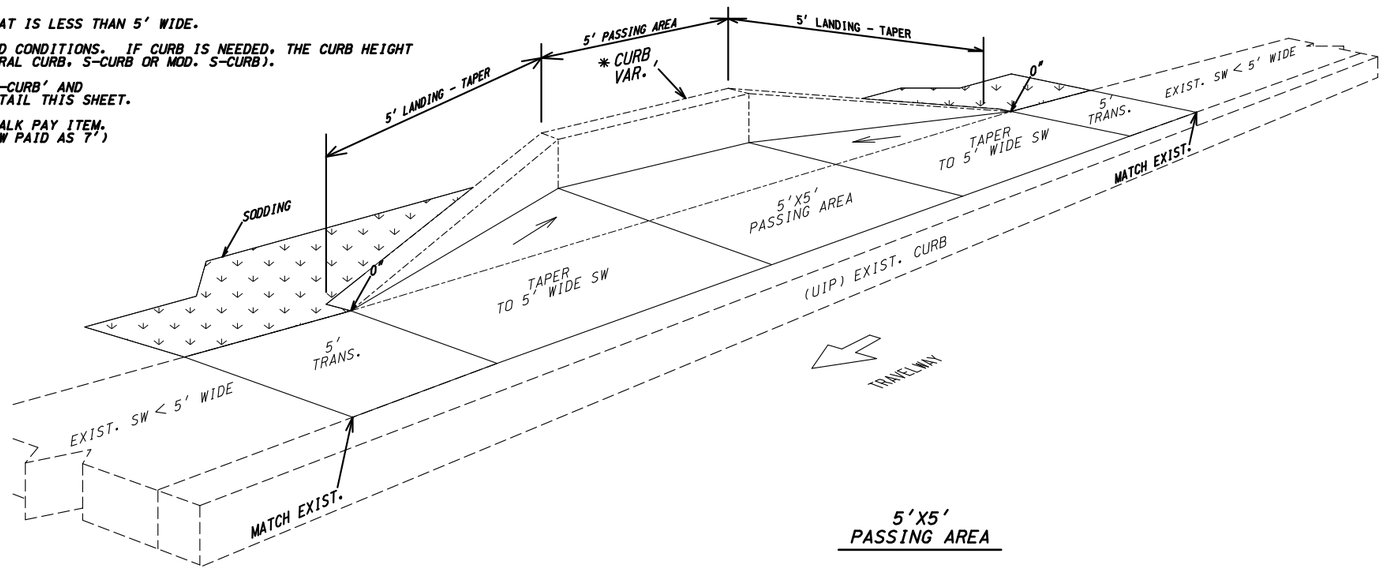
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REVISED: 2024-01-18

NOTES:

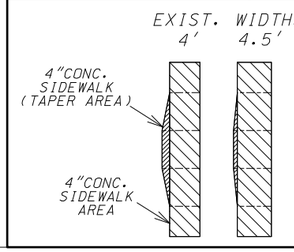
1. PASSING AREA REQUIRED EVERY 200' ON SIDEWALK THAT IS LESS THAN 5' WIDE.
2. ✱ CURB MAY OR MAY NOT BE NEEDED DEPENDING ON FIELD CONDITIONS. IF CURB IS NEEDED. THE CURB HEIGHT WILL VARY DEPENDING ON FIELD CONDITIONS. (INTEGRAL CURB, S-CURB OR MOD. S-CURB).
3. S-CURB OVER 12" TALL IS PAID FOR AS 'MODIFIED 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)



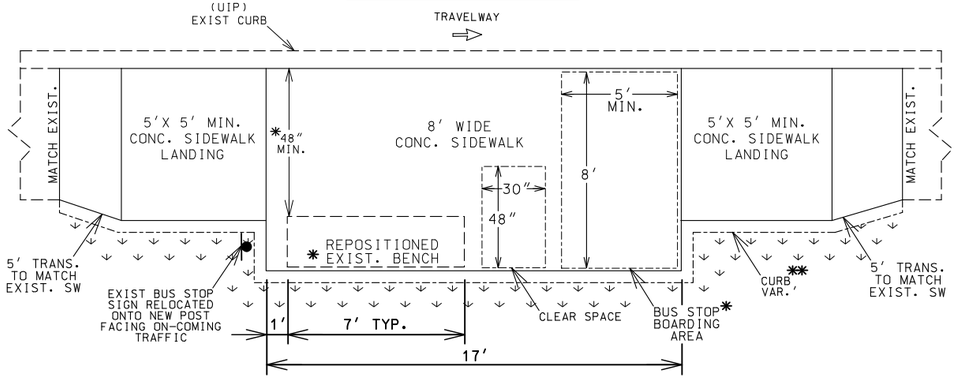
5'X5' PASSING AREA

NOT TO SCALE

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
MODIFIFED S-CURB		LF	17.2	16.0
SODDING		SY	53.0	53.0
LINEAR GRADING		LF	25.0	25.0



BUS STOP WITH BENCH



NOTES:

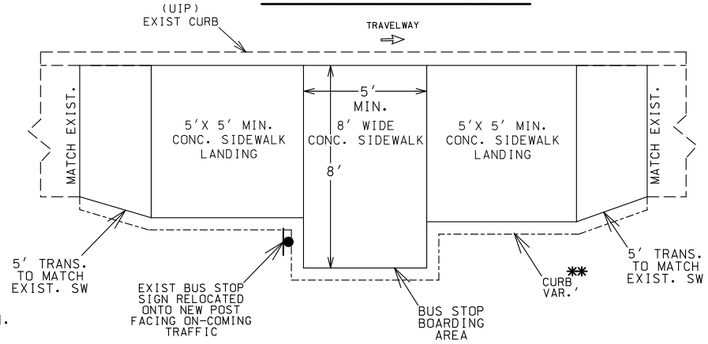
✱ 1. THE REPOSITIONED BENCH SHALL NOT BE PLACED ON THE 5'X8' BUS STOP BOARDING AREA. PLACE THE BACK OF THE BENCH AT THE BACK EDGE OF THE CONC. PAD TO PROVIDE MAX.CLEARANCE.

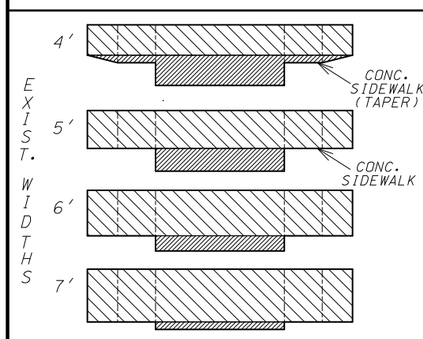
✱✱ 2. CURB USAGE DEPENDS ON FIELD CONDITIONS. IF CURB IS NEEDED DUE TO CUT, THE CURB HEIGHT WILL VARY DEPENDING ON FIELD CONDITIONS. (INTEGRAL CURB, S-CURB OR MOD. S-CURB).

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)

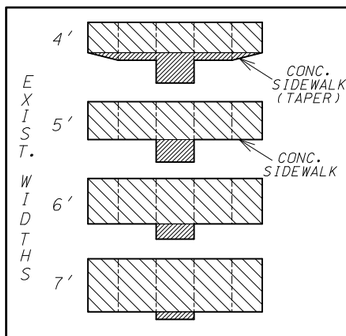
BUS STOP WITHOUT BENCH





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
MODIFIFED 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

NOT TO SCALE



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
MODIFIFED 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

ADA LIBRARY TYPICAL

PASSING AREAS AND BUS STOPS

TYPICAL SHEET 11 OF 12

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

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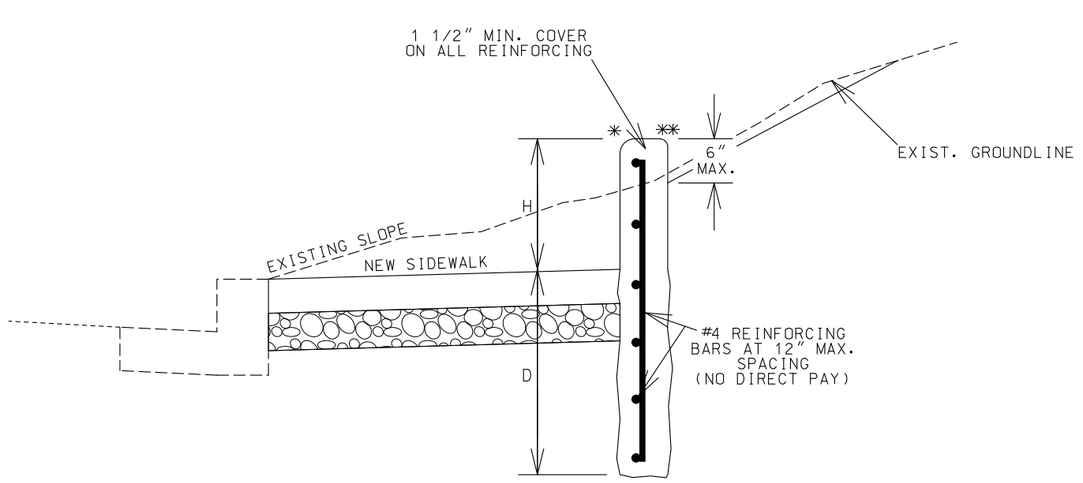
ENGINEERING CORPORATION - 000631

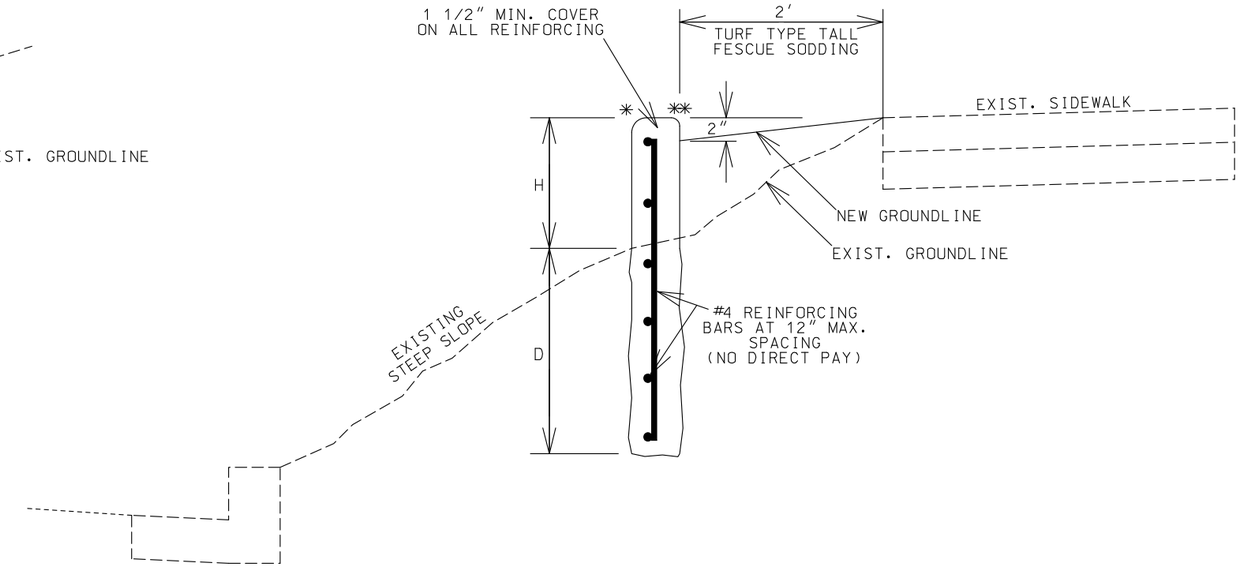
REV.

CREATED: 2023-11-16
REVISED: 2024-02-13

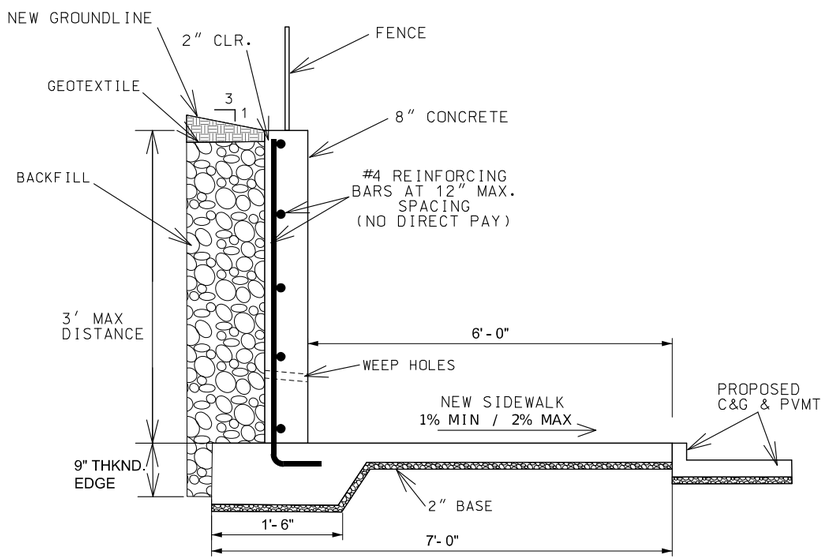
* ROUND TO 3/4" RADIUS
** ROUND TO 1/4" RADIUS
H = 2'-6" MAX. (30")
D = BURY DEPTH (FORMING NOT REQUIRED)
THIS SHALL BE 18 INCHES OR "H" WHICHEVER IS GREATER.
VERTICAL REINFORCING LENGTHS VARY AS NEEDED.
DEPTH MAY BE REDUCED IF KEYED 6" IN ROCK

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





NOT TO SCALE



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

NOT TO SCALE

ADA LIBRARY TYPICAL

MODIFIED S-CURB

TYPICAL SHEET
12 OF 12

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
J8S3156

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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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REMOVAL OF IMPROVEMENTS

PLAN SHEET	FROM STATION	TO STATION	BASELINE	OFFSET	DESCRIPTION	UNITS	QUANTITY	REMARKS
4 - 5	3+41.47	4+25.06	MELVILLE	LT.	GUARDRAIL	LF	86.0	
4 - 5	3+65.73	4+88.54	MELVILLE	RT	GUARDRAIL	LF	124.0	
4 - 6	3+65.73	10+02.84	MELVILLE	CL	PAVEMENT	SY	1219.0	
5	5+05.53		MELVILLE	LT.	LIGHT POLE	EACH	1.0	
5	5+08.02		MELVILLE	LT.	SIGN	EACH	1.0	
5	5+49.60		MELVILLE	RT.	SIGN	EACH	1.0	
5	5+58.20	6+05.07	MELVILLE	RT.	GUARDRAIL	LF	48.0	
5	5+91.57	6+19.85	MELVILLE	LT.	GUARDRAIL	LF	29.0	
5	6+03.08		MELVILLE	LT.	SIGN	EACH	1.0	
5	10+00.00		MELVILLE	LT.	18" PIPE	LF	55.0	
5	10+00.00		MELVILLE	LT.	18" FES	EACH	2.0	
5	876+29.94	880+50.20	I-44	RT.	GUARDRAIL	LF	315.0	
5	879+12.66	881+12.66	I-44	LT.	GUARDCABLE	LF	200.0	
5	879+26.93		I-44	CL	18 IN. FES	EACH	1.0	
5	879+26.93	881+09.41	I-44	CL	18 IN. PIPE	LF	183.0	
5	879+93.69	1014+28.24	I-44	LT.	GUARDRAIL	LF	415.0	
5	881+09.41		I-44	CL	18 IN. FES	EACH	1.0	
5	8+42.30	8+69.62	MELVILLE	RT.	GUARDRAIL	LF	28.0	
5	8+58.32	9+34.80	MELVILLE	LT.	GUARDRAIL	LF	77.0	
5	8+59.11		MELVILLE	LT.	SIGN	EACH	1.0	
7 - 8	874+76.64	883+58.98	NORTON	CL	PAVEMENT	SY	2783.0	
7	875+75.41		NORTON	LT.	SIGN	EACH	1.0	
7	876+23.41	876+42.82	NORTON	LT.	FENCE	LF	39.0	
					TOTAL:	1 LUMP SUM		

CLEARING AND GRUBBING

SHEET	FROM STATION	TO STATION	ROADWAY	LOCATION	CLEARING AND GRUBBING (ACRE)	REMARKS
6	10+04.75		MELVILLE	48.57' LT	0.01	SINGLE TREE, PREVIOUSLY TOPPED
6	10+54.19		MELVILLE	42.10' LT	0.01	SINGLE TREE, PREVIOUSLY TOPPED
6	10+83.24		MELVILLE	44.13' LT	0.01	SINGLE TREE, PREVIOUSLY TOPPED
6	11+00.35		MELVILLE	43.47' LT	0.01	SINGLE TREE, PREVIOUSLY TOPPED
7	874+93.48		NORTON	27.40' LT	0.01	SINGLE TREE, PREVIOUSLY TOPPED
7	876+26.11		NORTON	47.80' LT	0.01	SINGLE TREE, PREVIOUSLY TOPPED
				TOTAL	1	

MOBILIZATION

1 LUMP SUM

CONTRACTOR FURNISHED SURVEYING AND STAKING

1 LUMP SUM

SAWCUTS FOR PAVEMENT REMOVAL

ALL SAWCUTS NOT SHOWN ARE INCIDENTAL TO REMOVAL OF IMPROVEMENTS

ADDITIONAL MOBILIZATION FOR SEEDING

1 EACH

CULVERT CLEANOUT

PLAN SHEET	STATION	ROUTE	LOCATION	CULVERT CLEANOUT (EA)	REMARKS
7	876+76	NORTON	RT	1	
			TOTAL	1	

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

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DATE PREPARED
1/28/2025

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	3

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DATE	DESCRIPTION

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

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CRAWFORD, MURPHY & TILLY, INC.
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SUMMARY OF QUANTITIES
1 OF 10

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EARTHWORK

ROADWAY	CUT	EARTH CUT	ROCK CUT	FILL	EXCAVATION TO BE USED IN EMBANKMENT (CUYD)	UNCLASSIFIED EXCAVATION (CUYD)	EMBANKMENT IN PLACE (CUYD)	COMPACTING EMBANKMENT (CUYD)	COMPACTING IN CUT (STA)	REMARKS
MELVILLE	239	179	60	6,433					1.1	25% OF TOTAL CUT ASSUMED TO BE ROCK CUT
NORTON	3,986	2,990	997	5,441					4.3	25% OF TOTAL CUT ASSUMED TO BE ROCK CUT
I-44 (INCLUDES WALLS)	12,749	9,562	3,187	837						25% OF TOTAL CUT ASSUMED TO BE ROCK CUT
MSE WALL A9434										25% OF TOTAL CUT ASSUMED TO BE ROCK CUT
MSE WALL A9435										25% OF TOTAL CUT ASSUMED TO BE ROCK CUT
SUBTOTALS	16,974	12,731	4,244	12,711	14,852					
					TOTALS	16,974	0	12,711	5.4	

NOTE: 25% SHRINK AND SWELL ASSUMED DURING COMPACTION

ROCK FILL

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	FURNISHING ROCK FILL (CUYD)	PLACING ROCK FILL (CUYD)	REMARKS
5	878+88.58	880+93.53	I-44	LT	1,141	1,141	MSE WALL A9434
5	879+57.82	881+85.33	I-44	RT	1,386	1,386	MSE WALL A9435
				TOTALS	2,527	2,527	

DRAINAGE PIPES

PLAN SHEET	CULVERT SECTION SHEET	FROM STRUCT.	TO STRUCT.	PIPE COLLAR, TYPE A (EA)	12 IN. PIPE GROUP B (LF)	18 IN. PIPE GROUP B (LF)	36 IN. PIPE GROUP B (LF)	18 IN. PIPE GROUP A (LF)	CLASS 3 EXCAVATION (CUYD)	REMARKS
5	1	T-01	FES-01		19				0	
5	1	T-02	FES-02		22				2	
6	1	T-03	FES-03			24			2	
6	1	T-03	FES-04					45	32	
6	1	T-03	T-04		150				67	
7	1	COL-01	FES-05	1			59		5	
5	1	FES-06	COL-02	1				96	46	
5	1	COL-02	FES-07					73	36	
									190	SEE STRUCTURES FOR TOTAL
			TOTALS:	2	191	24	59	214	–	

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DATE PREPARED 12/20/2024

ROUTE CRD 127 | STATE MO

DISTRICT SW | SHEET NO. 3

COUNTY GREENE

JOB NO. J8S3156

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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REV.

SUMMARY OF QUANTITIES
2 OF 10

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FLARED END SECTIONS

PLAN SHEET	CULVERT SECTION SHEET	FROM STRUCT.	TO STRUCT.	12 IN. OR ALLOWED SUBSTITUTE GROUP B FLARED END SECTION (EA)	18 IN. OR ALLOWED SUBSTITUTE GROUP B FLARED END SECTION (EA)	36 IN. OR ALLOWED SUBSTITUTE GROUP B FLARED END SECTION (EA)	18 IN. OR ALLOWED SUBSTITUTE GROUP A FLARED END SECTION (EA)	18 IN. OR ALLOWED SUBSTITUTE SAFETY SLOPE END SECTION (EA)	ROCK LINING (CUYD)	REMARKS
5	1	T-01	FES-01	1					2	
5	1	T-02	FES-02	1					2	
6	1	T-03	FES-03		1				2	
6	1	T-03	FES-04				1		2	
7	1	COL-01	FES-05			1			9	
5	1	FES-06	COL-02					1		
5	1	COL-02	FES-07					1		
			TOTALS:	2	1	1	1	2	17	

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DRAINAGE STRUCTURES

STRUCT. NO.	PLAN SHEET	CULVERT SECTION SHEET	STATION	ROADWAY	LOCATION	STD.	TYPE	ACTUAL DEPTH	PRECAST CONCRETE DROP INLET 5 FT X 3 FT (FT)	CLASS 3 EXCAVATION (CUYD)	CLASS 3 EXCAVATION IN ROCK (CUYD)	CURB INLET (EA)	PIPE OPENINGS (NUMBER - SIZE)	REMARKS
T-01	5	1	5+85.08	MELVILLE	16.50' LT.	731.10S	T 5 x 3	3.01	3	0		1	1 - 12"	
T-02	5	1	8+76.66	MELVILLE	16.50' LT.	731.10S	T 5 x 3	3.19	3	4		1	1 - 12"	
T-03	6	1	10+00.60	MELVILLE	16.50' LT.	731.10S	T 5 x 3	5.67	6	11		1	1 - 12"; 2 - 18"	
T-04	6	1	11+55.00	MELVILLE	16.50' LT.	731.10S	T 5 x 3	3.00	3	6		1	1 - 12"	
										190				TOTAL FROM PIPES
											21			10% OF CLASS 3 EXC.
								TOTALS	15	211	21	4		

NOTE: EXCAVATION QUANTITIES ASSUME PRECAST CONCRETE STRUCTURES

DRAINAGE STRUCTURE LIDS

STRUCT. NO.	PLAN SHEET	CULVERT SECTION SHEET	STATION	ROADWAY	LOCATION	MANHOLE FRAME AND COVER, TYPE 3 (EA)	REMARKS
T-01	5	1	5+85.08	MELVILLE	16.50' LT.	1	
T-02	5	1	8+76.66	MELVILLE	16.50' LT.	1	
T-03	6	1	10+00.60	MELVILLE	16.50' LT.	1	
T-04	6	1	11+55.00	MELVILLE	16.50' LT.	1	
					TOTALS	4	

SUMMARY OF QUANTITIES
3 OF 10

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 1/28/2025
ROUTE: CRD 127 | STATE: MO
DISTRICT: SW | SHEET NO.: 3
COUNTY: GREENE
JOB NO.: J8S3156
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION | DATE

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105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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OPTIONAL PAVEMENT

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	OPTIONAL PAVEMENT (SQYD)	TYPE A2 SHOULDER (SQYD)	REMARKS
4 - 5	3+65.73	6+13.78	MELVILLE	LT & RT	1,391.6		
5 - 6	8+37.20	13+51.24	MELVILLE	LT & RT	441.7	297.8	
7 - 8	874+76.64	883+58.98	NORTON	LT & RT	2,402.1		
				TOTALS	4235.4	297.8	

NON-OPTIONAL PAVEMENT

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	COLDMILLING BITUMINOUS PAVEMENT FOR REMOVAL OF SURFACING (3 IN. THICK OR LESS) (SQYD)	BITUMINOUS PAVEMENT MIXTURE PG64-22, (BP-1) (TONS)	TACK COAT (GAL)	TYPE 5 AGGREGATE FOR BASE (4 IN. THICK) (SQYD)	5 ¾ INCHES, BITUMINOUS PAVEMENT (SQYD)	CURB AND GUTTER TYPE B (LF)	MODIFIED CONCRETE GUTTER TYPE B (LF)	REMARKS
4	1+66.06	3+65.73	MELVILLE	LT & RT	583	65.6	59					
5	4+98.94	6+21.98	MELVILLE	LT						124		
5 - 6	8+43.76	14+18.20	MELVILLE	LT						610		
6	10+02.84	14+18.20	MELVILLE	LT & RT	1251	140.8	126					
8	881+52.29	881+93.03	NORTON	LT				62	61.9			
5	878+88.58	880+93.53	I-44	LT							205	MSE WALL A9434
5	879+57.82	881+85.33	I-44	RT							228	MSE WALL A9435
				TOTALS	1834	206.4	185	✳	61.9	734	433	

✳ SEE SIDEWALK TABLE FOR TOTAL

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 12/20/2024
ROUTE: CRD 127 | STATE: MO
DISTRICT: SW | SHEET NO.: 3
COUNTY: GREENE
JOB NO.: J8S3156
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

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105 WEST CAPITOL
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SUMMARY OF QUANTITIES
4 OF 10

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BASE

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	TYPE 5 AGGREGATE FOR BASE (6 IN. THICK) (SQYD)	REMARKS
4 – 5	3+65.73	6+13.78	MELVILLE	LT & RT	1,433	
5 – 6	8+37.20	13+51.24	MELVILLE	LT & RT	893	
7 – 8	874+76.64	883+58.98	NORTON	LT & RT	2,403	
				TOTALS	4729	

TEMPORARY PAVEMENT

PHASE	FROM STATION	TO STATION	BASELINE	LOCATION	7 INCHES, BITUMINOUS PAVEMENT (SQYD)	TYPE 5 AGGREGATE FOR BASE (4 IN. THICK) (SQYD)	LINEAR GRADING CLASS 1 (STA)	REMARKS
2B	0+58.74	3+33.72	TEMP	LT & RT	637.5	638.0	2.8	
				TOTALS	637.5	✳	2.8	

✳ SEE SIDEWALK TABLE FOR TOTAL

TEMPORARY PAVEMENT MARKING

PHASE	FROM STATION	TO STATION	BASELINE	LOCATION	TEMPORARY REMOVABLE MARKING TAPE 4 IN., WHITE (LF)	TEMPORARY REMOVABLE MARKING TAPE 4 IN., YELLOW (LF)	REMARKS
PHASE 2B	0+00.00	3+91.00	TEMP	CL		391.0	
PHASE 2B	0+00.00	3+91.00	TEMP	LT & RT	828.7		
				TOTALS	829.0	391.0	

SIDEWALK

PLAN SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	TYPE 1 AGGREGATE FOR BASE (4 IN. THICK) (SQYD)	CONCRETE SIDEWALK, 4 IN. (SQYD)	CONCRETE CURB RAMP (SQYD)	TRUNCATED DOMES (SQFT)	REMARKS
5	4+76.15	6+28.55	MELVILLE	LT	101	101.2		16	
5 – 6	8+45.40	13+43.01	MELVILLE	LT	304	294.6	8.9	10	
					62				TOTAL FROM PAVEMENT NON-OPTIONAL
					638				TOTAL FROM TEMPORARY PAVEMENT
				TOTALS	1105	395.8	8.9	26	

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 12/20/2024
ROUTE: CRD 127 | STATE: MO
DISTRICT: SW | SHEET NO.: 3
COUNTY: GREENE
JOB NO.: J8S3156
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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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1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

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SUMMARY OF QUANTITIES
5 OF 10

NON-CONTRACTUAL ITEMS

PLAN SHEET	ROADWAY	LOCATION	UTILITY CONNECTION CHARGE (LS)	STEEL RIGHT OF WAY MARKERS (EA)	2 IN. ALUMINUM CAP WITH MODOT R/W IMPRINT (EA)	6 FT. WHITE CARSONITE POST WITH MODOT R/W STICKER (EA)	REMARKS
6	MELVILLE	LT		3	3	3	
7	NORTON	LT		2	2	2	
			1				
		TOTALS	1	5	5	5	

GUARDRAIL & GUARDCABLE

PLAN SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	MGS GUARDRAIL (LF)	MGS END ANCHOR (EA)	TYPE A CRASHWORTHY END TERMINAL (MASH) (EA)	MGS BRIDGE APPROACH TRANSITION SECTION (REGULAR/NO CURB) (EA)	MEDIAN GUARD CABLE 3 - STRAND (LF)	REMARKS
4-5	3+41.47	4+15.89	MELVILLE	LT	75.0					
4	3+65.73	4+04.39	MELVILLE	RT	25.0	1				
5	4+87.42	6+10.36	MELVILLE	RT	25.0		1	1		
5	8+20.92	9+54.56	MELVILLE	RT	37.5		1	1		
5	877+49.05	880+50.79	I-44	RT	237.5	1	1			
5	879+12.66	881+12.66	I-44	LT					200	
5	879+99.82	883+51.54	I-44	LT	287.5	1	1			
5, 8	879+33.57	880+90.27	NORTON	LT	125.0		1			
				TOTALS	813	3	5	2	200	

PAVEMENT MARKING

PLAN SHEET	FROM STATION	TO STATION	ROADWAY	LOCATION	4 IN. YELLOW STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS (LF)	4 IN. WHITE STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS (LF)	REMARKS
38	1+66.07	13+71.49	MELVILLE	CL	2,410		
38	1+66.07	4+24.03	MELVILLE	LT		283	
38	1+66.07	4+24.03	MELVILLE	RT		281	
38	4+50.76	14+18.20	MELVILLE	LT		1,032	
38	4+50.76	13+51.49	MELVILLE	RT		931	
38	874+76.67	878+77.77	NORTON	CL	800		
38	874+76.67	878+45.68	NORTON	LT		361	
38	874+76.67	878+45.68	NORTON	RT		376	
38	879+36.54	883+58.98	NORTON	CL	844		
38	879+49.83	883+58.98	NORTON	LT		410	
38	879+93.24	883+58.98	NORTON	RT		369	
			TOTALS		4,054	4,043	

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

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DATE PREPARED
12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	3

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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

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SUMMARY OF QUANTITIES
6 OF 10

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CONCRETE TRAFFIC BARRIER

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	CONCRETE TRAFFIC BARRIER, TYPE D (MOMENT SLAB) (LF)	REMARKS
5	6+03.55	6+28.55	MELVILLE	LT	25	
5	8+52.69	8+77.69	MELVILLE	LT	25	
				TOTALS	50	

EROSION CONTROL - PRE- CONSTRUCTION

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	SEDIMENT REMOVAL (CUYD)	SILT FENCE (LF)	ROCK DITCH CHECK (LF)	REMARKS
32	2+00.01		MELVILLE	RT	1.0		8	
32	3+60.66	881+55.83	MELVILLE/ NORTON	LT	3.0	291		
32	7+66.50	12+40.45	MELVILLE	RT	5.0	475		
32	8+62.82	14+33.43	MELVILLE	LT	6.0	622		
32	9+99.98		MELVILLE	RT	1.0		8	
32	874+76.06		NORTON	RT	1.0		8	
32	874+76.32		NORTON	LT	1.0		8	
32	875+40.94	877+54.13	NORTON	LT	2.0	211		
32	875+68.01	878+28.09	NORTON	RT	1.0	97		
32	876+61.83		NORTON	RT	1.0		8	
32	876+66.63	878+28.09	NORTON	RT	3.0	254		
32	879+09.84		I-44	LT	1.0		8	
32	880+04.47		I-44	RT	1.0		8	
32	880+09.81		I-44	LT	1.0		8	
32	880+77.36	881+58.72	NORTON	RT	1.0	144		
32	881+04.47		I-44	RT	1.0		8	
32	881+09.70		I-44	LT	1.0		8	
32	881+74.84		NORTON	RT	1.0		8	
32	881+93.66	882+44.07	NORTON	LT	1.0	58		
32	882+04.45		I-44	RT	1.0		8	
32	882+51.87		NORTON	LT	1.0		6	
32	883+56.60		NORTON	RT	1.0		8	
32	883+63.10		NORTON	LT	1.0		6	
				SUBTOTALS	37	2,152	116	
				TOTALS	*	2,152	*	

* SEE EROSION CONTROL - DURING CONSTRUCTION FOR TOTAL

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/20/2024
ROUTE CRD 127 | STATE MO
DISTRICT SW | SHEET NO. 3
COUNTY GREENE
JOB NO. J8S3156
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	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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SUMMARY OF QUANTITIES
7 OF 10

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EROSION CONTROL - DURING CONSTRUCTION

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	FURNISHING TYPE 2 ROCK BLANKET (CUYD)	PLACING TYPE 2 ROCK BLANKET (CUYD)	SEDIMENT REMOVAL (CUYD)	CURB INLET CHECK (EACH)	ROCK DITCH CHECK (LF)	REMARKS
33	5+85.06		MELVILLE	LT			1.0	1		
33	8+77.36		MELVILLE	LT			1.0	1		
33	10+00.88		MELVILLE	LT			1.0	1		
33	11+55.02		MELVILLE	LT			1.0	1		
33	12+98.99		MELVILLE	RT			1.0		8	
33	877+62.32		NORTON	LT			1.0		8	
33	878+39.66		NORTON	LT			1.0		8	
5	878+88.58	880+93.53	I-44	LT	48	48				BEHIND MSE WALL A9434
5	879+57.82	881+85.33	I-44	RT	53	53				BEHIND MSE WALL A9435
							37		116	TOTAL FROM PRE-CONSTRUCTION
				TOTALS	101	101	44	4	140	

EROSION CONTROL - POST-CONSTRUCTION

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	SEEDING - COOL SEASON MIXTURES (ACRE)	MULCHING (ACRE)	TURF TYPE TALL FESCUE SODDING (SQYD)	REMARKS
34	4+81.00	6+06.00	MELVILLE	LT			61	
34	7+69.00	13+71.00	MELVILLE	RT	0.23			
34	8+39.00	14+05.00	MELVILLE	LT	0.22			
34	8+73.00	13+37.00	MELVILLE	LT			231	
34	874+76.00	878+95.00	NORTON	LT	0.23			
34	874+76.00	878+90.00	NORTON	RT	0.52			
34	879+20.00	883+59.00	NORTON	LT	0.16			
34	879+20.00	883+59.00	NORTON	RT	0.33			
34	881+83.00	883+59.00	NORTON	LT	0.03			
				SUBTOTALS	1.72	1.72	292	
				TOTALS	1.7	1.7	292	

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000686
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 1/28/2025
ROUTE CRD 127 | STATE MO
DISTRICT SW | SHEET NO. 3
COUNTY GREENE
JOB NO. J8S3156
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE | REV.

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SUMMARY OF QUANTITIES
8 OF 10

POLES, ARMS, AND LUMINARES (MoDOT)

LIGHTING SHEET NO.	LUMIN. POLE NO.	STATION	OFFSET	LOCATION	30' POLE AT	30' POLE B	45' POLE TYPE AT D1	45' POLE TYPE AT D2	45' POLE TYPE AT D3	45' POLE TYPE AT D4	45' POLE TYPE AT D5	45' POLE TYPE B D3	45' POLE TYPE MB D3	RELOC. POLE	LUMINAIRE LED-A	LUMINAIRE LED-B	LUMINAIRE LED-C	LUMINAIRE 150W HP SODIUM UNDERPASS	BRACKET ARM 4'	BRACKET ARM 6'	BRACKET ARM 8'	BRACKET ARM 10'	BRACKET ARM 12'	BRACKET ARM 15'	CABLE 10 AWG 1 CONDUCTOR POLE AND BRACKET	POLE FOUNDATION 30' POLE	POLE FOUNDATION 45' POLE
1	A101	3+91.83	25.00' LT	MELVILLE	1											1						1			80	1	
1	A201	5+01.69	22.80' RT	MELVILLE	1											1							1		42	1	
				TOTALS:	2											2						1	1		122	2	

CABLE-CONDUIT & WIRES (MoDOT)

LIGHTING SHEET	FROM	TO	LOCATION	CENTER TO CENTER	CIR.	CABLE, 8 AWG 1 CONDUCTOR	WIRE, 8 AWG, BARE NEUTRAL	CABLE- CONDUIT, 1 IN., 2 CONDUCTORS AND 1 BARE NEUTRAL, 8 AWG
1	PS A	CS A	NORTON		A			45
1	CS A	A101	NORTON	188.2	A			198
1	A101	A1	MELVILLE	114.9	A	318	159	
1	A1	A201	MELVILLE	49.0	A	178	89	
			TOTALS:			496	248	243

CABLE-CONDUIT & WIRES (CITY)

LIGHTING SHEET	FROM	TO	LOCATION	CENTER TO CENTER	CIR.	CABLE, 8 AWG 1 CONDUCTOR	WIRE, 8 AWG, BARE NEUTRAL	CABLE- CONDUIT, 1 IN., 2 CONDUCTORS AND 1 BARE NEUTRAL, 8 AWG
1	PS B	CS B	NORTON		B			5
1	CS B	B1	NORTON	46.0	B			43
1	B1	A1	MELVILLE	92.1	B	192	96	
1	A1	B2	MELVILLE	147.1	B			151
1	B2	B101	MELVILLE	14.6	B	40	20	
1	B101	B102	MELVILLE	32.0	B	76	38	
1	B102	B103	MELVILLE	32.0	B	76	38	
1	B103	B104	MELVILLE	32.0	B	76	38	
1	B104	B105	MELVILLE	32.0	B	76	38	
1	B105	B106	MELVILLE	32.0	B	76	38	
1	B106	B107	MELVILLE	32.0	B	76	38	
			TOTALS:			688	344	199

RIGID CONDUIT (MoDOT)

LIGHTING SHEET	FROM	TO	LOCATION	CENTER TO CENTER	CIR.	TRENCHED (") 2"	TRENCHED (") 3"	TRENCHED (") 4"	TRENCHED (") 5"	PUSHED (") 3"	PUSHED (") 4"	PUSHED (") 5"	MEDIAN 4"	MEDIAN 5"	EXTERNAL ON STRUC. 3"	EXTERNAL ON STRUC. 4"	EXTERNAL ON STRUC. 5"
1	PS A	CS A	NORTON		A	5											
1	CS A	A101	NORTON	188.2	A	184											
1	A101	A1	MELVILLE	114.9	A	113											
1	A1	A201	MELVILLE	49.0	A	48											
			TOTALS:			350											

RIGID CONDUIT (CITY)

LIGHTING SHEET	FROM	TO	LOCATION	CENTER TO CENTER	CIR.	TRENCHED (") 2"	TRENCHED (") 3"	TRENCHED (") 4"	TRENCHED (") 5"	PUSHED (") 3"	PUSHED (") 4"	PUSHED (") 5"	MEDIAN 4"	MEDIAN 5"	EXTERNAL ON STRUC. 3"	EXTERNAL ON STRUC. 4"	EXTERNAL ON STRUC. 5"
1	PS B	CS B	NORTON		B	5											
1	CS B	B1	NORTON	46.0	B	43											
1	B1	A1	MELVILLE	92.1	B	89											
1	A1	B2	MELVILLE	147.1	B	145											
1	B2	B101	MELVILLE	14.6	B										15		
1	B101	B102	MELVILLE	32.0	B										32		
1	B102	B103	MELVILLE	32.0	B										32		
1	B103	B104	MELVILLE	32.0	B										32		
1	B104	B105	MELVILLE	32.0	B										32		
1	B105	B106	MELVILLE	32.0	B										32		
1	B106	B107	MELVILLE	32.0	B										32		
			TOTALS:			282									207		

POWER SUPPLY (MoDOT)

LIGHTING SHEET NO.	STATION	OFFSET	LOCATION	TYPE 1 (POLE) LT ONLY 240V	TYPE 1 (POLE) LT+SIG 240 120V	TYPE 1 (POLE) LT ONLY 480V	TYPE 1 (POLE) LT+SIG 480 120V	TYPE 2 (PED) LT ONLY 240V	TYPE 2 (PED) LT+SIG 240 120V	TYPE 2 (PED) LT ONLY 480V	TYPE 2 (PED) LT+SIG 480 120V	POWER SUPPLY DIRECTN TO FACE METER	POWER SUPPLY BRKR AMPS LITE	POWER SUPPLY BRKR AMPS SIGS	POWER SUPPLY CIR
1	880+69.09	65.14' LT	NORTON	1								W	15		A
			TOTALS:	1								EACH:	1		

POWER SUPPLY (CITY)

LIGHTING SHEET NO.	STATION	OFFSET	LOCATION	TYPE 1 (POLE) LT ONLY 240V	TYPE 1 (POLE) LT+SIG 240 120V	TYPE 1 (POLE) LT ONLY 480V	TYPE 1 (POLE) LT+SIG 480 120V	TYPE 2 (PED) LT ONLY 240V	TYPE 2 (PED) LT+SIG 240 120V	TYPE 2 (PED) LT ONLY 480V	TYPE 2 (PED) LT+SIG 480 120V	POWER SUPPLY DIRECTN TO FACE METER	POWER SUPPLY BRKR AMPS LITE	POWER SUPPLY BRKR AMPS SIGS	POWER SUPPLY CIR
1	880+77.36	66.99' LT	NORTON	1								S	15		B
			TOTALS:	1								EACH:	1		

CONTROL STATIONS (MoDOT)

LIGHTING SHEET NO.	STATION	OFFSET	LOCATION	CONTROL LETTER	BREAKERS (AMPS) MAIN	BREAKERS (AMPS) CIRCUIT 1	CIRCUIT 2	CIRCUIT 3	CIRCUIT 4	BASE MOUNT 4 CIR. 240V	BASE MOUNT 4 CIR. 480V
1	880+71.39	58.40' LT	NORTON	A		15				1	
				TOTALS, EACH:						1	

CONTROL STATIONS (CITY)

LIGHTING SHEET NO.	STATION	OFFSET	LOCATION	CONTROL LETTER	BREAKERS (AMPS) MAIN	BREAKERS (AMPS) CIRCUIT 1	CIRCUIT 2	CIRCUIT 3	CIRCUIT 4	BASE MOUNT 4 CIR. 240V	BASE MOUNT 4 CIR. 480V
1	880+79.49	60.21' LT	NORTON	B		15				1	
				TOTALS, EACH:						1	

PULLBOXES (MoDOT)

LIGHTING SHEET	STATION	OFFSET	LOCATION	P.B. NO.	CONCRETE DOUBLE TYPE A	CONCRETE DOUBLE TYPE B	CONCRETE STANDARD	PREFORM CL 1	PREFORM CL 2	PREFORM CL 3	DRAIN TYPE
1	5+04.05	26.15' LT	MELVILLE	A1			1				I
			TOTALS:				1				

PULLBOXES (CITY)

LIGHTING SHEET	STATION	OFFSET	LOCATION	P.B. NO.	CONCRETE DOUBLE TYPE A	CONCRETE DOUBLE TYPE B	CONCRETE STANDARD	PREFORM CL 1	PREFORM CL 2	PREFORM CL 3	DRAIN TYPE
1	880+57.59	19.33' LT	NORTON	B1			1				I
1	6+50.98	33.13' LT	MELVILLE	B2			1				II
			TOTALS:				2				

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

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DATE PREPARED 12/20/2024

ROUTE CRD 127 | STATE MO

DISTRICT SW | SHEET NO. 3

COUNTY GREENE

JOB NO. J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION | DATE | REV.

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

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SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

SUMMARY OF QUANTITIES
9 OF 10

SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NUM.	DESCRIPTION
WARNING SIGNS								
W01-1L	48X48	16.00		0.00		0.00		TURN (SYMBOL LEFT ARROW)
W01-1R	48X48	16.00		0.00		0.00		TURN (SYMBOL RIGHT ARROW)
W01-2L	48X48	16.00		0.00		0.00		CURVE (SYMBOL LEFT ARROW)
W01-2R	48X48	16.00		0.00		0.00		CURVE (SYMBOL RIGHT ARROW)
W01-3L	48X48	16.00		0.00		0.00		REVERSE TURN (SYMBOL LEFT ARROW)
W01-3R	48X48	16.00		0.00		0.00		REVERSE TURN (SYMBOL RIGHT ARROW)
W01-4L	48X48	16.00	2	32.00		0.00	15L	REVERSE CURVE (SYMBOL LEFT ARROW)
W01-4R	48X48	16.00	2	32.00		0.00	15R	REVERSE CURVE (SYMBOL RIGHT ARROW)
W01-4bL	48X48	16.00		0.00		0.00		DOUBLE ARROW REVERSE CURVE (SYMBOL LT ARROWS)
W01-4bR	48X48	16.00		0.00		0.00		DOUBLE ARROW REVERSE CURVE (SYMBOL RT ARROWS)
W01-4cL	48X48	16.00		0.00		0.00		TRIPLE ARROW REVERSE CURVE (SYMBOL LT ARROWS)
W01-4cR	48X48	16.00		0.00		0.00		TRIPLE ARROW REVERSE CURVE (SYMBOL RT ARROWS)
W01-6	60X30	12.50	6	75.00		0.00	16	HORIZONTAL ARROW (SYMBOL)
W01-6a	72X36	18.00		0.00		0.00		HORIZ. ARROW (SYMBOL ON PERMANENT BARRICADE)
W01-7	60X30	12.50		0.00		0.00		DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)
W01-7a	72X36	3.00		0.00		0.00		DOUBLE HEAD HORIZ. ARROW (SYMBOL ON PERM. BARR.)
W01-8	18X24	7.50		0.00		0.00		CHEVRON (SYMBOL)
W01-8a	30X36	16.00		0.00		0.00		CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)
W03-1	48X48	16.00		0.00		0.00		STOP AHEAD (SYMBOL)
W03-2	48X48	16.00		0.00		0.00		YIELD AHEAD (SYMBOL)
W03-3	48X48	16.00		0.00		0.00		SIGNAL AHEAD (SYMBOL)
W03-4	48X48	16.00	2	32.00		0.00	11	BE PREPARED TO STOP
W03-5	48X48	16.00		0.00		0.00		SPEED LIMIT AHEAD
W04-1L	48X48	16.00		0.00		0.00		MERGE (SYMBOL FROM LEFT)
W04-1R	48X48	16.00		0.00		0.00		MERGE (SYMBOL FROM RIGHT)
W04-1aL	48X48	16.00		0.00		0.00		MERGE (ARROW SYMBOL)
W04-1aR	48X48	16.00		0.00		0.00		MERGE (ARROW SYMBOL)
W05-1	48X48	16.00	1	16.00		0.00	43	ROAD/BRIDGE/RAMP NARROWS
W05-3	48X48	16.00		0.00		0.00		ONE LANE BRIDGE
W05-5	48X48	16.00		0.00		0.00		NNARROW LANES
W06-1	48X48	16.00		0.00		0.00		DIVIDED HIGHWAY (SYMBOL)
W06-2	48X48	16.00		0.00		0.00		DIVIDED HIGHWAY END (SYMBOL)
W06-3	48X48	16.00		0.00		0.00		TWO WAY TRAFFIC (SYMBOL)
W07-3a	30X24	5.00		0.00		0.00		NEXT XX MILES (PLAQUE)
W08-1	48X48	16.00		0.00		0.00		BUMP
W08-2	48X48	16.00		0.00		0.00		DIP
W08-3	48X48	16.00		0.00		0.00		PAVEMENT ENDS
W08-4	48X48	16.00		0.00		0.00		SOFT SHOULDER
W08-5	48X48	16.00		0.00		0.00		SLIPPERY WHEN WET (SYMBOL)
W08-6	48X48	16.00		0.00		0.00		TRUCK CROSSING (WITH FLAGS)
W08-6c	48X48	16.00		0.00		0.00		TRUCK ENTRANCE
W08-7	36X36	9.00		0.00		0.00		LOOSE GRAVEL
W08-7a	36X36	9.00		0.00		0.00		FRESH OIL/LOOSE GRAVEL
W08-9	48X48	16.00		0.00		0.00		LOW SHOULDER
W08-11	48X48	16.00		0.00		0.00		UNEVEN LANES
W08-12	48X48	16.00		0.00		0.00		NO CENTER LINE
W08-15	48X48	16.00		0.00		0.00		GROOVED PAVEMENT
W08-15P	30X24	5.00		0.00		0.00		MOTORCYCLE (PLAQUE)
W08-17	48X48	16.00		0.00		0.00		SHOULDER DROP-OFF (SYMBOL)
W08-17P	30X24	5.00		0.00		0.00		SHOULDER DROP-OFF (PLAQUE)
W010-1	42RND.	9.62		0.00		0.00		RAILROAD CROSSING
W012-1	24X24	4.00		0.00		0.00		DOUBLE DOWN ARROW (SYMBOL)
W012-2	48X48	16.00		0.00		0.00		LOW CLEARANCE (SYMBOL)
W012-2X	24X18	3.00		0.00		0.00		LOW CLEARANCE (PLAQUE)
W012-2a	84X24	14.00		0.00		0.00		OVERHEAD LOW CLEARANCE (FEET AND INCHES)
W012-4	120X60	50.00		0.00		0.00		LOW CLEARANCE XX FT XX IN XX MILES AHEAD
W012-5	120X60	50.00		0.00		0.00		WIDTH RESTRICTION XX FEET XX IN XX MILES AHEAD
W013-1	30X30	6.25	2	12.50		0.00	44	ADVISORY SPEED (PLAQUE)
W016-2	30X24	5.00		0.00		0.00		XXX FEET (PLAQUE)
W016-3	30X24	5.00		0.00		0.00		X MILE (PLAQUE)
W020-1	48X48	16.00	2	32.00		0.00	2	ROAD/BRIDGE/RAMP WORK AHEAD
W020-2	48X48	16.00	9	144.00		0.00	18	DETOUR AHEAD
W020-3	48X48	16.00	6	96.00		0.00	20	ROAD CLOSED AHEAD
W020-4	48X48	16.00		0.00		0.00		ONE LANE ROAD AHEAD
W020-5	48X48	16.00		0.00		0.00		RIGHT/CENTER/LEFT LANE CLOSED AHEAD
W020-5a	48X48	16.00		0.00		0.00		2 RIGHT/CENTER/LEFT LANE CLOSED AHEAD
W020-6a	48X48	16.00		0.00		0.00		RIGHT/CENTER/LEFT LANE CLOSED
W020-7a	48X48	16.00	2	32.00		0.00	8	FLAGGER (SYMBOL, WITH FLAGS)
W021-2	36X36	9.00		0.00		0.00		FRESH OIL
W021-5	48X48	16.00	2	32.00		0.00	21	SHOULDER WORK/SHOULDER WORK AHEAD
W021-5a	48X48	16.00		0.00		0.00		RIGHT SHOULDER CLOSED
W021-5b	48X48	16.00		0.00		0.00		RIGHT SHOULDER CLOSED AHEAD
W022-1	48X48	16.00		0.00		0.00		BLASTING ZONE AHEAD
W022-2	48X36	10.50		0.00		0.00		TURN OFF 2-WAY RADIO AND PHONE
W022-3	42X36	10.50		0.00		0.00		END BLASTING ZONE
G022-1	21X15	2.19		0.00		0.00		WET PAINT (ARROW PIVOTS)
GUIDE SIGNS								
E05-1	36X48	12.00		0.00		0.00		GORE EXIT
E05-2	48X36	12.00		0.00		0.00		EXIT OPEN
E05-2a	48X36	12.00		0.00		0.00		EXIT CLOSED
G020-1	60X24	10.00		0.00		0.00		ROAD WORK NEXT XX MILES
G020-2	48X24	8.00		0.00		0.00		END ROAD WORK
G020-4	36X18	4.50		0.00		0.00		PILOT CAR FOLLOW ME
G020-4a	42X30	8.75		0.00		0.00		PILOT CAR IN USE WAIT & FOLLOW
G020-4a	18X12	1.50		0.00		0.00		PILOT CAR IN USE WAIT & FOLLOW
G020-5aP	36X24	6.00		0.00		0.00		WORK ZONE (PLAQUE)
M04-8a	24X18	3.00	4	12.00		0.00	52	END DETOUR
M04-9L	48X36	12.00	11	132.00		0.00	50D-E	DETOUR (LEFT ARROW)
M04-9R	48X36	12.00	8	96.00		0.00	50B-C	DETOUR (RIGHT ARROW)
M04-9P	48X12	4.00	25	100.00		0.00	50	STREET NAME (PLAQUE)
M04-10L	48X18	6.00	1	6.00		0.00	17L	DETOUR (ARROW LEFT)
M04-10R	48X18	6.00	1	6.00		0.00	17R	DETOUR (ARROW RIGHT)
REGULATORY SIGNS								
R1-1	48X48	13.25		0.00		0.00		STOP
R1-2	48TRI.	6.93		0.00		0.00		YIELD
R1-2a	36X36	9.00		0.00		0.00		TO ONCOMING TRAFFIC (PLAQUE)
R1-3P	30X12	2.50		0.00		0.00		ALL WAY (PLAQUE)
R2-1	36X48	12.00		0.00		0.00		SPEED LIMIT XX
R3-1	48X48	16.00		0.00		0.00		NO RIGHT TURN (SYMBOL)
R3-2	48X48	16.00		0.00		0.00		NO LEFT TURN (SYMBOL)
R3-3	36X36	9.00		0.00		0.00		NO TURNS
R3-4	48X48	16.00		0.00		0.00		NO U-TURN (SYMBOL)
R3-7L	30X30	6.25		0.00		0.00		LEFT LANE MUST TURN LEFT
R3-7R	30X30	6.25		0.00		0.00		RIGHT LANE MUST TURN RIGHT
R4-1	36X48	12.00		0.00		0.00		DO NOT PASS
R4-2	36X48	12.00		0.00		0.00		PASS WITH CARE
R4-8a	36X48	12.00		0.00		0.00		KEEP LEFT (HORIZONTAL ARROW)
R4-7a	36X48	12.00		0.00		0.00		KEEP RIGHT (HORIZONTAL ARROW)
R5-1	30X30	6.25		0.00		0.00		DO NOT ENTER
R5-1a	36X24	6.00		0.00		0.00		WRONG WAY
R6-1L	54X18	6.75		0.00		0.00		ONE WAY ARROW (LEFT)
R6-1R	54X18	6.75		0.00		0.00		ONE WAY ARROW (RIGHT)
R6-2L	24X30	5.00		0.00		0.00		ONE WAY (LEFT)
R6-2R	24X30	5.00		0.00		0.00		ONE WAY (RIGHT)
R9-9	24X12	2.00		0.00		0.00		SIDEWALK CLOSED
R9-11L	24X18	3.00		0.00		0.00		SIDEWALK CLOSED AHEAD, (ARROW LEFT) CROSS HERE
R9-11-R	24X18	3.00		0.00		0.00		SIDEWALK CLOSED AHEAD, (ARROW RIGHT) CROSS HERE
R10-6	24X36	6.00		0.00		0.00		STOP HERE ON RED (45° ARROW)
R11-2	48X30	10.00	4	40.00		0.00	29	ROAD CLOSED
R11-3a	60X30	12.50		0.00		0.00		ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY
R11-4	60X30	12.50	1	12.50		0.00	55	ROAD CLOSED TO THRU TRAFFIC
CONST-3A	40X48	20.00		0.00		0.00		FINE SIGN
COSNT-3X	56X12	4.67		0.00		0.00		SPEEDING/PASSING (PLATE)
MISCELLANEOUS SIGNS								
CONST-5	48X36	12.00		0.00		0.00		POINT OF PRESENCE
CONST-5	96X48	32.00		0.00		0.00		POINT OF PRESENCE
CONST-7	48X24	8.00		0.00		0.00		RATE OUR WORK ZONE
CONST-7	72X36	18.00	2	36.00		0.00	56	RATE OUR WORK ZONE
CONST-8	48X36	12.00	4	48.00		0.00	59	WORK ZONE NO PHONE ZONE
M04-9R	48X36	12.00	6	72.00		0.00	50A	DETOUR (STRAIGHT ARROW)
SPECIAL	36X72	18.00	23	414.00		0.00	50F-R	I-44 DETOUR

616-10.05 CONSTRUCTION SIGNS	TOTAL
	1510.00

616-10.10 RELOCATED SIGNS *	TOTAL
	0.00

* NO DIRECT PAYMENT WILL BE MADE FOR RELOCATION OF SIGNS

ITEM NUMBER	TOTAL QTY	DESCRIPTION
6122008		IMPACT ATTENUATOR 40 MPH (SAND BARRELS)
6122009		IMPACT ATTENUATOR 45 MPH (SAND BARRELS)
6122010		IMPACT ATTENUATOR 50 MPH (SAND BARRELS)
6122012		IMPACT ATTENUATOR 55 MPH (SAND BARRELS)
6122014	1	IMPACT ATTENUATOR 60 MPH (SAND BARRELS)
6122017		IMPACT ATTENUATOR 65 MPH (SAND BARRELS)
6122019	1	IMPACT ATTENUATOR 70 MPH (SAND BARRELS)
6122020		REPLACEMENT SAND BARREL
6122030		IMPACT ATTENUATOR (RELOCATION)
6123000A		TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)
6161008	4	ADVANCED WARNING RAIL SYSTEM
6161012		BUOYS (BOATS KEEP OUT)
6161013		BUOYS (NO WAKE)
6161014		SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)
6161025	225	CHANNELIZER (TRIM LINE)
6161030	37	TYPE III MOVEABLE BARRICADE
6161033		DIRECTION INDCATOR BARRICADE
6161040		FLASING ARROW PANEL
6161047		TYPE III OBJECT MARKER
6161051		WARNING LIGHT TYPE A
6161052		WARNING LIGHT TYPE B
6161053		WARNING LIGHT TYPE C
6161055		SEQUENTIAL FLASHING WARNING LIGHT
6161070		TUBULAR MARKER
6161095		RADAR SPEED ADVISORY SYSTEM
6161096		CHANGEABLE MESSAGE SIGN, COMMISSION FURNISHED/RETAINED
6161098A		CHANGEABLE MESSAGE SIGN W/O COMM. INTERFACE, CONTRACTOR FURNISHED/RETAINED
6161099	10	CHANGEABLE MESSAGE SIGN WITH COMM. INTERFACE, CONTRACTOR FURNISHED/RETAINED
6162000A		WORK ZONE TRAFFIC SIGNAL SYSTEM
6162002		TEMPORARY LONG-TERM RUMBLE STRIPS
6162004		TEMPORARY SHORT-TERM RUMBLE STRIPS
6173600D	700	TEMPORARY TRAFFIC BARRIER CONTRACTOR FURNISHED/ RETAINED
6173602B		TEMPORARY TRAFFIC BARRIER ANCHORED CONTRACTOR FURNISHED/COMMISSION RETAINED
6174000A		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION
6175010A		RELOCATING TEMPORARY TRAFFIC BARRIER
6176000B		TEMPORARY TRAFFIC BARRIER COMMISSION FURNISHED/RETAINED
6177000B		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION COMMISSION FURNISHED/RETAINED
6208064A		TEMPORARY RAISED PAVEMENT MARKER
9029400		TEMPORARY TRAFFIC SIGNALS
9029401		TEMPORARY TRAFFIC SIGNALS AND LIGHTING

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STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 12/20/2024
ROUTE: CRD 127
STATE: MO
DISTRICT: SW
SHEET NO.: 3
COUNTY: GREENE
JOB NO.: J8S3156
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

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

CMT
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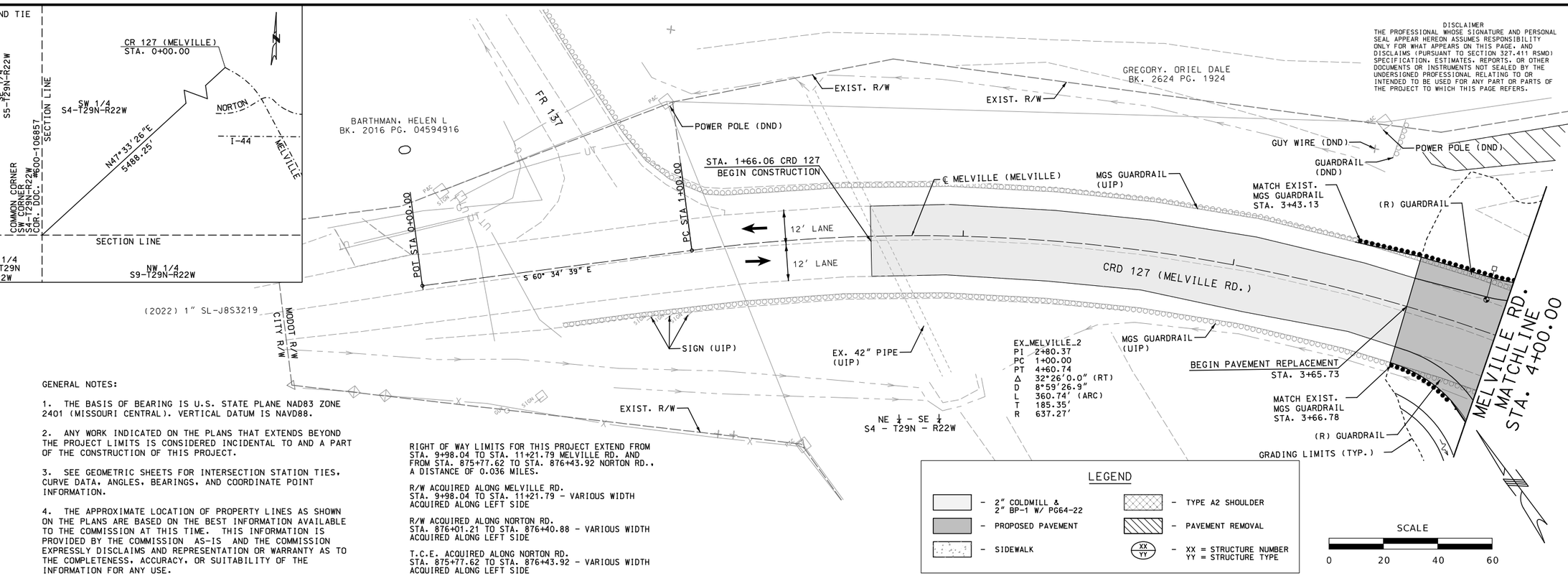
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

SUMMARY OF QUANTITIES
10 OF 10



GENERAL NOTES:

1. THE BASIS OF BEARING IS U.S. STATE PLANE NAD83 ZONE 2401 (MISSOURI CENTRAL). VERTICAL DATUM IS NAVD88.

2. 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.

3. SEE GEOMETRIC SHEETS FOR INTERSECTION STATION TIES, CURVE DATA, ANGLES, BEARINGS, AND COORDINATE POINT INFORMATION.

4. 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 AND REPRESENTATION OR WARRANTY AS TO THE COMPLETENESS, ACCURACY, OR SUITABILITY OF THE INFORMATION FOR ANY USE.

RIGHT OF WAY LIMITS FOR THIS PROJECT EXTEND FROM STA. 9+98.04 TO STA. 11+21.79 MELVILLE RD. AND FROM STA. 875+77.62 TO STA. 876+43.92 NORTON RD., A DISTANCE OF 0.036 MILES.

R/W ACQUIRED ALONG MELVILLE RD.
STA. 9+98.04 TO STA. 11+21.79 - VARIOUS WIDTH ACQUIRED ALONG LEFT SIDE

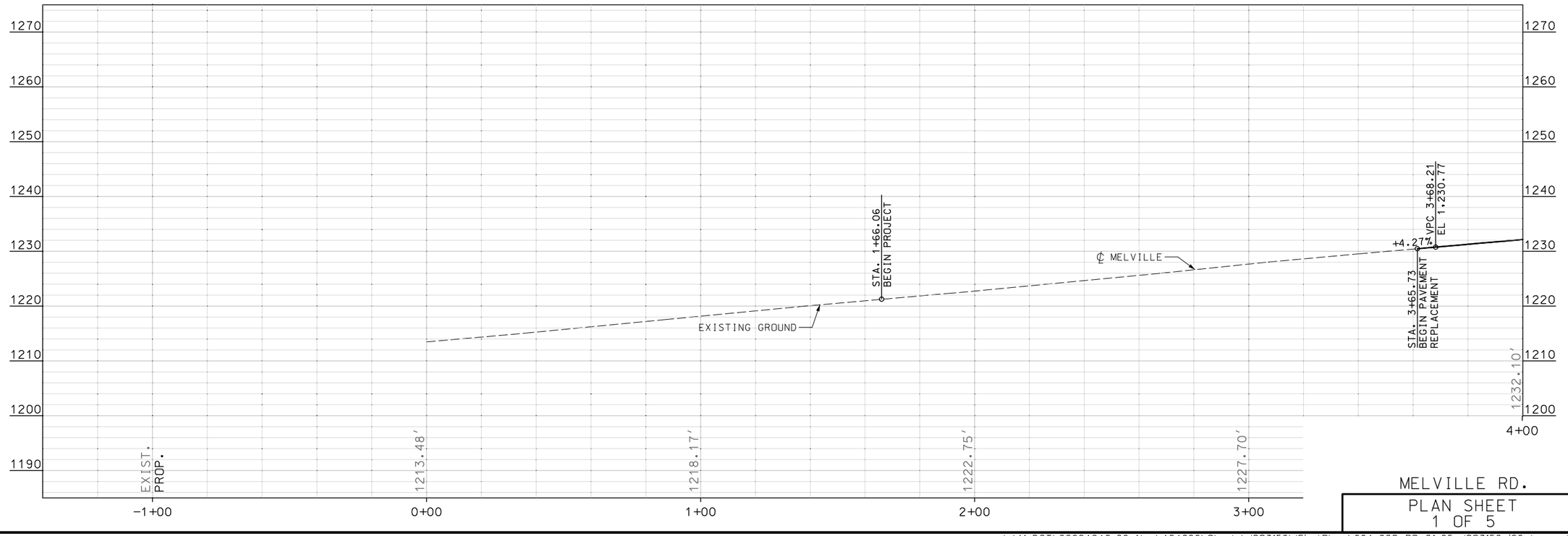
R/W ACQUIRED ALONG NORTON RD.
STA. 876+01.21 TO STA. 876+40.88 - VARIOUS WIDTH ACQUIRED ALONG LEFT SIDE

T.C.E. ACQUIRED ALONG NORTON RD.
STA. 875+77.62 TO STA. 876+43.92 - VARIOUS WIDTH ACQUIRED ALONG LEFT SIDE

LEGEND

- 2" COLDMILL & 2" BP-1 W/ PG64-22
- PROPOSED PAVEMENT
- SIDEWALK
- TYPE A2 SHOULDER
- PAVEMENT REMOVAL
- XX/YY - XX = STRUCTURE NUMBER, YY = STRUCTURE TYPE

SCALE
0 20 40 60



MELVILLE RD.

PLAN SHEET
1 OF 5

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STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	4

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

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

CMT
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CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8S3156\!Final Plans\004-008_PS_01-05_J8S3156_i20.dgn 2:10:16 PM 12/20/2024

NORTON RD. MATCHLINE STA. 879+80.00 (SEE SHEET 8)

MELVILLE RD. MATCHLINE STA. 4+00.00

MELVILLE RD. MATCHLINE STA. 9+40.00

EXIST. R/W

GRADING LIMITS (TYP).

(R) SIGN

LIGHT POLE (R)

TYPE B CURB AND GUTTER

5' SIDEWALK

R 50'

R 30'

PC STA 879+13.94

STA. 4+36.03 MELVILLE= STA. 879+10.88 NORTON

88.32°

PT STA 4+60.74

CRD 127 (MELVILLE RD.)

S 28° 08' 39" E

(R) GUARDRAIL

MGS GUARDRAIL

TRANSITION CURB TO MATCH BRIDGE

MASH END TERMINAL

(R) SIGN

MGS BRIDGE APPROACH TRANSITION SECTION STA. 5+62.93

MSE WALL #A9434

TYPE 2 ROCK BLANKET

END ANCHOR

NORTON RD.

S 56° 33' 19" E

℄ NORTON (NORTON)

NORTON RD. MATCHLINE (SEE SHEET 7) STA. 878+30.00

GRADING LIMITS (TYP.)

T01

STA. 5+85.08 OFF. 16.50' LT

PRECAST CURB INLET (5'X3') - TYPE T

DA = 0.21 AC

Q_{α} = 1.52 CFS

STA. 878+96.88 I-44 BEGIN MSE WALL

NE ¼ - SE ¼ S4 - T29N - R22W

TYPE 2 ROCK BLANKET

25' BARRIER HEIGHT TRANSITION

12" FES GROUP B

19 LF 12" GROUP B PIPE

BRIDGE APPROACH SLAB STA. 6+13.78

STA. 880+84.27 I-44 END MSE WALL

07 FES

WB I-44

(R) 18" PIPE & FES'S

(R & REPLACE) 287.5 LF MGS GUARDRAIL

BRIDGE #A9317

76 LF 18" GROUP A PIPE

STA. 7+25.49 MELVILLE = STA. 880+20.16 I-44

51.32°

TYPE A PIPE COLLAR

℄ MELVILLE (MELVILLE)

(R) BRIDGE #A0441

96 LF 18" GROUP A PIPE

(R & REPLACE) 237.5 LF MGS GUARDRAIL

(R & REPLACE) 200 LF MEDIAN GUARDCABLE FROM STA. 879+12.66 TO STA. 881+12.66

BRIDGE #A9317
STA. 6+33.21 TO
STA. 8+17.77 CR 127
TWO-SPAN (90'-0" SPANS)
184'-63/4" LONG, 47'-8" WIDE

06 FES

STA. 879+66.08 I-44 BEGIN MSE WALL

STA. 881+76.22 I-44 END MSE WALL

MSE WALL #A9435

EB I-44

TYPE B CURB AND GUTTER

25' BARRIER HEIGHT TRANSITION

12" FES GROUP B

22 LF 12" GROUP B PIPE

(R) GUARDRAIL

(R) SIGN

02 T

12' LANE

TRANSITION CURB TO MATCH BRIDGE

12' LANE

(R) GUARDRAIL

TYPE A2 SHOULDER

MGS GUARDRAIL STA. 8+66.89

MASH END TERMINAL

MGS BRDIGE APPROACH TRANSITION SECTION

GRADING LIMITS (TYP.)

BRIDGE APPROACH SLAB STA. 8+37.20

EXIST. R/W

TYPE 2 ROCK BLANKET

T02

STA. 8+77.44 OFF. 16.50' LT

PRECAST CURB INLET (5'X3') - TYPE T

DA = 0.17 AC

Q_{α} = 1.11 CFS

NE ¼ - SE ¼ S4 - T29N - R22W

ELLIS-HOLDORF, SUSAN F ETAL
BK. 2009 PG. 05109409

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STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

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DATE PREPARED: 12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	5

COUNTY: GREENE

JOB NO.: J8S3156

CONTRACT ID.

PROJECT NO.

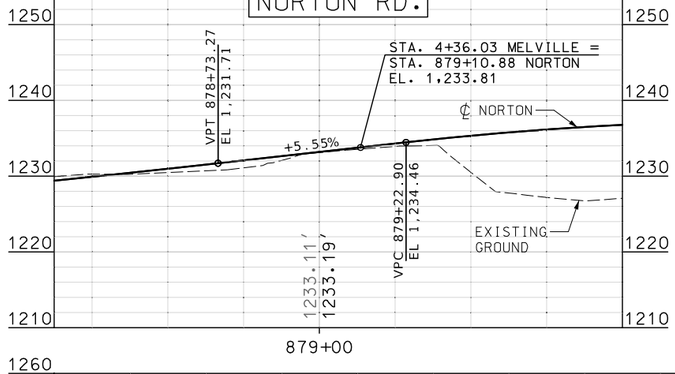
BRIDGE NO.

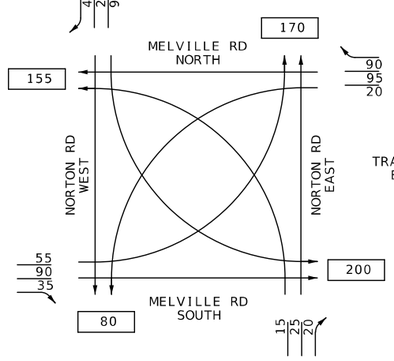
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



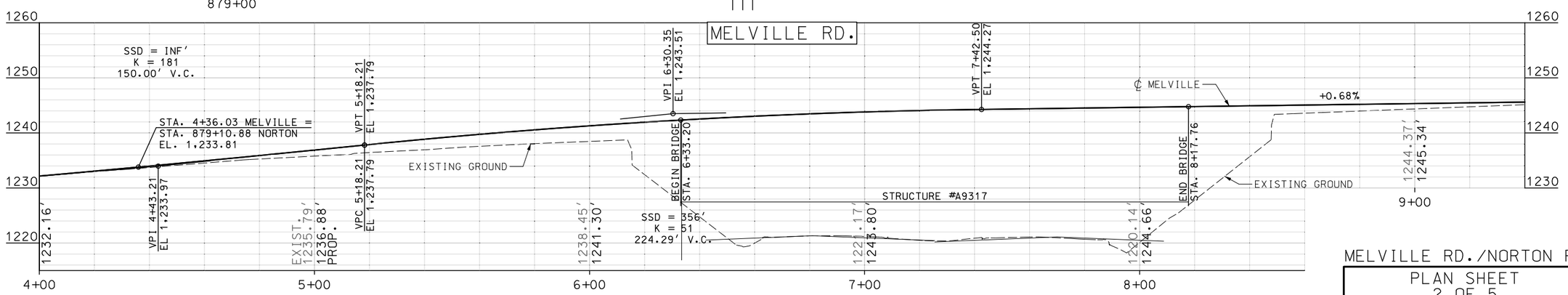


TRAFFIC FLOW DIAGRAM
ESTIMATED - 2045
TRAFFIC VOLUME

SCALE
0 20 40 60

LEGEND

- 2" COLDMILL & 2" BP-1 W/ PG64-22
- PROPOSED PAVEMENT
- SIDEWALK
- TYPE A2 SHOULDER
- PAVEMENT REMOVAL
- XX / YY = XX = STRUCTURE NUMBER, YY = STRUCTURE TYPE



MELVILLE RD./NORTON RD

PLAN SHEET
2 OF 5

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

L:\MoDOT\22004246-00_New\424600\Sheets\J8S3156\!Final Plans\004-008_PS_01-05_J8S3156_i20.dgn 2:10:17 PM 12/20/2024

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MATCHLINE STA. 9+40.00

1

SHARP, KENDALL
BK. 2022 PG. 04777922
1,362.7 SF NEW R/W
0.00 SF PERM. ESM'T
0.00 SF TEMP. ESM'T
3.39 AC. REMAINING

STA. 9+98.04
OFF. 51.61' LT.

NEW R/W

L = 123.73'
S 28° 12' 28" E

STA. 11+21.77
OFF. 51.75' LT.

L = 12.00'
N 61° 47' 32" E

STA. 11+21.79
OFF. 39.75' LT.

EXIST. R/W

(R) TREE

STA. 10+18.41
OFF. 39.63' LT.

150 LF
12" GROUP A PIPE

GRADING LIMITS (TYP.)

POWER POLE (DND)

TYPE 2-B
CURB RAMP

TYPE B CURB
& GUTTER

5' SIDEWALK

R L

STA. 14+04.99 MELVILLE RD.
END CONSTRUCTION

12' LANE

12' LANE

03
T

04
T

TYPE B CURB & GUTTER

S 28° 08' 39" E

℄ MELVILLE (MELVILLE)

CRD 127 (MELVILLE RD.)

EX. 18" PIPE (R)

END PAVEMENT REPLACEMENT
STA. 10+02.84

TYPE A2 SHOULDER

(UIP) SIGN

NE ¼ - SE ¼
S4 - T29N - R22W

POT STA 14+18.20

TREELINE (DND)

EXIST. R/W

T03
STA. 11+55.00 OFF. 16.50' LT
PRECAST CURB INLET (5'X3') - TYPE T
DA = 0.05 AC
Q_{α} = 0.35 CFS

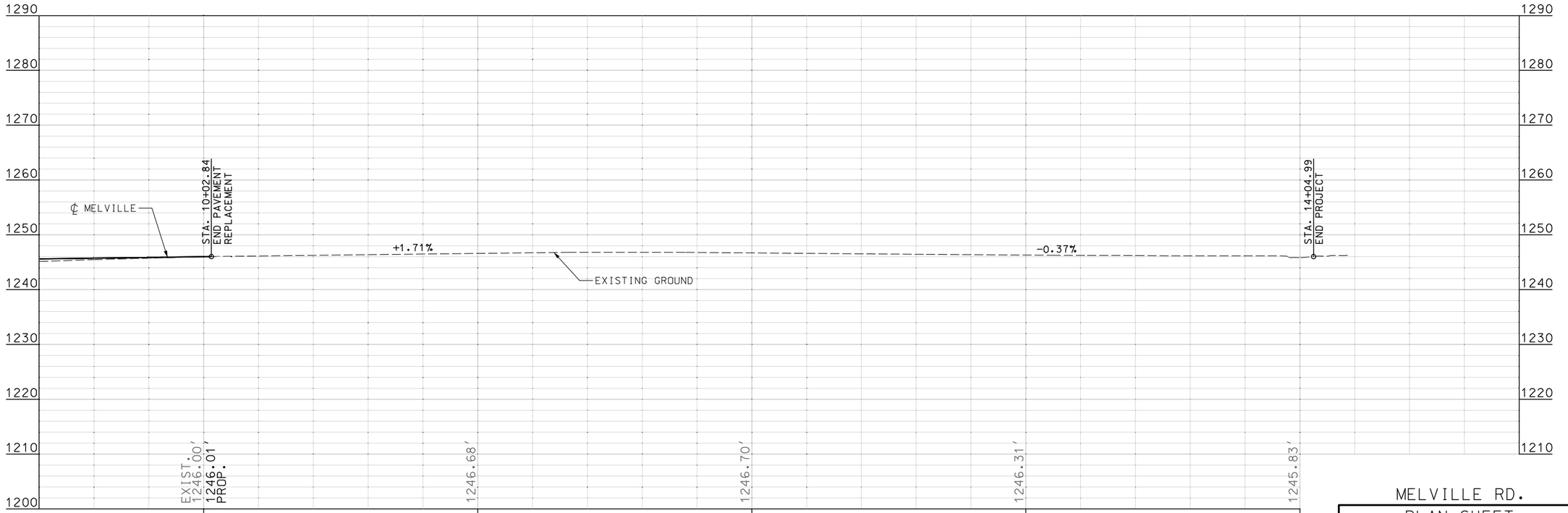
T04
STA. 11+55.00 OFF. 16.50' LT
PRECAST CURB INLET (5'X3') - TYPE T
DA = 0.07 AC
Q_{α} = 0.43 CFS

ELLIS-HOLDORF, SUSAN F ETAL
BK. 2009 PG. 05109409

LEGEND

- 2" COLDMILL & 2" BP-1 W/ PG64-22
- PROPOSED PAVEMENT
- SIDEWALK
- TYPE A2 SHOULDER
- PAVEMENT REMOVAL
- XX / YY — XX = STRUCTURE NUMBER, YY = STRUCTURE TYPE

SCALE
0 20 40 60



MELVILLE RD.

PLAN SHEET
3 OF 5

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	6

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

CMT

CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8S3156\!Final Plans\004-008_PS_01-05_J8S3156_i20.dgn 2:10:18 PM 12/20/2024

SCALE
0 20 40 60

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(2) WARE, DONNA M E TR
BK. 2013 PG. 02201213
291.0 SF NEW R/W
0.00 SF PERM. ESM'T
503.00 SF TEMP. ESM'T (CONST.)
17.33 AC. REMAINING

875

EXIST. ROW
FENCE (R)
NEW T.C.E.
TREE (R)
1.5'x9'x18' ROCK LINING
36" FES GROUP B
GRADING LIMITS (TYP.)
STA. 876+43.92 OFF. 58.96' LT.
STA. 876+40.88 OFF. 47.98' LT.
59 LF 36" GROUP B PIPE
NORTON RD. MATCHLINE STA. 878+30.00 (SEE SHEET 5)
POT STA 874+00.00
EXIST. ROW
STA. 875+77.62 OFF. 39.95' LT.
TREE (R)
PC STA 875+27.85
L = 62.64'
N 63° 24' 13" E
L = 31.84'
N 63° 24' 13" E
GUY WIRES (ADJUST BY OTHERS)
NEW R/W
STA. 876+01.21 OFF. 37.26' LT.
STA. 876+36.50 OFF. 31.10' LT.
RISER (ADJUST BY OTHERS)
R 500'
12' LANE
12' LANE
BEGIN NORTON CONSTRUCTION STA. 874+76.64
S 89° 27' 56" E
POWER POLE (ADJUST BY OTHERS)
GUY WIRES (ADJUST BY OTHERS)
(R) SIGN
SAWCUT
12' LANE
12' LANE
℄ NORTON (NORTON)
TYPE A PIPE COLLAR
PR_NORTON_2
PI 876+71.13
PC 875+27.85
PT 878+06.93
Δ 31°58'45.6" (LT)
D 11°27'33.0"
L 279.07' (ARC)
T 143.28'
R 500.00'
CP #514
GRADING LIMITS (TYP.)
EX 36" PIPE (UIP)

LAND TIE
SE 1/4 S5-T29N-R22W
NORTON RD STA. 874+00.00
SW 1/4 S4-T29N-R22W
NORTON
I-44
MELVILLE
SECTION LINE
COMMON CORNER SW CORNER S4-T29N-R22W COR. DOC. #600-106857
N49°44'44"E 5099.59'
SECTION LINE
NE 1/4 S8-T29N R22W
NW 1/4 S9-T29N-R22W

LEGEND
- 2" COLDMILL & 2" BP-1 W/ PG64-22
- PROPOSED PAVEMENT
- SIDEWALK
- TYPE A2 SHOULDER
- PAVEMENT REMOVAL
- XX/YY = XX = STRUCTURE NUMBER, YY = STRUCTURE TYPE

SSD = 437'
K = 95
350.00' V.C.
STA. 874+76.64 BEGIN IMPROVEMENTS
VPC 875+23.27 EL 1,218.73
℄ NORTON
+1.86%
+1.86%
+5.55%
VPI 876+98.27 EL 1,221.99
EXISTING GROUND
EXIST. 1216.40'
PROP. 1218.28' 1218.30'
1219.53' 1220.47'
1214.47' 1223.67'
1228.60' 1227.92'
874+00 875+00 876+00 877+00 878+00
1260 1250 1240 1230 1220 1210 1200 1190 1180

NORTON RD.
PLAN SHEET 4 OF 5

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/20/2024
ROUTE CRD 127
STATE MO
DISTRICT SW
SHEET NO. 7
COUNTY GREENE
JOB NO. J8S3156
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION
DATE
REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

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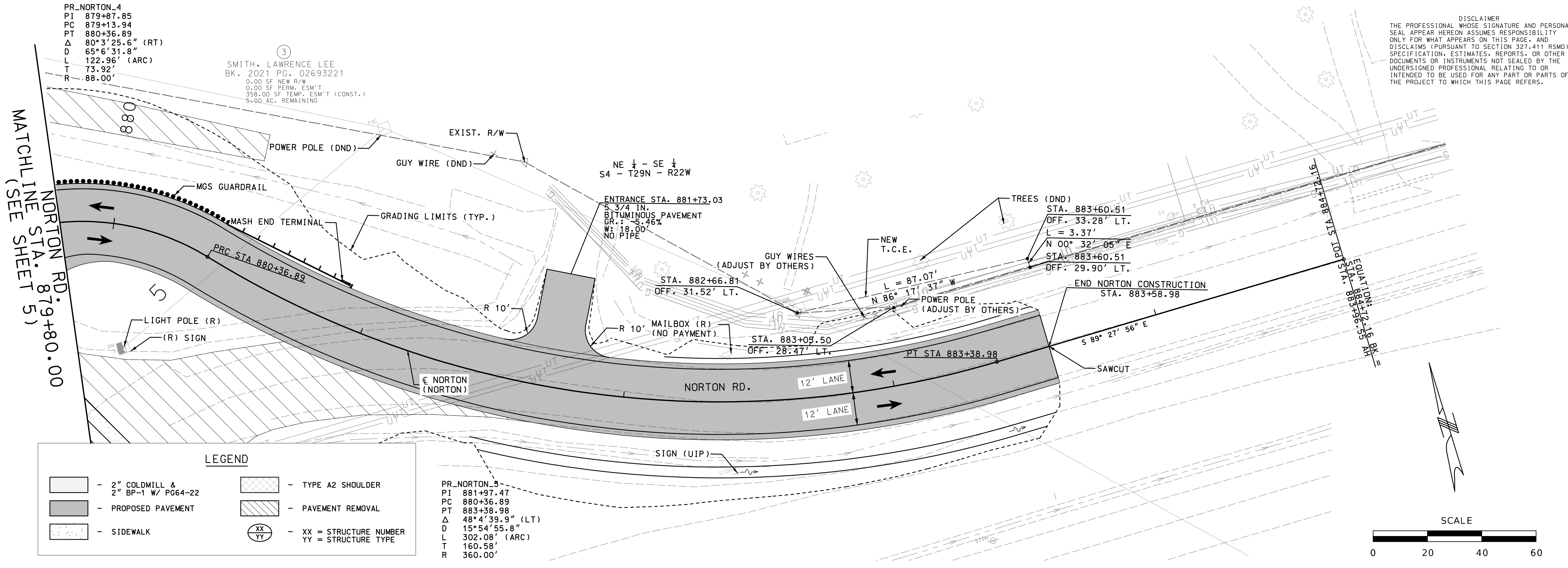

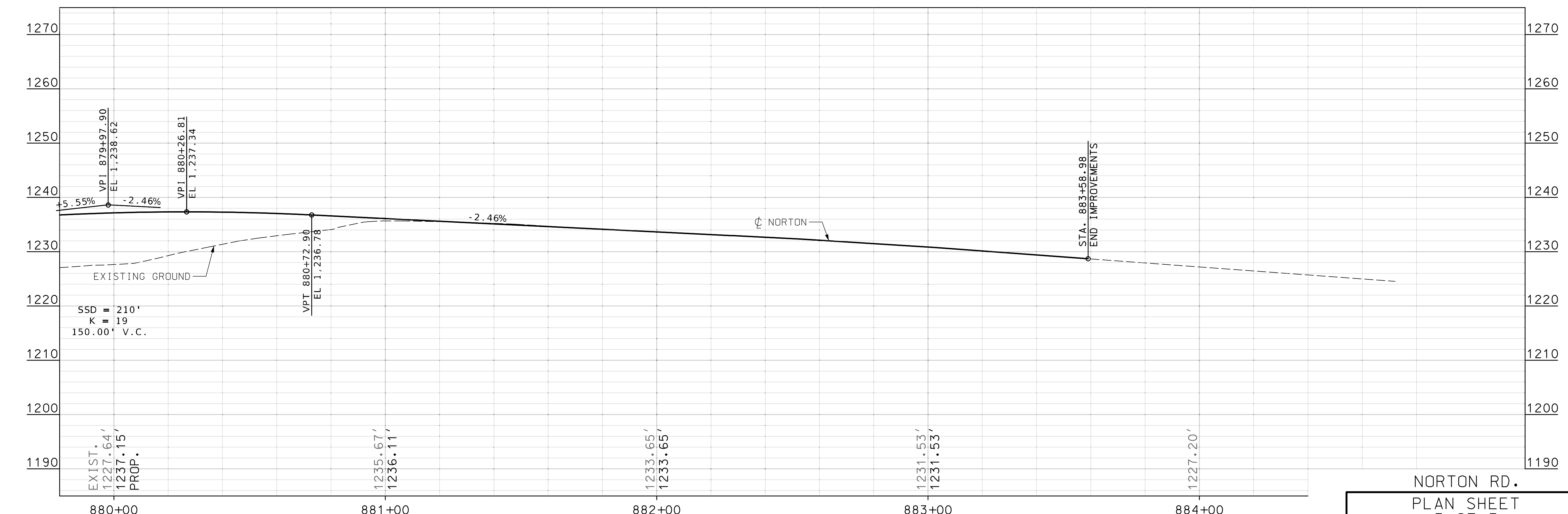

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STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	1/9/2025
ROUTE	CRD 127
STATE	MO
DISTRICT	SW
SHEET NO.	8
COUNTY	GREENE
JOB NO.	J8S3156
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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ENGINEERING CORPORATION - 000631

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REV.

NORTON RD.

PLAN SHEET
5 OF 5

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SEC./SUR. 4 TWP. 29N RGE. 22W

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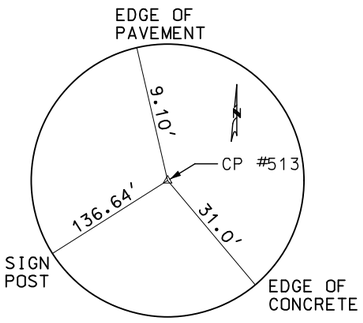
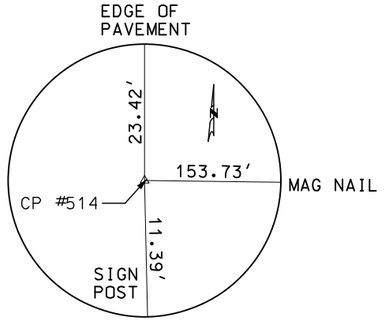
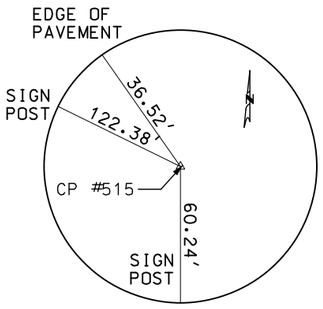


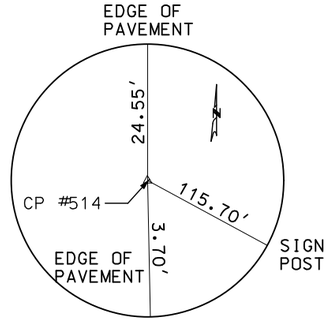
CONTROL POINT #513
N: 516507.53
E: 1394546.40
EL. 1253.87
STA. 842+05.38 R1 OFF. 93.86' LT I-44
5/8" I.B. W/ ALUMINUM CAP



CONTROL POINT #514
N: 517039.25
E: 1397801.35
EL. 1222.12
STA. 2+62.67 OFF. 395.06' RT MELVILLE
5/8" I.B. W/ ALUMINUM CAP



CONTROL POINT #515
N: 516847.15
E: 1399681.98
EL. 1219.86
STA. 894+00.43 R1 OFF. 90.54' RT I-44
5/8" I.B. W/ ALUMINUM CAP



CONTROL POINT #516
N: 517010.02
E: 1402625.88
EL. 1241.09
STA. 1053+66.22 R2 OFF. 100.14 LT I-44
5/8" I.B. W/ ALUMINUM CAP

MELVILLE RD.

REFERENCE POINTS
1 OF 1

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	9

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

REV.	DESCRIPTION	DATE

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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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SEC./SUR. 4 TWP. 29N RGE. 22W

SCALE

0 100 200 300 400 500

EX_MELVILLE_2	
PI	2+80.37
PC	1+00.00
PT	4+60.74
Δ	32°26′00.0″(RT)
D	8°59′26.9″
L	360.74′ (ARC)
T	185.35′
R	637.27′
emax	8%
e	6.4%

PR_NORTON_4	
PI	879+87.85
PC	879+13.94
PT	880+36.89
Δ	80°3′25.6″ (RT)
D	65°6′31.8″
L	122.96′ (ARC)
T	73.92′
R	88.00′
emax	LSU
e	NC

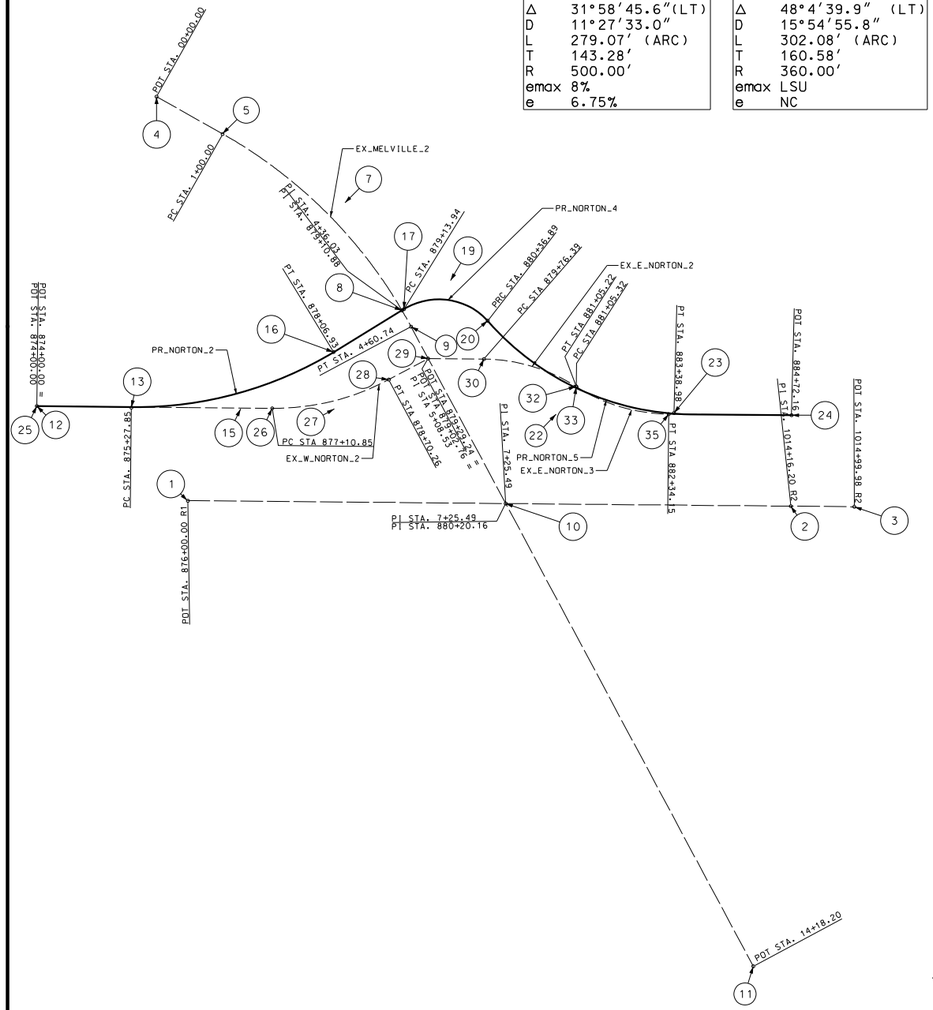
EX_W_NORTON_2	
PI	877+92.60
PC	877+10.85
PT	878+70.26
Δ	28°41′42″ (LT)
D	17°55′34.4″
L	159.41′ (ARC)
T	81.75′
R	319.62′
emax	LSU
e	NC

EX_E_NORTON_3	
PI	881+71.47
PC	881+05.32
PT	882+34.15
Δ	32°06′58″ (LT)
D	24°54′40.4″
L	128.83′ (ARC)
T	66.20′
R	230.00′
emax	LSU
e	NC

PR_NORTON_2	
PI	876+71.13
PC	875+27.85
PT	878+06.93
Δ	31°58′45.6″(LT)
D	11°27′33.0″
L	279.07′ (ARC)
T	143.28′
R	500.00′
emax	8%
e	6.75%

PR_NORTON_5	
PI	881+97.47
PC	880+36.89
PT	883+38.98
Δ	48°4′39.9″ (LT)
D	15°54′55.8″
L	302.08′ (ARC)
T	160.58′
R	360.00′
emax	LSU
e	NC

EX_E_NORTON_2	
PI	880+42.55
PC	879+76.39
PT	881+05.22
Δ	32°05′35″ (RT)
D	24°54′40.4″
L	128.83′ (ARC)
T	66.15′
R	230.00′
emax	LSU
e	NC



ALL PROJECT COORDINATES HAVE BEEN PROJECTED FROM THE MISSOURI STATE PLANE COORDINATE (SPC) SYSTEM OF 1983 USING AN AVERAGE PROJECT PROJECTION (GRID TO GROUND) FACTOR. TO GET BACK TO STATE PLANE COORDINATES, MULTIPLY THE PROJECT COORDINATES BY THE AVERAGE GRID FACTOR AS SHOWN IN THE "REFERENCE CONTROL INFORMATION" PORTION OF THIS TABLE.

PROJECT COORDINATE INFORMATION	
COORDINATE SYSTEM	MISSOURI STATE PLANE
HORIZONTAL DATUM	NAD83
VERTICAL DATUM	NAVD88
GEOID MODEL	GEOID 12B
ELEVATIONS DETERMINED BY	OPUS FOR PRIMARY CONTROL
PROJECT PROJECTION FACTOR	1.0000702
REFERENCE CONTROL INFORMATION	
COORDINATE SYSTEM	MISSOURI STATE PLANE
CONTROL STATION	MODOT GNSS
DESIGNATION	
CORS_ID	
PID	
LATITUDE	
LONGITUDE	
NORTHING (M)	
EASTING (M)	
ZONE	CENTRAL
PROJECT AVERAGE GRID FACTOR	0.9999298073

EXAMPLE OF PROJECT COORDINATE TO S.P.C.

PROJECT NORTHING X AVERAGE GRID FACTOR
= STATE PLANE NORTHING
PROJECT EASTING X AVERAGE GRID FACTOR
= STATE PLANE EASTING

EXAMPLE: CONTROL POINT #[512]
N [514723.75] X [0.9999298073] = N [514687.62]
E [1393079.80] X [0.9999298073] = E [1392982.01]

LINEAR UNIT CONVERSION

1 METER = 3.280833333 US SURVEY FEET (USFT)

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COORDINATE POINT LISTING

SHEET NO	STATION	LOCATION	OFFSET	STATE PLANE NORTHING (US SURVEY FEET)	STATE PLANE EASTING (US SURVEY FEET)	MOD. STATE PLANE NORTHING (US SURVEY FEET)	MOD. STATE PLANE EASTING (US SURVEY FEET)	ELEVATION (US SURVEY FEET)	DESCRIPTION	POINT ID
PROJECT CONTROL POINTS										
9	842+05.38 R1	I-44	93.86 LT	516471.28	1394448.51	516507.53	1394546.40	1253.87	⅝" I.B. W/ ALUMINUM CAP	513
9	3+28.73	MELVILLE	395.06 RT	517002.95	1397703.23	517039.25	1397801.35	1222.12	⅝" I.B. W/ ALUMINUM CAP	514
9	894+00.43 R1	I-44	90.54 RT	516810.87	1399583.74	516847.15	1399681.98	1219.86	⅝" I.B. W/ ALUMINUM CAP	515
9	1053+66.22 R2	I-44	100.14 LT	516973.73	1402527.43	517010.02	1402625.88	1241.09	⅝" I.B. W/ ALUMINUM CAP	516
ALIGNMENTS										
*	876+00.00	I-44	0.00	516918.30	1397784.37	516954.59	1397882.49	1222.29	POT I-44	1
*	1014+16.20 R2	I-44	0.00	516910.87	1398580.84	516947.16	1398679.01	1214.35	PI I-44	2
*	1014+99.98 R2	I-44	0.00	516910.48	1398664.60	516946.77	1398762.79	1213.54	POT I-44	3
4	00+00.00	MELVILLE	0.00	517451.39	1397743.67	517487.72	1397841.79	1218.83	POT MELVILLE	4
4	1+00.00	MELVILLE	0.00	517402.27	1397830.77	517438.59	1397928.90	1218.83	PC MELVILLE	5
4	1+00.00	MELVILLE	637.27 RT	516847.23	1397517.74	516883.51	1397615.84	1218.83	CC OF CURVE MELVILLE	6
4	2+80.37	MELVILLE	26.41 RT	517311.23	1397992.20	517347.54	1398090.34	1226.68	PI MELVILLE	7
5	4+36.03 879+10.88	MELVILLE NORTON	0.00	517169.36	1398067.55	517205.67	1398165.69	1233.57	PI MELVILLE PI NORTON	8
5	4+60.74	MELVILLE	0.00	517147.81	1398079.62	517184.11	1398177.76	1234.59	PT MELVILLE	9
5	7+25.49 880+20.16	MELVILLE I-44	0.00	516914.38	1398204.49	516950.67	1398302.64	1243.92	PI MELVILLE PI I-44	10
6	14+18.20	MELVILLE	0.00	516303.62	1398531.21	516339.86	1398629.39	1246.18	POT MELVILLE	11
7	874+00.00	NORTON	0.00	517042.92	1397585.54	517079.22	1397683.65	1217.86	POT NORTON	12
7	875+27.85	NORTON	0.00	517041.73	1397713.38	517078.03	1397811.50	1218.82	PC NORTON	13
-	875+27.85	NORTON	500.00 LT	517115.14	1397978.87	517151.44	1398077.00	-	CC OF CURVE NORTON	14
7	876+71.13	NORTON	20.10 RT	517039.07	1397854.47	517075.37	1397952.60	-	PI NORTON	15
7	878+06.93	NORTON	0.00	517115.14	1397978.87	517151.44	1398077.00	1228.26	PT NORTON	16
5	879+13.94	NORTON	0.00	517170.96	1398070.15	517207.26	1398168.29	1233.96	PC NORTON	17
-	879+13.94	NORTON	88.00 RT	517170.96	1398070.15	517207.26	1398168.29	-	CC OF CURVE NORTON	18
8	879+87.85	NORTON	26.92 LT	517208.65	1398131.80	517244.96	1398229.95	-	PI NORTON	19
8	880+36.89	NORTON	0.00	517154.06	1398182.07	517190.36	1398280.22	1237.32	PRC NORTON	20
-	880+36.89	NORTON	360 LT	517154.06	1398182.07	517190.36	1398280.22	-	CC OF CURVE NORTON	21
8	881+97.47	NORTON	34.18 RT	517110.31	1398222.42	517146.61	1398320.57	-	PI NORTON	22
8	883+38.98	NORTON	0.00	517032.10	1398448.79	517068.39	1398546.96	1229.45	PT NORTON	23
8	884+72.16 883+96.55	NORTON EX NORTON E	0.00	517030.86	1398581.96	517067.15	1398680.13	1228.70	POT NORTON POT EX NORTON E	24
-	876+00.00	EX NORTON W	0.00	517041.06	1397785.52	517077.36	1397883.64	1219.73	POT EX NORTON W	25
-	877+10.85	EX NORTON W	0.00	517040.03	1397896.35	517076.32	1397994.48	1223.11	PC EX NORTON W	26
-	877+92.60	EX NORTON W		517039.26	1397978.10	517075.56	1398076.23	-	PI EX NORTON W	27
-	878+70.26	EX NORTON W	0.00	517077.84	1398050.17	517114.14	1398148.31	1233.64	PT EX NORTON W	28
-	5+08.53 879+29.24 879+02.76	MELVILLE EX NORTON W EX NORTON E	0.00	517105.68	1398102.16	517141.98	1398200.30	1236.01	PI MELVILLE POT EX NORTON W POT EX NORTON E	29
-	879+76.39	EX NORTON E	0.00	517104.99	1398175.78	517141.29	1398273.93	1236.7	PC EX NORTON E	30
-	880+42.55	EX NORTON E		517104.43	1398235.69	517140.73	1398333.85	-	PI EX NORTON E	31
-	881+05.22	EX NORTON E	0.00	517068.71	1398297.64	517105.00	1398395.80	1234.13	PT EX NORTON E	32
-	881+05.32	EX NORTON E	0.00	517068.66	1398297.72	517104.95	1398395.87	1234.13	PC EX NORTON E	33
-	881+71.47	EX NORTON E		517032.99	1398353.43	517069.28	1398451.59	-	PI EX NORTON E	34
-	882+34.15	EX NORTON E	0.00	517032.37	1398419.57	517068.67	1398517.74	1230.53	PT EX NORTON E	35

* REFERENCE PROJECT J8I3225 FOR COORDINATE POINT LOCATION

MELVILLE RD.
COORDINATE POINTS
1 OF 1

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	10

COUNTY GREENE
JOB NO. J8S3156
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

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

CMT

CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

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SCALE
0 10 20 30

CURVE NW1
PC STA. 3+65.73 (MELVILLE) OFF. 21.46' RT
PT STA. 4+21.77 (MELVILLE) OFF. 73.74' RT
RADIUS = 50'

CURVE NE1
PC STA. 3+92.56 (MELVILLE) OFF. 12.26' LT
PT STA. 4+31.37 (MELVILLE) OFF. 41.74' LT
RADIUS = 50'

CURVE SE1
PC STA. 880+04.60 (NORTON) OFF. 14.00' RT
PT STA. 4+98.94 (MELVILLE) OFF. 14' LT
RADIUS = 30'

CURVE SW1
PC STA. 4+53.30 (MELVILLE) OFF. 70.84' RT
PT STA. 5+04.04 (MELVILLE) OFF. 18.00' RT
RADIUS = 50'

INTERSECTION GRADING

SPECIAL SHEET
1 OF 2

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	11

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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ENGINEERING CORPORATION - 000631

REV.

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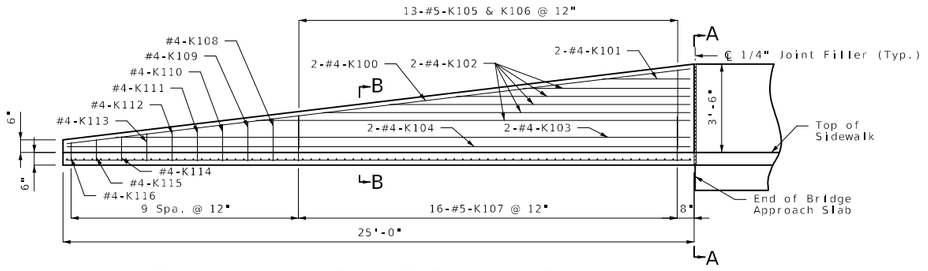
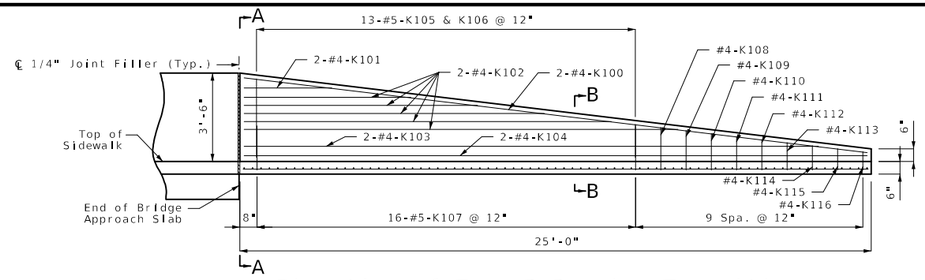
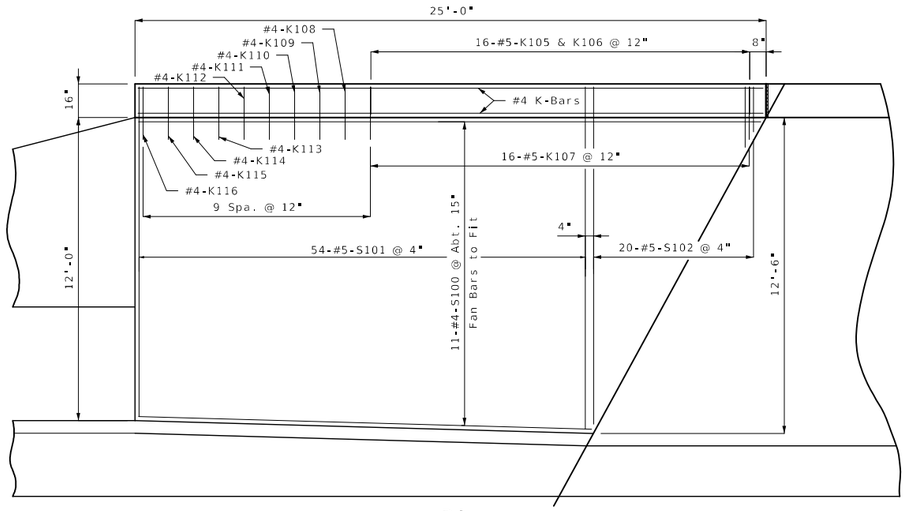


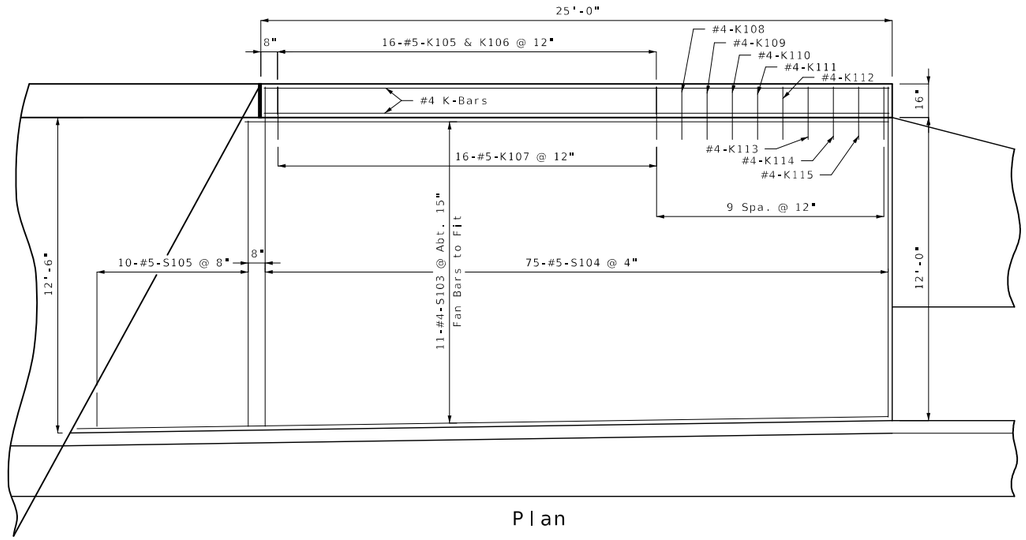
Elevation of Type D Barrier Transition



Elevation of Type D Barrier Transition



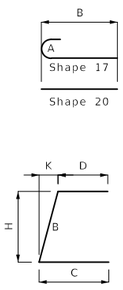
Plan

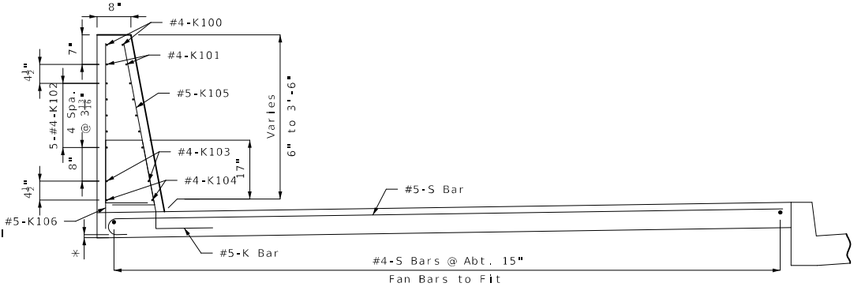


Plan

BILL OF REINFORCING STEEL

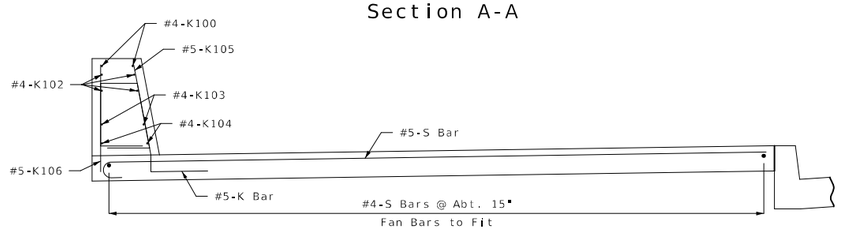
NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.
11	4	S100	TRANSITION	E	20			V	1	24	7.750													24	8	24	8	
										17	11.250													18	0	18	0	157
54	5	S101	TRANSITION	E	17			V	1	13	6.000													14	1	14	1	
										13	0.000													13	7	13	7	780
20	5	S102	TRANSITION	E	20			V	1	13	3.750													13	4	13	4	
										1	9.000													1	9	1	9	158
11	4	S103	TRANSITION	E	20			V	1	32	1.500													32	2	32	2	
										25	5.750													25	6	25	6	212
75	5	S104	TRANSITION	E	17			V	1	13	5.250													14	1	14	1	
										13	0.000													13	7	13	7	1083
10	5	S105	TRANSITION	E	20			V	1	12	1.000													12	1	12	1	
										1	4.000													1	4	1	4	70
4	4	K100	TRANSITION	E	20					24	10.000													24	10	24	10	67
4	4	K101	TRANSITION	E	20					3	5.500													3	6	3	6	10
20	4	K102	TRANSITION	E	20			V	4	17	2.250													17	3	17	3	
										6	7.000													6	7	6	7	160
4	4	K103	TRANSITION	E	20					22	9.000													22	9	22	9	61
4	4	K104	TRANSITION	E	20					24	8.000													24	8	24	8	66
32	5	K105	TRANSITION	E	21			V	2	3	3.000	10.000								3	2.375	7.250		4	1	3	11	
										1	3.750	10.000								16.000		3.000		2	2	2	0	99
32	5	K106	TRANSITION	E	19			V	2	3	2.000	10.000												4	0	3	11	
										1	2.750	10.000												2	1	2	0	99
32	5	K107	TRANSITION	E	27						21.000	8.750		17.375		4.000		12.000		17.000		3.250		5	4	5	2	173
2	5	K108	TRANSITION	E	27						20.250	8.875		16.500		4.000		12.000		16.250		3.125		5	2	5	0	11
2	5	K109	TRANSITION	E	27						18.750	9.125		15.125		4.000		12.000		14.750		2.875		4	11	4	9	10
2	5	K110	TRANSITION	E	27						17.375	9.375		13.625		4.000		12.000		13.375		2.500		4	9	4	7	10
2	5	K111	TRANSITION	E	27						15.875	9.750		12.125		4.000		12.000		11.875		2.250		4	6	4	4	10
2	5	K112	TRANSITION	E	27						14.500	10.000		10.625		4.000		12.000		10.500		2.000		4	4	4	2	9
2	5	K113	TRANSITION	E	27						13.000	10.250		9.250		4.000		12.000		9.000		1.750		4	1	3	11	9
2	5	K114	TRANSITION	E	27						11.625	10.500		7.750		4.000		12.000		7.625		1.500		3	10	3	8	8
2	5	K115	TRANSITION	E	27						10.125	10.750		6.250		4.000		12.000		6.125		1.125		3	8	3	6	8
2	5	K116	TRANSITION	E	27						8.750	11.125		4.875		4.000		12.000		4.750		0.875		3	5	3	3	7





* Tilt transverse reinforcement hooks from vertical alignment to maintain 1½" minimum clearance.

Section A-A



Section B-B

Details of Type D Barrier Transition (Moment Slab)

SS-62

SPECIAL SHEET 2 OF 2

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	12

COUNTY: GREENE

JOB NO.: J8S3156

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

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

CMT
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CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8S3156\!Final Plans\012_SS_02_J8S3156_i10_Barrier_Details.dgn 2:10:42 PM 12/20/2024

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GENERAL NOTES:

1. ANY EXISTING SIGNS THAT CONFLICT WITH TRAFFIC CONTROL PLAN SHALL BE COVERED.
2. ALL DISTANCES ARE APPROXIMATE & MAY BE REVISED BY THE ENGINEER TO FIT FIELD CONDITIONS.
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. SEE STANDARD DRAWING 616.10, 619.10, AND 620.10 FOR ADDITIONAL DETAILS AND 903.03 FOR SIGN AND SIGN MOUNTING REQUIREMENTS.
6. 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.
7. SPEED LIMIT SIGNS INDICATING THE EXISTING POSTED SPEED LIMIT SHALL BE INSTALLED AT THE END OF THE WORK ZONE, PROVIDED NO FURTHER WORK ZONES WILL BE ENCOUNTERED WITHIN THE NEXT ½ MILE.
8. TEMPORARY SPEED LIMIT SIGNS SHALL BE COVERED OR REMOVED WHEN THE CONDITIONS REQUIRING REDUCED SPEEDS DO NOT EXIST.
9. NO DIRECT PAYMENT WILL BE MADE FOR THE RELOCATION OF CHANNELIZERS.

PHASE 1A NOTES

1. PHASE 1A SHALL CONSIST OF REMOVAL OF EXISTING STRUCTURE OVER I-44.
2. CONSTRUCT NEW BRIDGE GIRDERS AND SLABS.
3. CR 127 (MELVILLE RD.) WILL BE CLOSED BETWEEN NORTON RD. AND PFEIFFER RD. (FR 112). I-44 WILL BE CLOSED BETWEEN ROUTE 13 (KANSAS EXPWY.) AND US 160 (WEST BYPASS). SEE TRAFFIC CONTROL SHEETS 16-17 FOR DETOUR INFORMATION.
4. TEMPORARY TRAFFIC CONTROL SIGNAGE ON I-44 FOR THIS PROJECT SHALL BE PLACED IN CONJUNTION WITH SURROUNDING PROJECTS. SEE JOB #'S J8I3044C, JSU0076, AND JST0088B FOR FURTHER TRAFFIC CONTROL AND DETOUR INFORMATION FOR I-44.
5. BRIDGE REMOVAL SHALL LAST NO LONGER THAN 24 HOURS AND CLOSURE OF I-44 SHALL BE LIMITED TO WEEKEND ONLY.
6. BUSINESS AND RESIDENTIAL ACCESS SHALL BE MAINTAINED AT ALL TIMES.
7. CONFLICTING SIGNS SHALL BE COVERED.

PHASE 1B NOTES

1. PHASE 1B SHALL CONSIST OF REMOVAL OF EXISTING PAVEMENT ON CR 127 (MELVILLE RD.) SOUTH OF THE BRIDGE.
2. CONSTRUCT NEW PAVEMENT, NEW SIDEWALK, NEW CURB & GUTTER, NEW BRIDGE APPROACH SLAB SOUTH OF I-44.
3. CR 127 (MELVILLE RD.) WILL BE CLOSED BETWEEN NORTON RD. AND PFEIFFER RD. (FR 112). SEE TRAFFIC CONTROL SHEET 16 FOR DETOUR INFORMATION.
4. BUSINESS AND RESIDENTIAL ACCESS SHALL BE MAINTAINED AT ALL TIMES.
5. CONFLICTING SIGNS SHALL BE COVERED.

PHASE 2A NOTES

1. PHASE 2A SHALL CONSIST OF THE CONSTRUCTION OF NEW PAVEMENT, NEW SHOULDER, AND GRADING ON NORTON RD. WEST OF MELVILLE RD. OUTSIDE OF THE TRAVELED WAY; AS WELL AS GRADING AND THE CONSTRUCTION OF TEMPORARY PAVEMENT ON THE NORTHEAST QUADRANT OF THE INTERSECTION CONNECTING CR 127 (MELVILLE RD.) TO NORTON RD.
2. CR 127 (MELVILLE RD.) WILL BE CLOSED BETWEEN NORTON RD. AND PFEIFFER RD. (FR 112). SEE TRAFFIC CONTROL SHEET 16 FOR DETOUR PLAN.
3. BUSINESS AND RESIDENTIAL ACCESS SHALL BE MAINTAINED AT ALL TIMES.
4. CONFLICTING SIGNS SHALL BE COVERED.

PHASE 2B NOTES

1. PHASE 2B SHALL CONSIST OF REMOVAL OF EXISTING INTERSECTION MELVILLE RD. AND NORTON RD.
2. CONSTRUCT NEW PAVEMENT, NEW SHOULDER, GRADING ON NORTON RD. AND CR 127 (MELVILLE RD.) AND TIE-IN WEST NORTON RD.
3. NORTON RD. WEST OF CR 127 (MELVILLE RD.) WILL BE CLOSED TO THRU TRAFFIC. CR 127 (MELVILLE RD.) WILL BE CLOSED BETWEEN NORTON RD. AND PFEIFFER RD. (FR 112). SEE TRAFFIC CONTROL SHEETS 16 AND 18 FOR DETOUR AND CLOSURE INFORMATION.
4. BUSINESS AND RESIDENTIAL ACCESS SHALL BE MAINTAINED AT ALL TIMES.
5. CONFLICTING SIGNS SHALL BE COVERED.

PHASE 2C NOTES

1. PHASE 2C SHALL CONSIST OF REMOVAL OF EXISTING NORTON RD. EAST OF MELVILLE RD.
2. CONSTRUCT NEW PAVEMENT, NEW SHOULDER, AND GRADING ON NORTON RD. AND CONSTRUCT TIE-IN TO NEW MELVILLE RD.
3. NORTON RD. WILL BE CLOSED EAST OF MELVILLE RD. SEE TRAFFIC CONTROL SHEET 19 FOR CLOSURE INFORMATION.
4. BUSINESS AND RESIDENTIAL ACCESS SHALL BE MAINTAINED AT ALL TIMES.
5. CONFLICTING SIGNS SHALL BE COVERED.

PHASE 3 NOTES

1. PHASE 3 SHALL CONSIST OF COLDMILLING AND RESURFACING OF MELVILLE RD. BETWEEN CR 137 AND NORTON RD.
2. THRU ACCESS SHALL BE MAINTAINED.
3. ALL LANES OPEN TO TRAFFIC. BUSINESS AND RESIDENTIAL ACCESS SHALL BE MAINTAINED AT ALL TIMES.
4. CONFLICTING SIGNS SHALL BE COVERED.

PHASE 4 NOTES

1. PHASE 4 SHALL CONSIST OF PAVEMENT MARKING AND INSTALLATION OF PERMANENT SIGNAGE.
2. THRU ACCESS SHALL BE MAINTAINED.
3. ALL LANES OPEN TO TRAFFIC. BUSINESS AND RESIDENTIAL ACCESS SHALL BE MAINTAINED AT ALL TIMES.
4. CONFLICTING SIGNS SHALL BE COVERED.

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 12/20/2024
ROUTE: CRD 127 | STATE: MO
DISTRICT: SW | SHEET NO.: 13
COUNTY: GREENE
JOB NO.: J8S3156
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

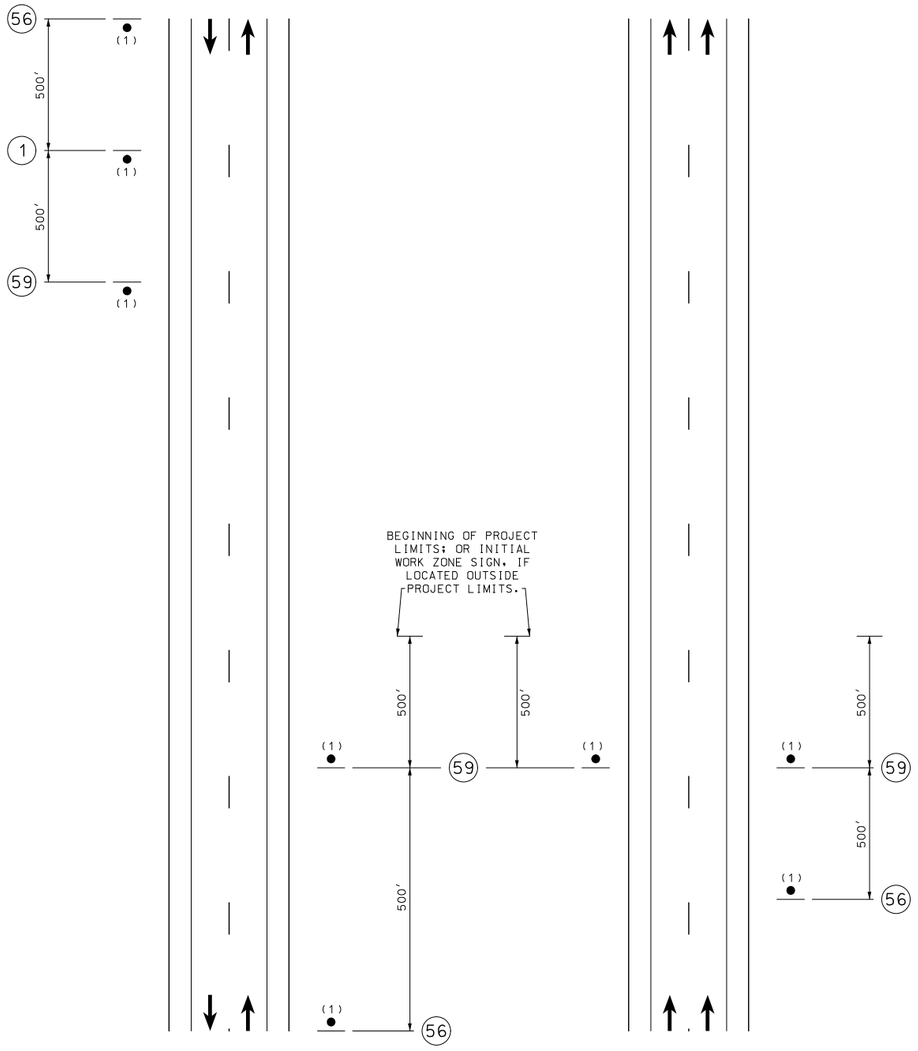
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DATE	DESCRIPTION

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

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

MELVILLE RD.
GENERAL NOTES
TRAFFIC CONTROL
1 OF 19



TWO-LANE UNDIVIDED MULTI-LANE DIVIDED

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NOTES:

SIGN GO20-1 IS REQUIRED PER EPG 616.6.56.

SIGN GO20-2 IS USED ON ALL PROJECTS WHERE SIGN GO20-1 IS USED.

OTHER SIGNS SUCH AS DETOUR OR ALTERNATE ROUTE SIGNING MAY BE USED OUTSIDE THE PROJECT LIMITS.

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

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

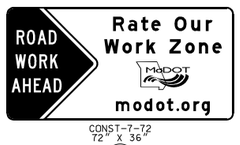
(2) SIGN CONST-7-72 OR CONST-7-48 IS PLACED 500 FEET BEFORE THE BEGINNING OF PROJECT LIMITS OR THE ROAD WORK AHEAD SIGN OR ROAD WORK NEXT XX MILES SIGN. IF USED, WHEN THESE SIGNS ARE LOCATED OUTSIDE THE PROJECT LIMITS.

(3) CONST-5-96 OR CONST-5-48 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 OR CONST-7-48.

(4) THE "RATE OUR WORK ZONE" SIGN IS AVAILABLE IN TWO SIZES DEPENDING ON ROADWAY CONDITIONS. THE 48 IN. X 24 IN. SIGN IS USED ON LOW VOLUME ROUTES THAT CARRY 400 AADT OR LESS, ON PROJECTS THAT HAVE A DURATION OF 4 WEEKS OR LESS OR IN URBAN AREAS WHERE THERE IS INSUFFICIENT RIGHT OF WAY FOR A SIX FOOT WIDE SIGN. THE 72 IN. X 36 IN. VERSION OF THE SIGN IS USED IN ALL OTHER APPLICATIONS, BUT CAN ALSO BE USED IN PLACE OF THE 48 IN. x 24 IN. SIGN IF ADDED EMPHASIS IS DEEMED NECESSARY.

(5) THE "POINT OF PRESENCE" SIGN IS AVAILABLE IN TWO SIZES DEPENDING ON ROADWAY CONDITIONS. THE 48 IN. X 36 IN. SIGN IS USED ON LOW VOLUME ROUTES THAT CARRY 400 AADT OR LESS, ON PROJECTS THAT HAVE A DURATION OF 4 WEEKS OR LESS OR IN URBAN AREAS WHERE THERE IS INSUFFICIENT RIGHTS OF WAY FOR AN EIGHT FOOT WIDE SIGN. THE 96 IN. X 48 IN. VERSION OF THE SIGN IS USED IN ALL OTHER APPLICATIONS, BUT CAN ALSO BE USED IN PLACE OF THE 48 IN. x 36 IN. SIGN IF ADDED EMPHASIS IS DEEMED NECESSARY.

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



CONST-7-72
72" X 36"
56

CONST-8
48" X 36"
59

BEGINNING AND END OF PROJECT SIGNING
TO REMAIN IN PLACE THROUGH DURATION OF ALL PROJECTS

TYPICAL DETAILS
TRAFFIC CONTROL
2 OF 19

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	14

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	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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SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

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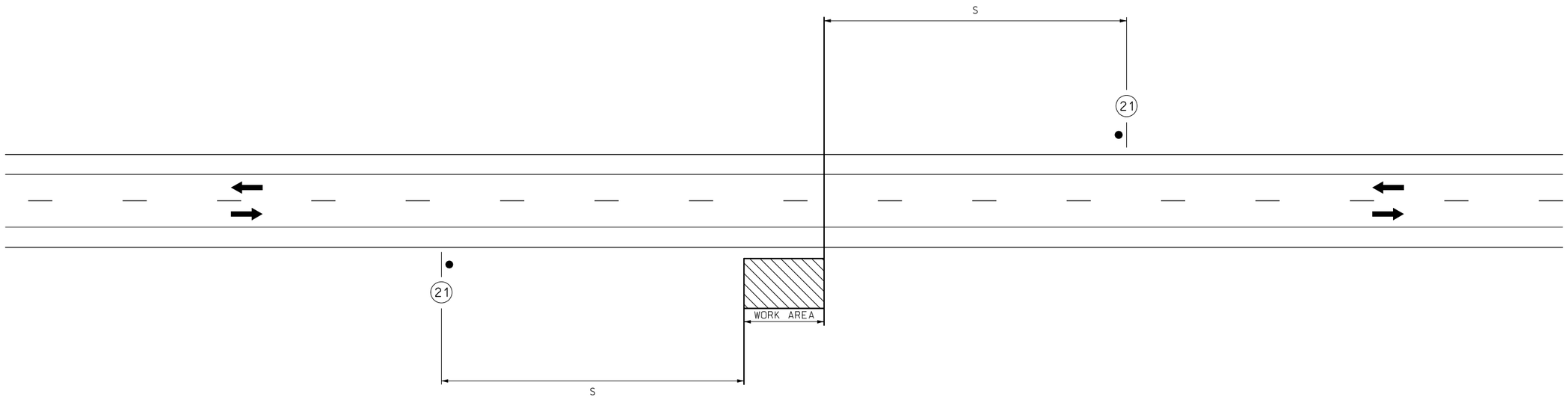

NOTES:

1. ONLY APPLICABLE WHEN WORK ZONE IS WITHIN THE CLEAR ZONE
2. ON MULTI-LANE, DIVIDED HIGHWAYS, SIGNS ADVISING OF SHOULDER WORK OR THE CONDITION OF THE SHOULDER SHOULD BE PLACED ONLY ON THE SIDE OF THE AFFECTED SHOULDER.
3. VEHICLE HAZARD WARNING SIGNALS SHALL NOT BE USED INSTEAD OF THE VEHICLE'S HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING OR STROBE LIGHTS.

SPEED	SIGN SPACING (ft.)		TAPER LENGTH (ft.)		OPTIONAL	CHANNELIZER SPACING (ft.)	
PERMANENT POSTED (MPH)	UNDIVIDED (S)	DIVIDED (S)	SHOULDER (1) (T1)	LANE (2) (T2)	BUFFER LENGTH (ft.) (B)	TAPERS	BUFFER/ WORK AREAS
0-35	200	200	-	-	-	-	-
40-45	350	500	-	-	-	-	-
50-55	500	1000	-	-	-	-	-
60-70	1000	SA - 1000, SB - 1500, SC - 2640	-	-	-	-	-

WD21-5
48" X 48"
21

WORK BEYOND THE SHOULDER ON DIVIDED AND UNDIVIDED HIGHWAYS

DAY TIME OR NIGHT TIME ALLOWED

TYPICAL DETAILS

TRAFFIC CONTROL
3 OF 19

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	15

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

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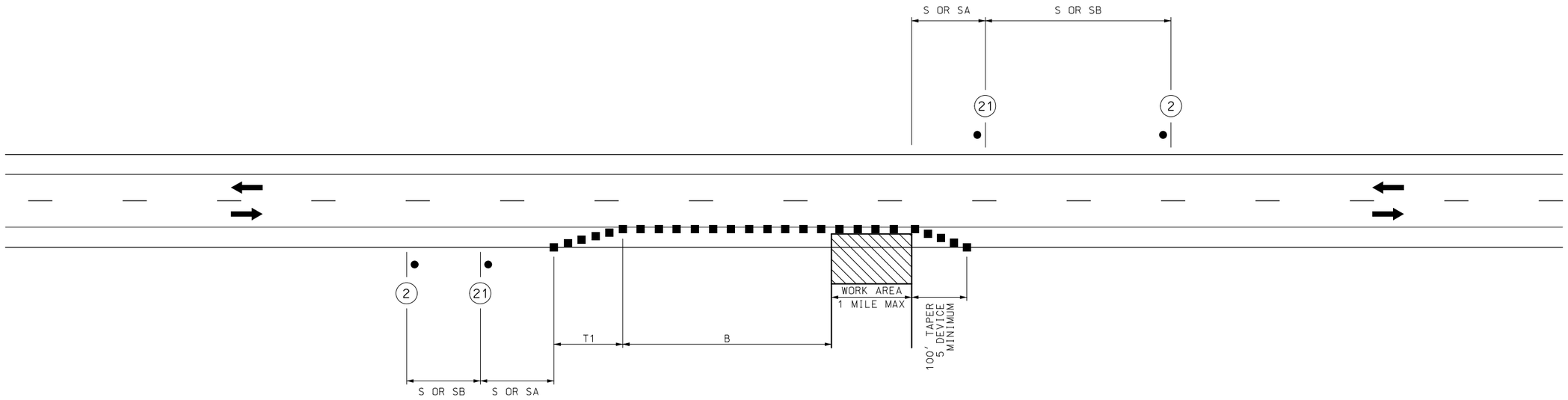

CHANNELIZERS

SPEED	SIGN SPACING (ft.)		TAPER LENGTH (ft.)		OPTIONAL	CHANNELIZER SPACING (ft.)	
PERMANENT POSTED (MPH)	UNDIVIDED (S)	DIVIDED (S)	SHOULDER (1) (T1)	LANE (2) (T2)	BUFFER LENGTH (ft.) (B)	TAPERS	BUFFER/ WORK AREAS
0-35	200	200	70	245	280	35	40
40-45	350	500	150	540	400	40	80
50-55	500	1000	185	660	560	50	80
60-70	1000	SA - 1000. SB - 1500. SC - 2640	235	840	840	60	120
1 SHOULDER TAPER LENGTH BASED ON 10 ft. (STANDARD SHOULDER WIDTH) OFFSET. 2 LANE TAPER LENGTH BASED ON 12 ft. (STANDARD LANE WIDTH) OFFSET.							

NOTES:

1. PROVIDE SIGNS ON LEFT AND RIGHT SIDES OF DIVIDED HIGHWAYS.
2. ROAD WORK AHEAD SIGN NOT NEEDED IF SHOULDER WORK IS LOCATED WITHIN THE LIMITS OF AN ACTIVITY AREA WHERE ANOTHER ROAD WORK AHEAD SIGN IS ALREADY USED.
3. SEE EPG 616.12 WORK ZONE SPEED LIMITS FOR SPEED LIMIT GUIDELINES.
4. VEHICLE HAZARD WARNING SIGNALS SHALL NOT BE USED INSTEAD OF THE VEHICLE'S ROTATING LIGHTS OR STROBE LIGHTS.
5. WHEN PAVED SHOULDERS HAVING A WIDTH OF 8 FEET OR MORE ARE CLOSED, AT LEAST ONE ADVANCE WARNING SIGN SHALL BE USED. IN ADDITION, CHANNELIZING DEVICES SHALL BE USED TO CLOSE THE SHOULDER IN ADVANCE TO DELINEATE THE BEGINNING OF THE WORK SPACE AND DIRECT VEHICULAR TRAFFIC TO REMAIN WITHIN THE TRAVELED WAY.

WORK ON THE SHOULDER ON DIVIDED AND UNDIVIDED HIGHWAYS

DAY TIME OR NIGHT TIME ALLOWED

TYPICAL DETAILS

TRAFFIC CONTROL
4 OF 19

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	16

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

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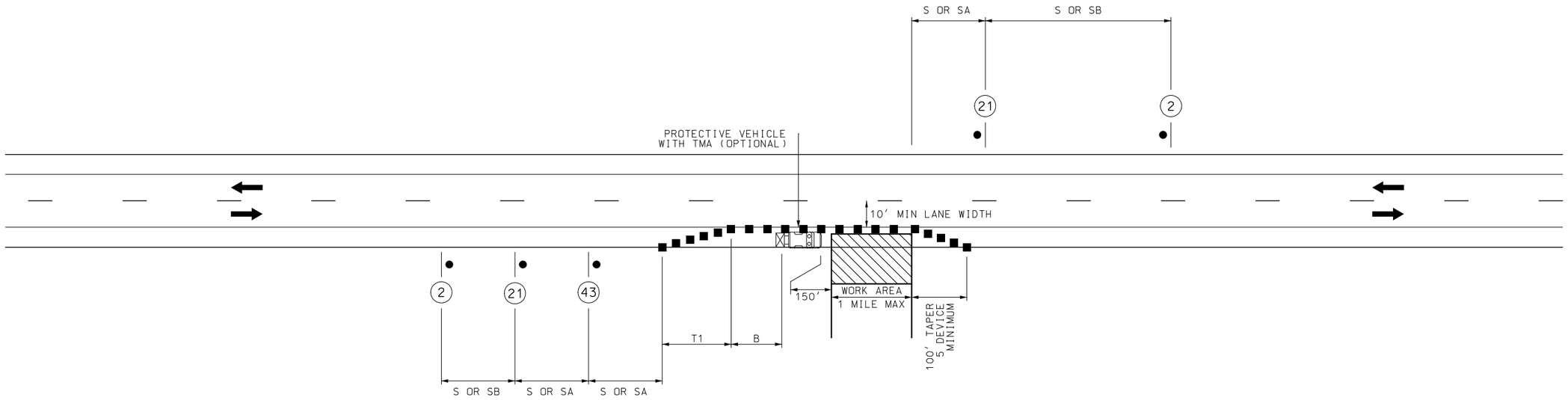
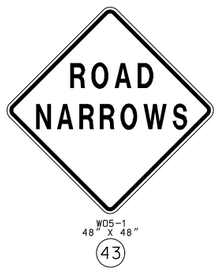


W020-1
48" X 48"
(2)

W021-5
48" X 48"
(21)



W05-1
48" X 48"
(43)

CHANNELIZERS

FLASHING
ARROW PANEL

ATTENUATOR TRUCK OR TRAILER
WITH FLASHING ARROW

SPEED	SIGN SPACING (ft.)		TAPER LENGTH (ft.)		OPTIONAL	CHANNELIZER SPACING (ft.)	
PERMANENT POSTED (MPH)	UNDIVIDED (S)	DIVIDED (S)	SHOULDER (1) (T1)	LANE (2) (T2)	BUFFER LENGTH (ft.) (B)	TAPERS	BUFFER/ WORK AREAS
0-35	200	200	70	245	280	35	40
40-45	350	500	150	540	400	40	80
50-55	500	1000	185	660	560	50	80
60-70	1000	SA - 1000. SB - 1500. SC - 2640	235	840	840	60	120
1 SHOULDER TAPER LENGTH BASED ON 10 ft. (STANDARD SHOULDER WIDTH) OFFSET. 2 LANE TAPER LENGTH BASED ON 12 ft. (STANDARD LANE WIDTH) OFFSET.							

NOTES:

1. SEE EPG 616.12 WORK ZONE SPEED LIMITS FOR SPEED LIMIT GUIDELINES.
2. PROVIDE SIGNS ON LEFT AND RIGHT SIDES OF DIVIDED HIGHWAYS.
3. ROAD WORK AHEAD SIGN NOT NEEDED IF SHOULDER WORK IS LOCATED WITHIN THE LIMITS OF AM ACTIVITY AREA WHERE ANOTHER ROAD WORK AHEAD SIGN IS ALREADY USED.
4. THE PROTECTIVE VEHICLE MAY BE OMMITTED IF A TAPER AND CHANNELIZING DEVICES ARE USED.
5. 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.
6. VEHICLE HAZARD LIGHTS SHALL NOT BE USED INSTEAD OF VEHICLE'S ROTATING LIGHTSOR STROBE LIGHTS.
7. SHADOW AND WORK VEHICLES SHALL DISPLAY HIGH-DENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS.

SHOULDER WORK WITH MINOR ENCROACHMENT ON DIVIDED AND UNDIVIDED HIGHWAYS

DAY TIME OR NIGHT TIME ALLOWED

TYPICAL DETAILS

TRAFFIC CONTROL
5 OF 19

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	17

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	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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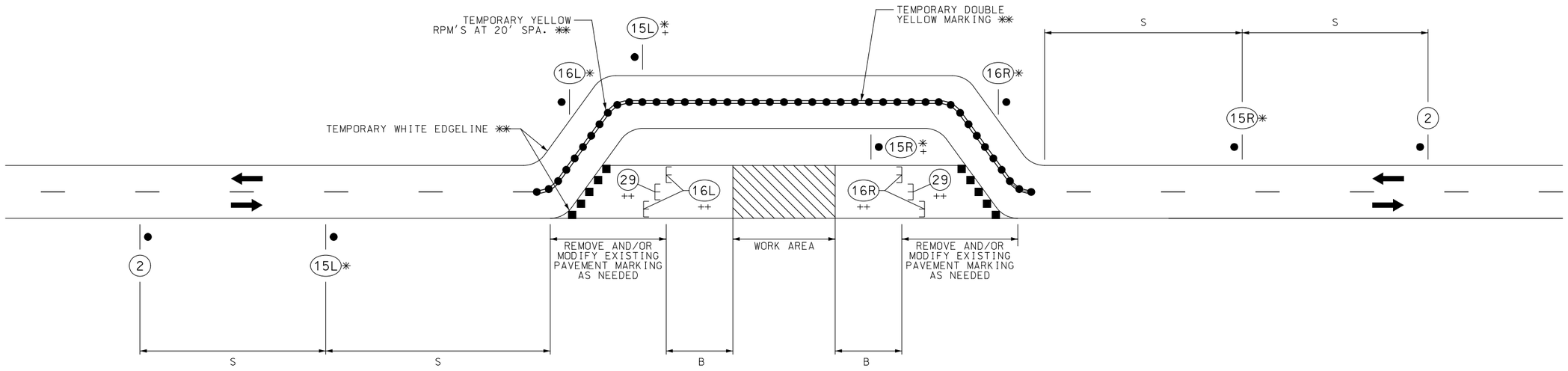
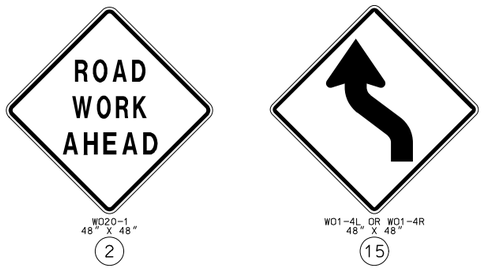
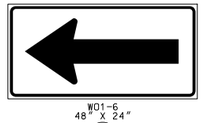




WD20-1
48" X 48"
(2)

WO1-4L OR WO1-4R
48" X 48"
(15)


WO1-6
48" X 24"
(16)

R11-2
48" X 30"
(29)

CHANNELIZERS

TEMPORARY RAISED PAVEMENT MARKER

TYPE III MOVEABLE BARRICADE

SPEED	SIGN SPACING (ft.)		TAPER LENGTH (ft.)		OPTIONAL	CHANNELIZER SPACING (ft.)	
PERMANENT POSTED (MPH)	UNDIVIDED (S)	DIVIDED (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

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

NOTES:

1. SEE EPG 616.12 WORK ZONE SPEED LIMITS FOR SPEED LIMIT GUIDELINES.
2. ROAD WORK AHEAD SIGN NOT NEEDED IF DIVERSION IS LOCATED WITHIN THE LIMITS OF AN ACTIVITY AREA WHERE ANOTHER ROAD WORK AHEAD SIGN IS ALREADY USED.
   - * ARROW SIGNS AND REVERSE CURVE OR TURN SIGNS AS DETERMINED BY DIVERSION GEOMETRICS. ADDITIONAL WARNING SIGNS MAY ALSO BE NEEDED.
   - ** PAVEMENT MARKING IS NOT USED ON NON-PAVED SURFACES
   - + SIGNS LOCATED IN ORDER TO PROVIDE SUFFICIENT ADVANCE WARNING.
   - ++ SEE STANDARD PLAN 616.10 FOR SIGNING AND BARRICADE REQUIREMENTS.
3. IF RUMBLE STRIPS ARE USED, REVIEW EPG 616.6.87 RUMBLE STRIPS.
4. FOR FLAGS AND ADVANCE WARNING RAIL SYSTEM, REFER TO EPG 616.6.22 FLAGS AND ADVANCE WARNING RAIL SYSTEM.
5. PAVEMENT MARKINGS NO LONGER APPLICABLE TO THE TRAFFIC PATTERN OF THE ROADWAY SHALL BE REMOVED OR OBLITERATED BEFORE ANY NEW TRAFFIC PATTERNS ARE OPEN TO TRAFFIC.

ROAD CLOSURE WITH A DIVERSION
DAY TIME OR NIGHT TIME ALLOWED

TYPICAL DETAILS
TRAFFIC CONTROL
6 OF 19

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/20/2024
ROUTE CRD 127 | STATE MO
DISTRICT SW | SHEET NO. 18
COUNTY GREENE
JOB NO. J8S3156
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE | REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

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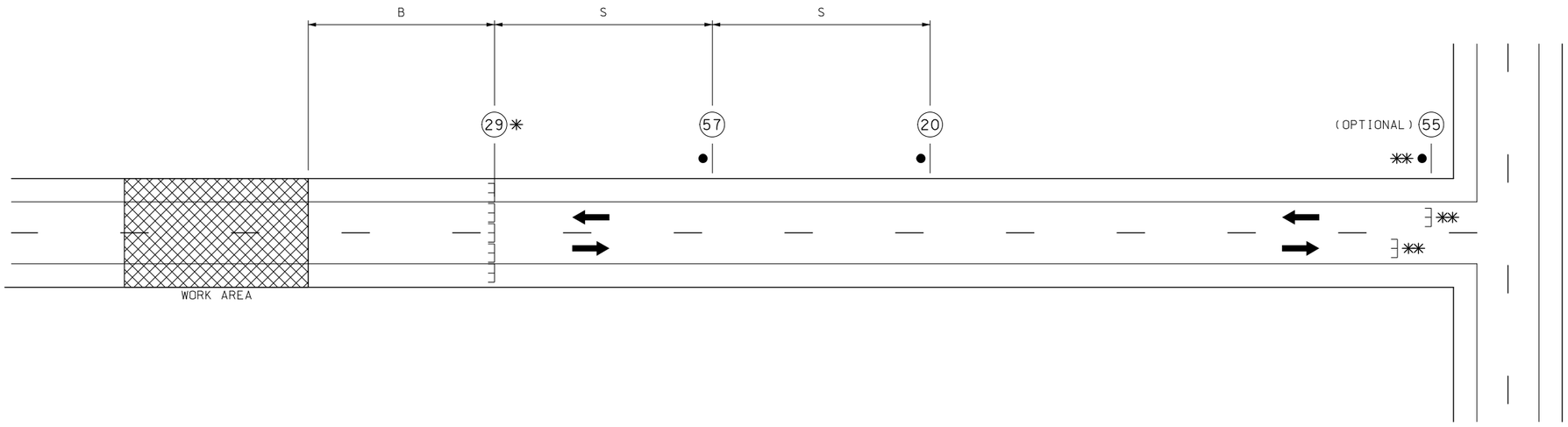

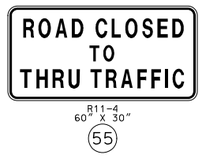

TYPE III MOVEABLE BARRICADE

SPEED	SIGN SPACING (ft.)		TAPER LENGTH (ft.)		OPTIONAL	CHANNELIZER SPACING (ft.)	
PERMANENT POSTED (MPH)	UNDIVIDED (S)	DIVIDED (S)	SHOULDER (1) (T1)	LANE (2) (T2)	BUFFER LENGTH (ft.) (B)	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	-	-
1 SHOULDER TAPER LENGTH BASED ON 10 ft. (STANDARD SHOULDER WIDTH) OFFSET. 2 LANE TAPER LENGTH BASED ON 12 ft. (STANDARD LANE WIDTH) OFFSET.							

NOTES:

* ROAD CLOSED SIGN MAY BE PLACED 7-10 FEET BEHIND THE BARRICADES AND AT A SIGN HEIGHT APPROPRIATE TO THE TYPE OF ROADWAY. ONE BARRICADE SHOULD BE REQUIRED TO COMPLETELY CLOSE EACH 8-FEET OF PAVEMENT. PAVED SHOULDERS SHALL BE INCLUDED IN THE AREA TO BE CLOSED.

** IF USED, THE ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY OR ROAD CLOSED TO THRU TRAFFIC SIGN SHOULD BE LOCATED AT THE FIRST STATE ROUTE OR, AT THE DISCRETION OF THE ENGINEER, ANY OTHER INTERSECTION IN ADVANCE OF THE CLOSURE. ADDITIONAL BARRICADES MAY BE USED AND OFFSET TO FACILITATE ACCESS FOR WORK VEHICLES, LOCAL TRAFFIC, ETC.

1. TRAFFIC CONTROL SHOULD BE REMOVED AS SOON AS PRACTICAL AFTER CONDITION FOR THE CLOSURE NO LONGER EXISTS.
2. FOR LONG-TERM OPERATIONS, REFER TO EPG 616.6.2.2 FLAGS AND ADVANCE WARNING RAIL SYSTEM (AWRS).
3. ADDITIONAL WARNING SIGNS SHOULD BE ERECTED AT EACH INTERSECTION WITHIN THE WORK ZONE.
4. SUPPLEMENTAL WARNING METHODS MAY BE USED TO CALL ATTENTION TO THE WORK ZONE.
5. SEE STANDARD PLAN 616.10 FOR USE OF BARRICADES AND SIGNS.
6. FOR LONG-TERM CLOSURE, DETOUR SIGNING SHOULD BE CONSIDERED.
7. FOR DETOUR SIGNING, REVIEW EPG 616.8.9 ROAD CLOSED BEYOND JUNCTION DETOUR.

HIGHWAY CLOSURE

DAY TIME OR NIGHT TIME ALLOWED

TYPICAL DETAILS

TRAFFIC CONTROL
7 OF 19

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	19

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	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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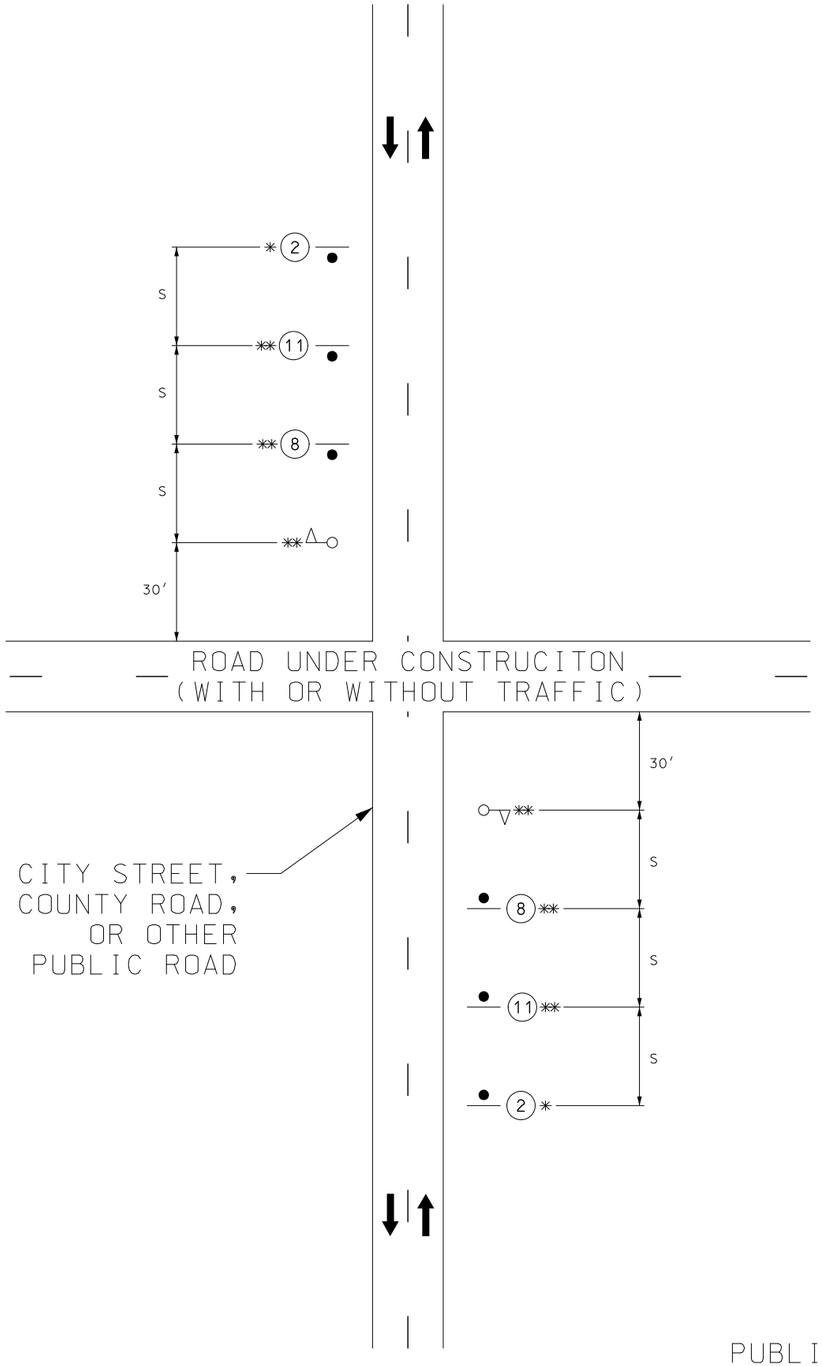

PUBLIC ROAD CROSSING ANOTHER ROAD
UNDER CONSTRUCTION

DAY TIME OR NIGHT TIME ALLOWED

NOTES:

1. SEE EPG 616.12 WORK ZONE SPEED LIMITS FOR SPEED LIMIT GUIDELINES.
2. ADDITIONAL SIGNING MAY BE REQUIRED BASED ON WORK ZONE ACTIVITIES.
   - ✳ ROAD WORK AHEAD SIGN REQUIRED FOR ALL PUBLIC ROAD APPROACHES TO THE WORK ZONE. IF NO FLAGGERS ARE REQUIRED, THEN ROAD WORK AHEAD SIGNS ARE LOCATED "S OR "SA" FEET FROM THE INTERSECTION.
   - ✳✳ FLAGGER AND SIGNING ONLY REQUIRED WHERE EQUIPMENT IS CROSSING THE ROAD OR OTHER CONDITIONS REQUIRING FLAGGER CONTROL EXIST.
4. IF RUMBLE STRIPS ARE USED, REVIEW 616.6.87 RUMBLE STRIPS.
5. IF USED AT NIGHT, THE FLAGGER SHALL BE ILLUMINATED WITH AN AVERAGE MAINTAINED INTENSITY OF 0.6 FOOTCANDLES (6.5 LUX)

SPEED	SIGN SPACING (ft.)		TAPER LENGTH (ft.)		OPTIONAL	CHANNELIZER SPACING (ft.)	
PERMANENT POSTED (MPH)	UNDIVIDED (S)	DIVIDED (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

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

WO20-1
48" X 48"
(2)

WO20-7a
(8)

WO3-4
(11)

FLAGGER

TYPICAL DETAILS

TRAFFIC CONTROL
8 OF 19

DATE PREPARED 12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	20

COUNTY: GREENE
JOB NO.: J8S3156
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION | DATE | REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

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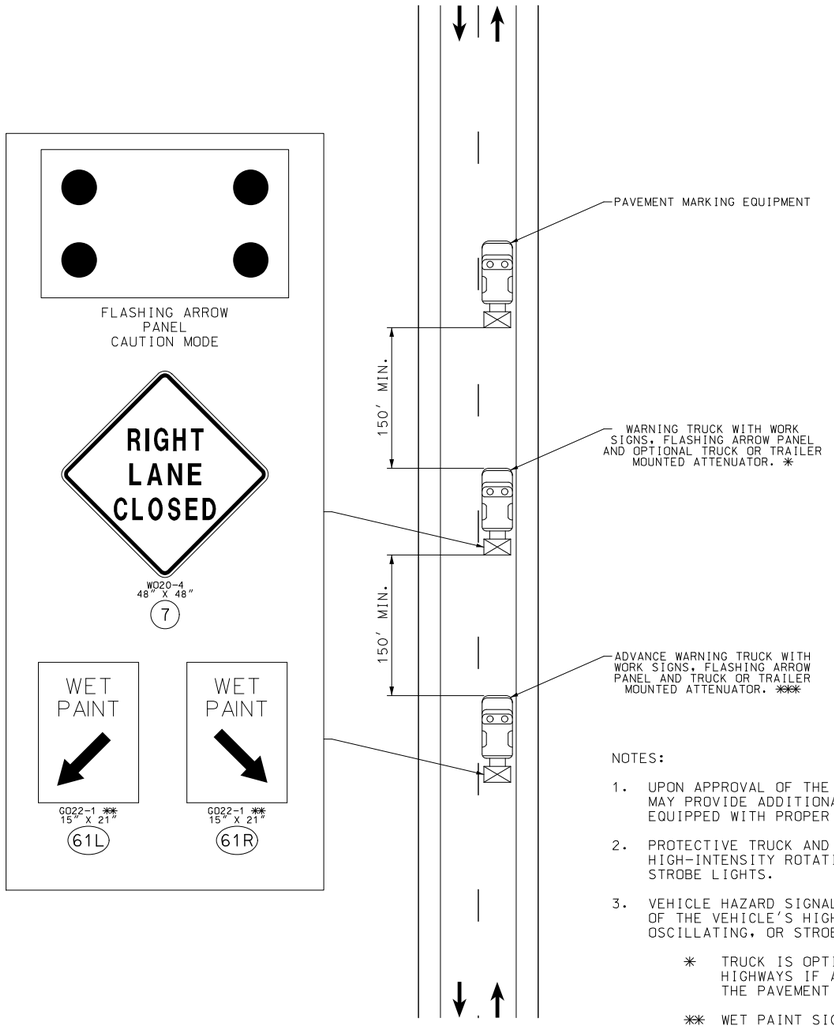
ENGINEERING CORPORATION - 000631



NOTES:

1. UPON APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY PROVIDE ADDITIONAL PROTECTIVE TRUCKS EQUIPPED WITH PROPER WARNING DEVICES.
2. PROTECTIVE TRUCK AND WORK VEHICLES SHALL DISPLAY HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS.
3. VEHICLE HAZARD SIGNALS SHALL NOT BE USED INSTEAD OF THE VEHICLE'S HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS.

    * TRUCK IS OPTIONAL ON TWO-LANE UNDIVIDED HIGHWAYS IF ARROW BOARD IS MOUNTED ON THE PAVEMENT MARKING EQUIPMENT.

    ** 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.

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

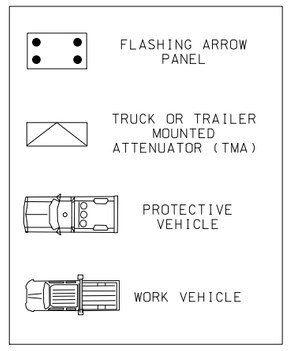
4. NO DIRECT PAYMENT FOR PAVEMENT MARKING EQUIPMENT, WARNING TRUCKS, WORK SIGNS, FLASHING ARROW PANEL, TMA, OR OTHER DEVICES NECESSARY FOR THE PAVEMENT MARKING OPERATION.

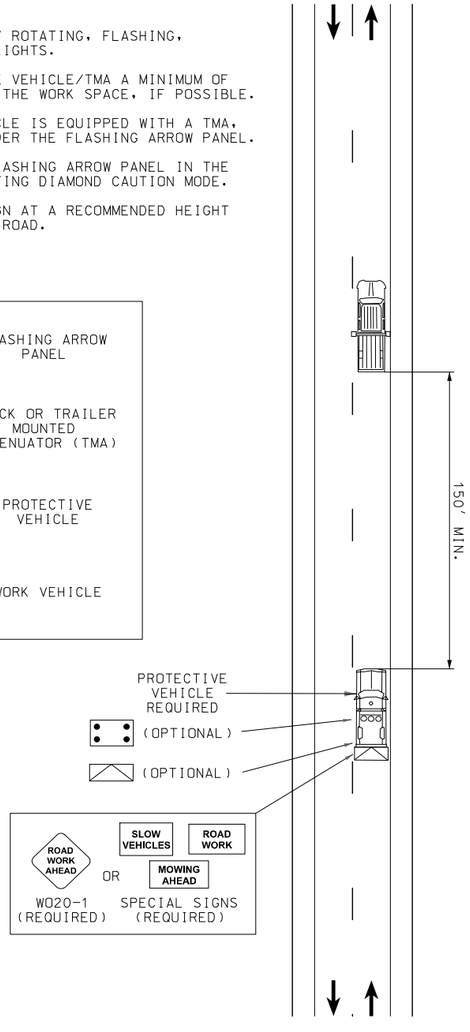
CENTER LINE/EDGE LINE STRIPING ON TWO-LANE HIGHWAYS

DAY TIME OR NIGHT TIME ALLOWED

NOTES:

1. ACTIVATE HIGH INTENSITY ROTATING, FLASHING, OSCILLATING, OR STOBE LIGHTS.
2. POSITION THE PROTECTIVE VEHICLE/TMA A MINIMUM OF 150 FEET IN ADVANCE OF THE WORK SPACE, IF POSSIBLE.
3. IF THE PROTECTIVE VEHICLE IS EQUIPPED WITH A TMA, PLACE A STATIC SIGN UNDER THE FLASHING ARROW PANEL.
4. IF USED, OPERATE THE FLASHING ARROW PANEL IN THE FOUR-CORNER OR ALTERNATING DIAMOND CAUTION MODE.
5. SET VEHICLE MOUNTED SIGN AT A RECOMMENDED HEIGHT OF 48 INCHES ABOVE THE ROAD.





MOBILE OPERATION ON A TWO-LANE HIGHWAY

DAY TIME OR NIGHT TIME ALLOWED

TYPICAL DETAILS

TRAFFIC CONTROL
9 OF 19

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED	
12/20/2024	
ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	21
COUNTY	
GREENE	
JOB NO.	
J8S3156	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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ENGINEERING CORPORATION - 000631

SCALE

0 50 100 150

NOTES:

1. BRIDGE REMOVAL SHALL BE LIMITED TO 24 HOURS. SEE JSP FOR ADDITIONAL INFORMATION.
2. FOR CR 127 (MELVILLE) DETOUR INFORMATION SEE SHEET 28.
3. SEE JSP'S FOR COORDINATION REQUIREMENTS WITH CONTRACTOR ON I-44 WIDENING PROJECT (J8I3044C, JSU0076, & JST0088B.
4. TRAFFIC PACING FOR GIRDER PLACEMENT TO BE COORDINATED WITH THE ENGINEER AND HIGHWAY PATROL. GIRDER PLACEMENT WILL ONLY BE ALLOWED BETWEEN THE HOURS OF 10 PM AND 6AM. PROVIDE TWO-WEEK ADVANCE NOTICE TO THE ENGINEER PRIOR TO REQUESTED DATES FOR GIRDER PLACEMENT.

W020-1

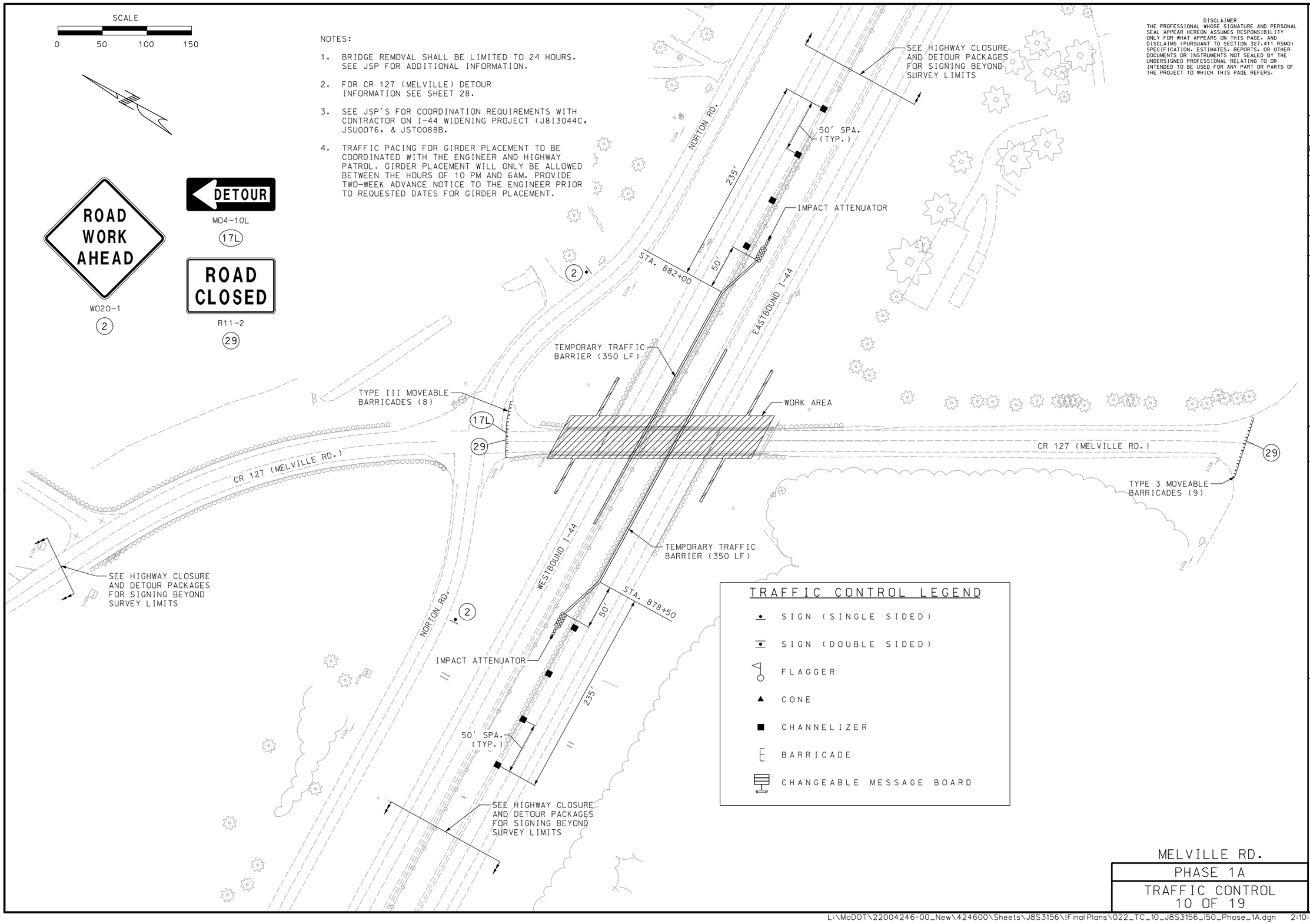
(2)

M04-10L

(17L)

R11-2

(29)



TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- SIGN (DOUBLE SIDED)
- FLAGGER
- CONE
- CHANNELIZER
- BARRICADE
- CHANGEABLE MESSAGE BOARD

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	22

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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MELVILLE RD.

PHASE 1A

TRAFFIC CONTROL
10 OF 19

REV.

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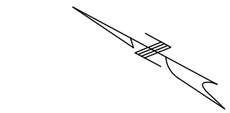
SCALE

0 50 100 150

NOTES:

1. FOR CR 127 (MELVILLE) DETOUR INFORMATION SEE SHEET 28.



WO20-1

2

R11-2

29

M04-10L

17L

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	23

COUNTY
GREENE

JOB NO.
J8S3156

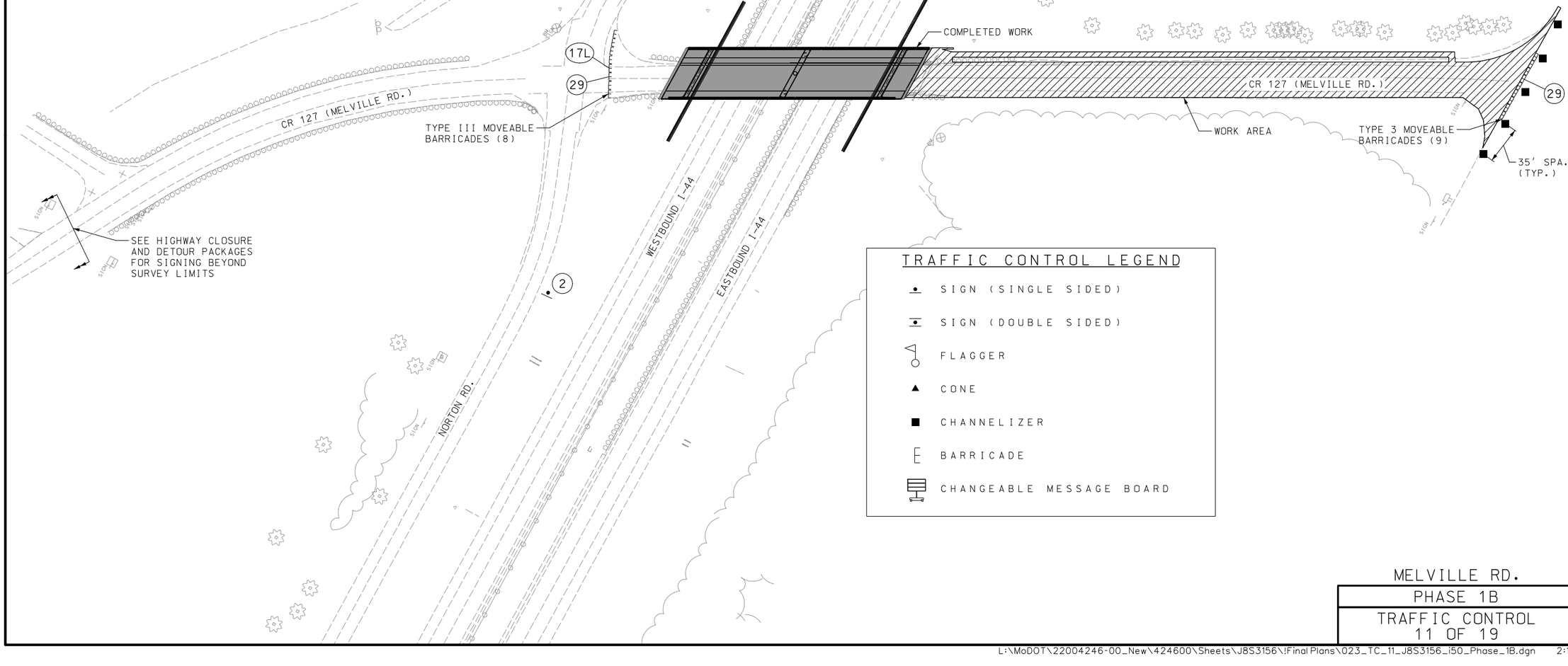
CONTRACT ID.

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE



TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- SIGN (DOUBLE SIDED)
- FLAGGER
- CONE
- CHANNELIZER
- BARRICADE
- CHANGEABLE MESSAGE BOARD

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MELVILLE RD.

PHASE 1B

TRAFFIC CONTROL
11 OF 19

REV.

SCALE

0 50 100 150

NOTES:

1. FOR CR 127 (MELVILLE) DETOUR INFORMATION SEE SHEET 28.

W020-1

2

M04-10L

17L

R11-2

29

WORK AREA

SEE PHASE 2B FOR TYPICAL SECTION OF TEMPORARY PAVEMENT

TYPE III MOVEABLE BARRICADES (8)

COMPLETED WORK

CR 127 (MELVILLE RD.)

TYPE 3 MOVEABLE BARRICADES (8)

NORTON RD.

WESTBOUND I-44

EASTBOUND I-44

SEE HIGHWAY CLOSURE AND DETOUR PACKAGES FOR SIGNING BEYOND SURVEY LIMITS

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- SIGN (DOUBLE SIDED)
- FLAGGER
- CONE
- CHANNELIZER
- BARRICADE
- CHANGEABLE MESSAGE BOARD

MELVILLE RD.

PHASE 2A

TRAFFIC CONTROL
12 OF 19

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	24

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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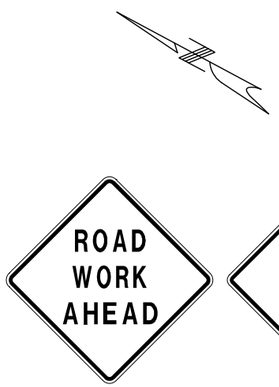
SCALE
0 50 100 150

NOTES:

1. FOR WEST NORTON RD. CLOSURE INFORMATION SEE SHEET 30.



W020-1
48" X 48"
(2)


M04-10L, OR M04-10R
48" X 48"
(15)

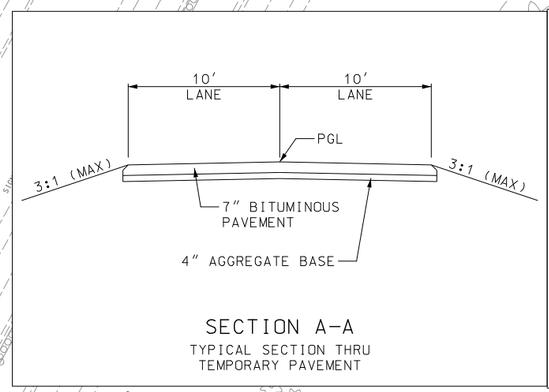
M04-10L
(17L)
R11-2
48" X 30"
(29)

W013-1
18" X 18"
(44)

SEE HIGHWAY CLOSURE AND DETOUR PACKAGES FOR SIGNING BEYOND SURVEY LIMITS

NORTON RD.

(15R)
(44)



SECTION A-A
TYPICAL SECTION THRU TEMPORARY PAVEMENT

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- SIGN (DOUBLE SIDED)
- FLAGGER
- CONE
- CHANNELIZER
- BARRICADE
- CHANGEABLE MESSAGE BOARD

TYPE III MOVEABLE BARRICADES (4)

℄ TEMPORARY PAVEMENT (TEMP)

R 170'

35' SPA. (TYP.)

(15R)

(29)

TEMPORARY PAVEMENT MARKING

(15L)

(29)

150'

35' SPA. (TYP.)

TYPE III MOVEABLE BARRICADES (3)

COMPLETED WORK

WORK AREA

CR 127 (MELVILLE RD.)

WESTBOUND I-44

EASTBOUND I-44

COMPLETED WORK

CR 127 (MELVILLE RD.)

(29)

TYPE 3 MOVEABLE BARRICADES (9)

SEE HIGHWAY CLOSURE AND DETOUR PACKAGES FOR SIGNING BEYOND SURVEY LIMITS

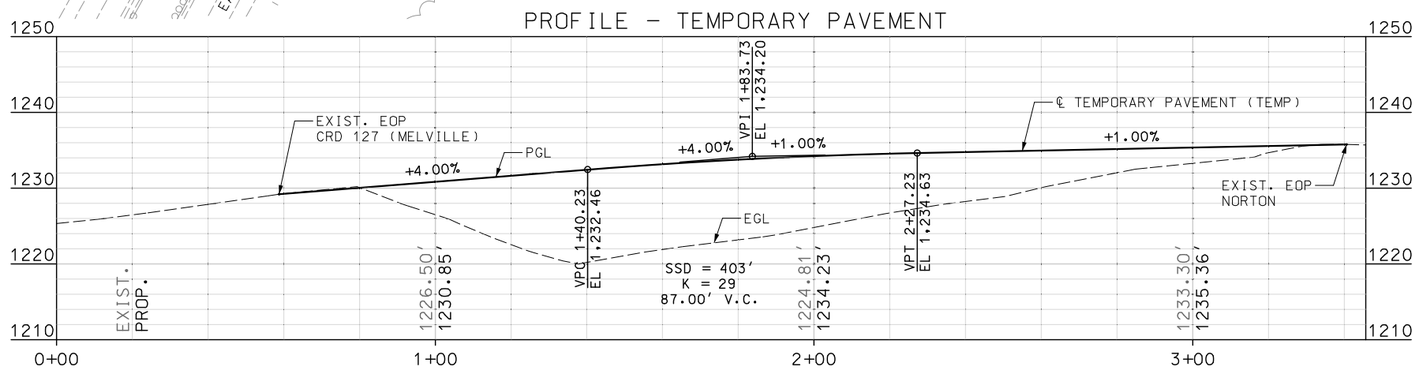
NORTON RD.

WORK AREA

SEE HIGHWAY CLOSURE AND DETOUR PACKAGES FOR SIGNING BEYOND SURVEY LIMITS

(29)

PROFILE - TEMPORARY PAVEMENT



MELVILLE RD.
PHASE 2B
TRAFFIC CONTROL
13 OF 19

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STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	25

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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SCALE

0 50 100 150

NOTES:

1. FOR EAST NORTON RD. CLOSURE INFORMATION SEE SHEET 31.

SEE HIGHWAY CLOSURE AND DETOUR PACKAGES FOR SIGNING BEYOND SURVEY LIMITS

29

NORTON RD.

WORK AREA

MAINTAIN ACCESS TO PROPERTY AT ALL TIMES

ROAD CLOSED

R11-2

29

TYPE III MOVEABLE BARRICADES (10)

29

35' SPA. (TYP.)

CR 127 (MELVILLE RD.)

COMPLETED WORK

CR 127 (MELVILLE RD.)

WESTBOUND I-44

EASTBOUND I-44

NORTON RD.

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- SIGN (DOUBLE SIDED)
- FLAGGER
- CONE
- CHANNELIZER
- BARRICADE
- CHANGEABLE MESSAGE BOARD

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STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	26

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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MELVILLE RD.
PHASE 2C
TRAFFIC CONTROL
14 OF 19

REV.

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SCALE

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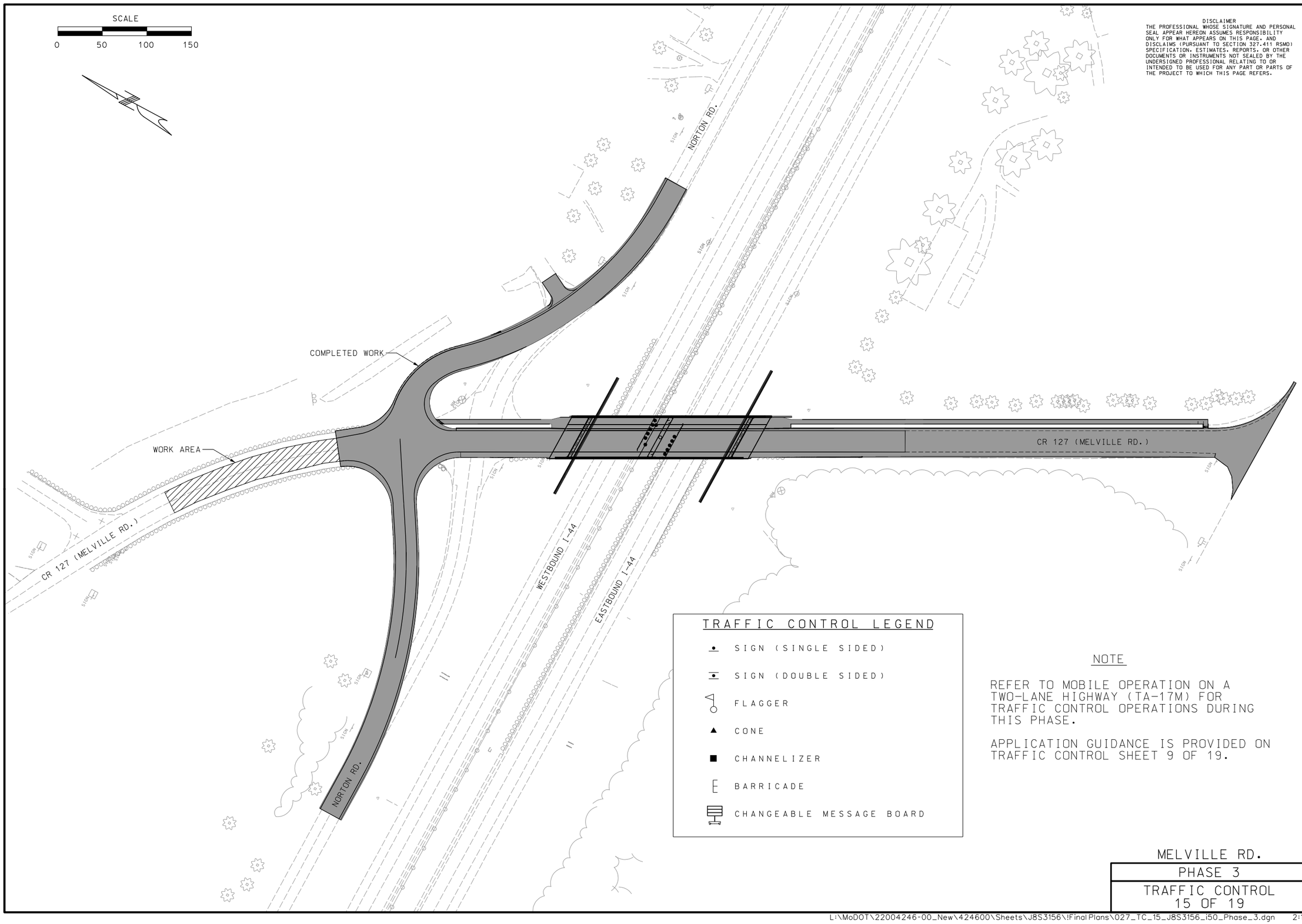

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- SIGN (DOUBLE SIDED)
- FLAGGER
- CONE
- CHANNELIZER
- BARRICADE
- CHANGEABLE MESSAGE BOARD

NOTE

REFER TO MOBILE OPERATION ON A TWO-LANE HIGHWAY (TA-17M) FOR TRAFFIC CONTROL OPERATIONS DURING THIS PHASE.

APPLICATION GUIDANCE IS PROVIDED ON TRAFFIC CONTROL SHEET 9 OF 19.

MELVILLE RD.

PHASE 3

TRAFFIC CONTROL
15 OF 19

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RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

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DATE PREPARED
12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	27

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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N.T.S.

DETOUR LEGEND

- TYPE III BARRICADE
- CONSTRUCTION SIGN
- DETOUR ROUTE
- ROAD CLOSURE SECTION

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CR 127 (MELVILLE RD.)
NORTON RD.
NORTON RD.
MELVILLE RD.
FULBRIGHT AVE.

ROAD CLOSED AHEAD — W020-3 — (20)
DETOUR AHEAD — W020-2 — (18)
DETOUR — M04-10L — (17L)
DETOUR — M04-10R — (17R)
DETOUR MELVILLE RD — M04-9S — (50A)
DETOUR MELVILLE RD — M04-9aR — (50B)
DETOUR MELVILLE RD — M04-9R — (50C)
DETOUR MELVILLE RD — M04-9aL — (50D)
DETOUR MELVILLE RD — M04-9L — (50E)
END DETOUR — M04-8a — (52)

MELVILLE RD. DETOUR

TRAFFIC CONTROL
16 OF 19

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	28

COUNTY: GREENE
JOB NO.: J8S3156
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

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DESCRIPTION | DATE | REV.

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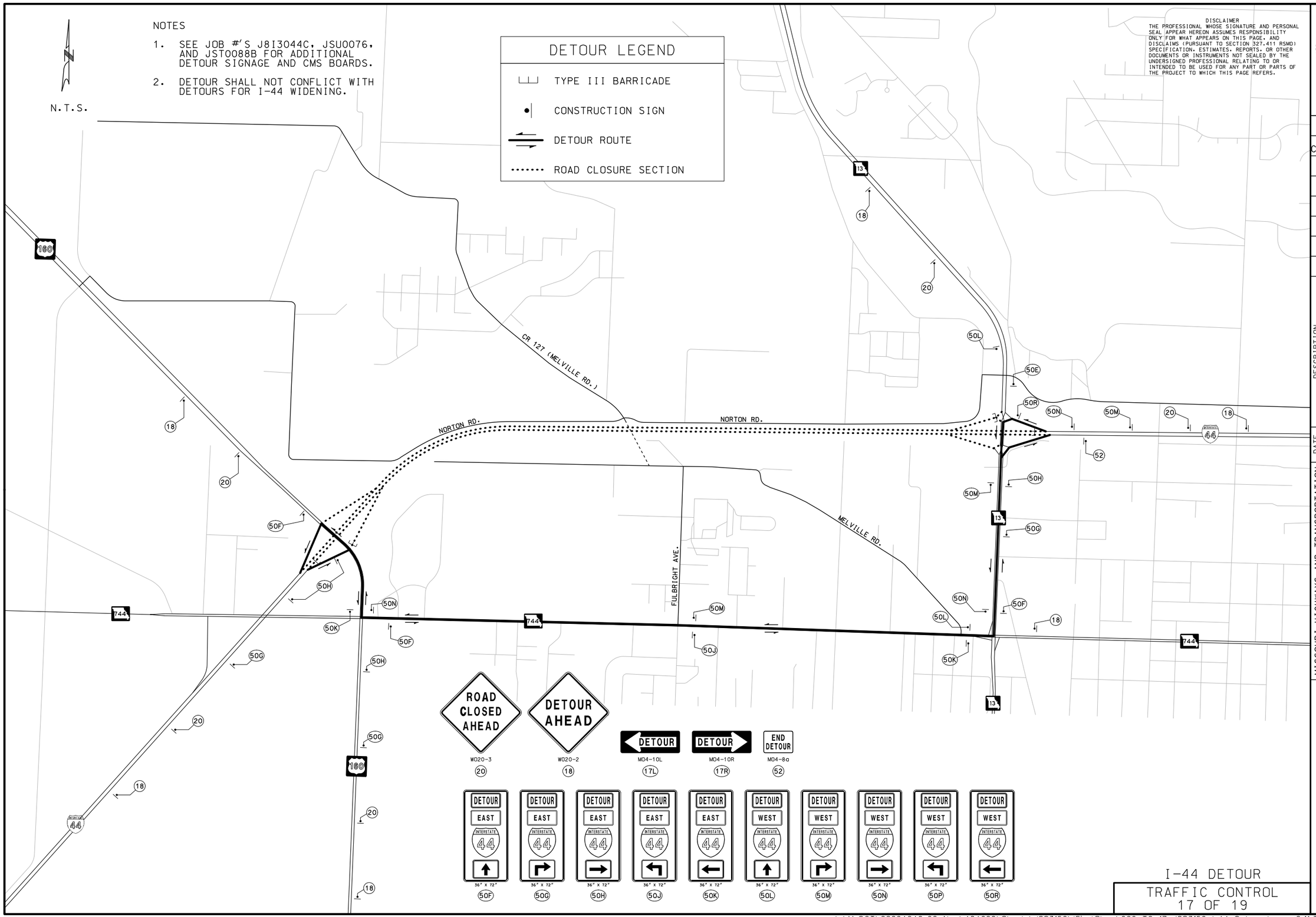
NOTES

1. SEE JOB #'S J8I3044C, JSU0076, AND JST0088B FOR ADDITIONAL DETOUR SIGNAGE AND CMS BOARDS.
2. DETOUR SHALL NOT CONFLICT WITH DETOURS FOR I-44 WIDENING.

N.T.S.

DETOUR LEGEND

- TYPE III BARRICADE
- CONSTRUCTION SIGN
- DETOUR ROUTE
- ROAD CLOSURE SECTION



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STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

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DATE PREPARED	
12/20/2024	
ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	29
COUNTY	
GREENE	
JOB NO.	
J8S3156	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

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ENGINEERING CORPORATION - 000631

REV.

I-44 DETOUR
TRAFFIC CONTROL
17 OF 19

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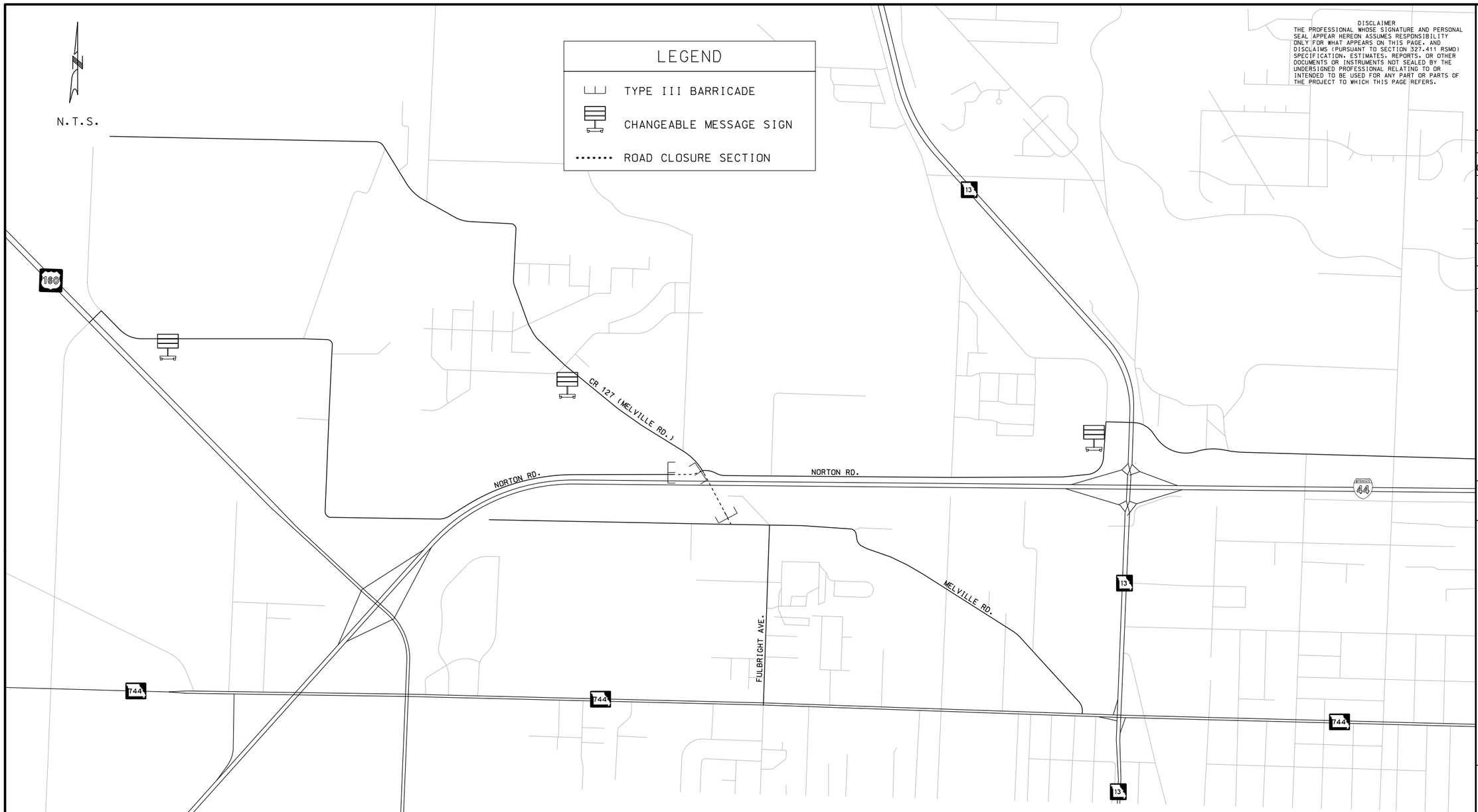
N.T.S.

LEGEND

- TYPE III BARRICADE
- CHANGEABLE MESSAGE SIGN
- ROAD CLOSURE SECTION



NOTES:

1. CHANGEABLE MESSAGE SIGNS INFORMING ROAD USERS OF THE CLOSURE OF WEST NORTON SHALL BE IN PLACE NO LESS THAN 2 WEEKS PRIOR TO CLOSURE OF NORTON RD.
2. CLOSURE OF WEST NORTON SHALL NOT OCCUR DURING DAYTIME HOURS ON SUNDAYS OR WEDNESDAYS IN ORDER TO AVOID BACKUPS DURING PERIODS OF HIGHER VOLUMES.

NORTON RD. CLOSURE

TRAFFIC CONTROL
18 OF 19

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	30

COUNTY: GREENE
JOB NO.: J8S3156
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

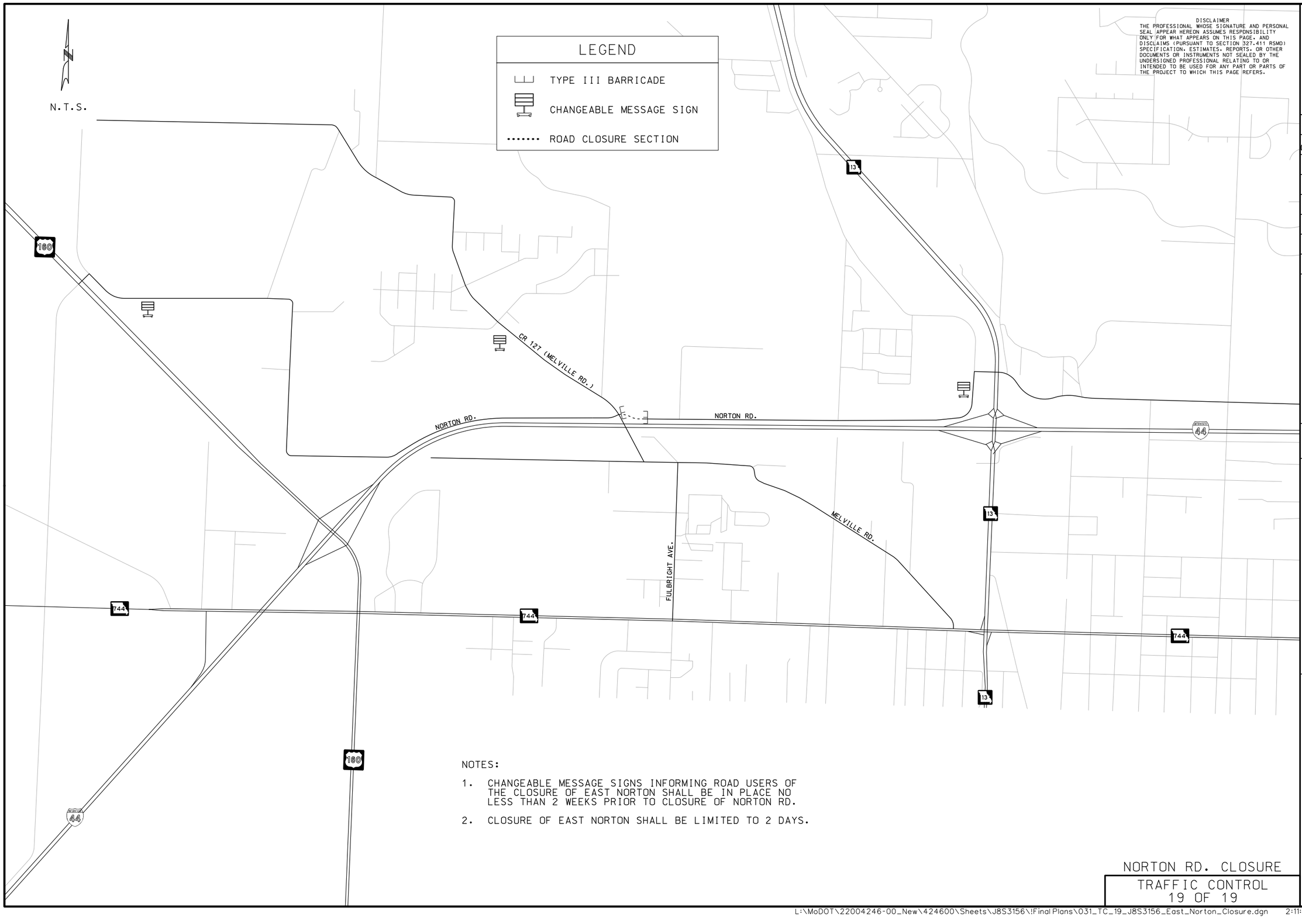
CMT

CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

N.T.S.

LEGEND

- TYPE III BARRICADE
- CHANGEABLE MESSAGE SIGN
- ROAD CLOSURE SECTION



NOTES:

1. CHANGEABLE MESSAGE SIGNS INFORMING ROAD USERS OF THE CLOSURE OF EAST NORTON SHALL BE IN PLACE NO LESS THAN 2 WEEKS PRIOR TO CLOSURE OF NORTON RD.
2. CLOSURE OF EAST NORTON SHALL BE LIMITED TO 2 DAYS.

NORTON RD. CLOSURE

TRAFFIC CONTROL
19 OF 19

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STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	31

COUNTY: GREENE

JOB NO.: J8S3156

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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JEFFERSON CITY, MO 65102
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SCALE

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RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

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DATE PREPARED
12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	32

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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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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SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

STA 883+63.10
OFF 19.76' LT.

STA 883+56.60
OFF 22.10' RT.

STA 882+44.07
OFF 25.37' LT.

SILT FENCE
(58 LF)

STA 881+93.66
OFF 42.59' LT.

STA 881+55.83
OFF 42.59' LT.

SILT FENCE
(136 LF)

SILT FENCE
(156 LF)

STA 3+60.66
OFF 64.10' LT.

WB I-44

EB I-44

STA 881+74.84
OFF 26.27' RT.

STA 881+09.70
OFF 66.81' LT.

STA 882+04.45
OFF 62.99' RT.

STA 881+58.72
OFF 39.08' RT.

STA 880+77.36
OFF 74.96' LT.

SILT FENCE
(144 LF)

STA 8+62.82
OFF 94.38' LT.

SILT FENCE
(289 LF)

STA 11+20.77
OFF 50.75' LT.

STA 11+20.73
OFF 38.75' LT.

SILT FENCE
(321 LF)

STA 14+33.43
OFF 67.78' LT.

STA 880+09.81
OFF 62.14' LT.

STA 881+04.47
OFF 61.28' RT.

SILT FENCE
(12 LF)

CRD 127 (MELVILLE RD.)

STA 880+04.47
OFF 61.03' RT.

STA 879+09.84
OFF 64.40' LT.

STA 9+99.98
OFF 35.42' RT.

STA 12+40.45
OFF 35.78' RT.

SILT FENCE
(242 LF)

SILT FENCE
(233 LF)

STA 2+00.01
OFF 57.88' RT.

STA 878+28.09
OFF 159.10' RT.

STA 7+66.50
OFF 82.80' RT.

STA 877+54.13
OFF 33.13' LT.

SILT FENCE
(254 LF)

STA 876+44.23
OFF 58.00' LT.

SILT FENCE
(114 LF)

STA 876+66.63
OFF 53.65' RT.

STA 875+77.77
OFF 38.93' LT.

SILT FENCE
(63 LF)

STA 876+61.83
OFF 52.25' RT.

STA 876+55.64
OFF 50.26' RT.

STA 875+40.94
OFF 41.07' LT.

SILT FENCE
(34 LF)

SILT FENCE
(97 LF)

STA 875+68.01
OFF 29.56' RT.

STA 874+76.32
OFF 21.47' LT.

STA 874+76.06
OFF 23.42' RT.

TEMPORARY EROSION CONTROL LEGEND

(C)	CURB INLET CHECK
(R)	ROCK DITCH CHECK
(S)	SEDIMENT TRAP
▼——▼	SILT FENCE

PRE-CONSTRUCTION

EROSION CONTROL
1 OF 3

L:\MoDOT\22004246-00_New\424600\Sheets\J8S3156\!Final Plans\032_EC_01_J8S3156_i50_Pre.dgn 2:28:38 PM 12/20/2024

SCALE

0 50 100 150

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STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

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DATE PREPARED
12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	33

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE	DESCRIPTION	REV.

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

CMT

CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

STA 883+63.10
OFF 19.76' LT.

STA 883+56.60
OFF 22.10' RT.

STA 882+51.87
OFF 22.18' LT.

STA 882+44.07
OFF 25.37' LT.

SILT FENCE
(58 LF)

STA 881+93.66
OFF 42.59' LT.

SILT FENCE
(136 LF)

STA 881+55.83
OFF 42.59' LT.

880

STA 880+29.40
OFF 54.50' LT.

SILT FENCE
(156 LF)

STA 3+60.66
OFF 64.10' LT.

STA 881+74.84
OFF 26.27' RT.

STA 880+98.00
OFF 75.33' LT.

STA 881+09.70
OFF 66.87' LT.

STA 881+58.72
OFF 39.08' RT.

SILT FENCE
(144 LF)

STA 881+04.47
OFF 61.28' RT.

STA 880+09.00
OFF 62.14' LT.

STA 882+04.45
OFF 62.99' RT.

STA 8+73.22
OFF 113.99' LT.

SILT FENCE
(289 LF)

STA 11+20.77
OFF 50.75' LT.

STA 11+20.96
OFF 38.65' LT.

SILT FENCE
(321 LF)

STA 14+33.43
OFF 67.78' LT.

STA 10+00.88
OFF 12.88' LT.

SILT FENCE
(12 LF)

STA 8+77.36
OFF 12.28' LT.

STA 11+55.02
OFF 12.97' LT.

STA 5+85.06
OFF 12.58' LT.

STA 878+39.66
OFF 26.40' LT

STA 2+00.01
OFF 57.88' RT.

STA 877+62.32
OFF 25.66' LT.

STA 877+54.13
OFF 33.13' LT.

STA 877+06.96
OFF 71.68' LT.

SILT FENCE
(58 LF)

STA 876+90.84
OFF 68.89' LT.

SILT FENCE
(42 LF)

STA 876+44.23
OFF 58.00' LT.

SILT FENCE
(63 LF)

STA 875+77.77
OFF 38.93' LT.

875

SILT FENCE
(34 LF)

STA 875+40.94
OFF 41.07' LT.

STA 874+76.32
OFF 21.47' LT.

STA 874+76.06
OFF 23.42' RT.

STA 879+09.84
OFF 64.40' LT.

STA 878+19.42
OFF 152.46' RT.

STA 880+04.47
OFF 61.03' RT.

SILT FENCE
(250 LF)

STA 876+61.83
OFF 52.25' RT.

SILT FENCE
(97 LF)

STA 7+59.47
OFF 100.02' RT.

SILT FENCE
(242 LF)

STA 9+92.94
OFF 35.63' RT.

STA 10+07.86
OFF 35.64' RT.

STA 9+99.98
OFF 35.42' RT.

STA 12+40.48
OFF 35.74' RT.

SILT FENCE
(233 LF)

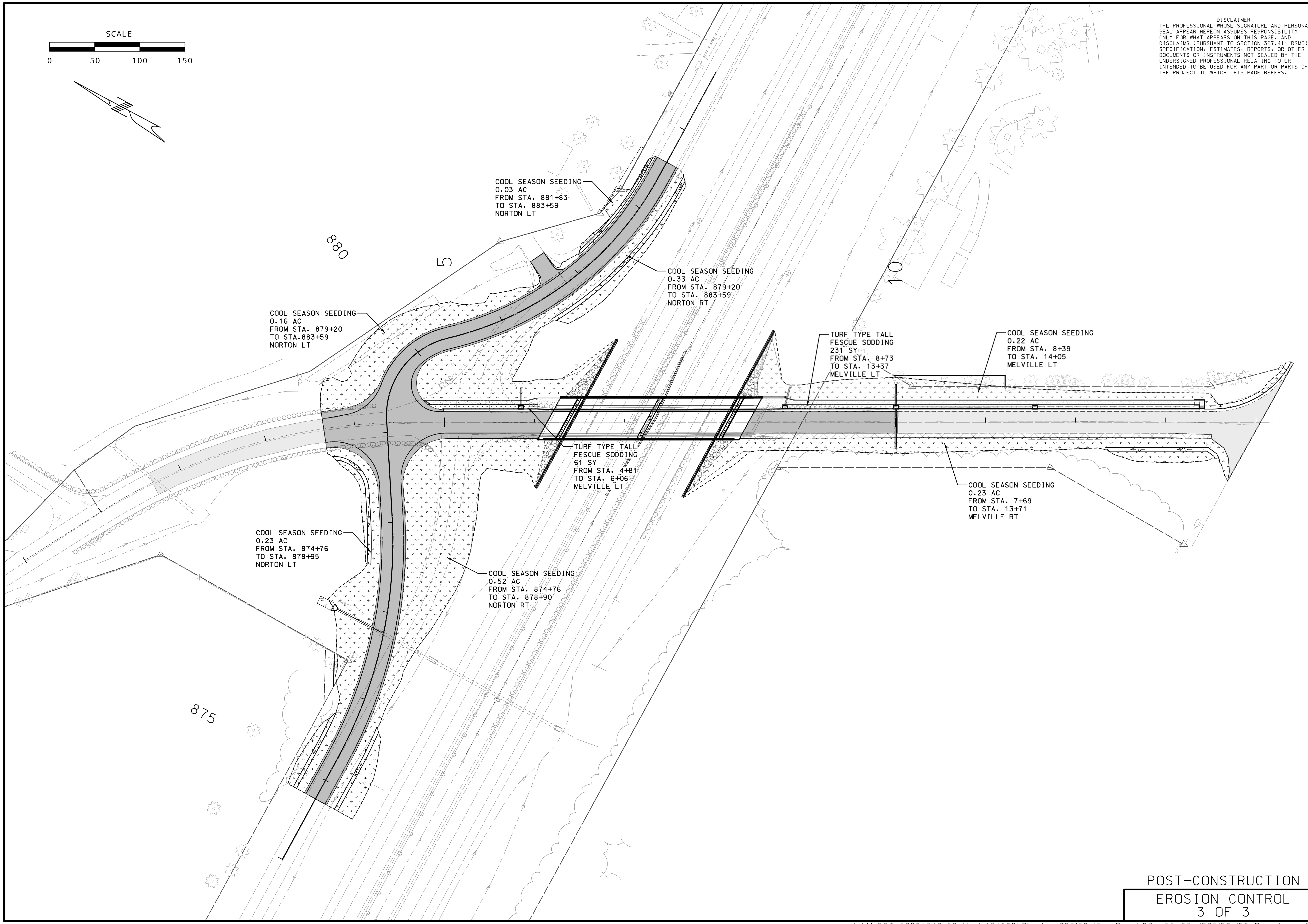
STA 12+98.99
OFF 30.47' RT.

TEMPORARY EROSION CONTROL LEGEND

(C)	CURB INLET CHECK
(R)	ROCK DITCH CHECK
(S)	SEDIMENT TRAP
▼——▼	SILT FENCE

DURING CONSTRUCTION

EROSION CONTROL
2 OF 3



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STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	12/20/2024
ROUTE	CRD 127
STATE	MO
DISTRICT	SW
SHEET NO.	34
COUNTY	GREENE
JOB NO.	J8S3156
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)

CMT
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SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

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REV.

POST-CONSTRUCTION
EROSION CONTROL
3 OF 3

SCALE
0 20 40 60

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LIGHTING LEGEND

	CONTROLLER, LIGHTING		LED-A LUMINAIRE
	CONTROLLER, LIGHTING (EXISTING)		LED-B LUMINAIRE
	WOOD POST		LED-C LUMINAIRE
	POWER SUPPLY	P.S.	POWER SOURCE
JCT	JUNCTION BOX		PULL BOX (EXISTING)
	PULL BOX CONCRETE TYPE 1		PULL BOX CONCRETE TYPE 2
	PULL BOX PREFORMED TYPE 1		PULL BOX PREFORMED TYPE 2
	CONDUIT, RIGID (TRENCH)		CONDUIT, RIGID (PUSHED)
M M M M	CONDUIT, RIGID (MEDIAN)	B B B B	CONDUIT, RIGID (BRIDGE)
	CONDUIT, RIGID (EXISTING)		CABLE-CONDUIT (EXISTING)
			CABLE-CONDUIT

PT STA 883+38.98

EXIST. R/W

NORTON RD.

EXIST. POWER POLE

POWER SUPPLY "A"
STA. 880+69.09, NORTON
OFF. 65.14' LT
PS A

PS B
POWER SUPPLY "B"
STA. 880+77.36, NORTON
OFF. 66.99' LT

CONTROLLER "A"
MoDOT ROADWAY LIGHTING
STA. 880+71.39, NORTON
OFF. 58.40' LT
CS A

CS B
CONTROLLER "B"
CITY DECORATIVE BRIDGE LIGHTING
STA. 880+79.49, NORTON
OFF. 60.21' LT

B1
PREFORMED
STA. 880+57.59, NORTON
OFF. 19.33' LT

PRC STA 880+36.89

880

EXIST. R/W

CONCRETE
STA. 6+31.60, CR 127
OFF. 33.13' LT
B2

EXIST. LIGHT POLE (R)

A1
PREFORMED
STA. 5+04.05, CR 127
OFF. 26.15' LT

LED-A
30' M.H., 12' M.A.
STA. 3+91.83, CR 127
OFF. 25.00' LT
A101

PC STA 879+13.94
STA. 4+36.03 CRD 127=
STA. 879+10.88 NORTON
PT STA 4+60.74

CRD 127 (MELVILLE RD.)

STA. 7+25.49 MELVILLE =
STA. 880+20.16 I-44

℄ MELVILLE (MELVILLE)

A201
LED-A
30' M.H., 10' M.A.
STA. 5+01.69, CR 127
OFF. 22.80' RT

℄ NORTON (NORTON)

PT STA 878+06.93

B101 B102 B103 B104 B105 B106 B107

BRIDGE MOUNTED DECORATIVE LIGHT POLE (SEE BRIDGE PLANS, BRIDGE ITEM)
B101
B102
B103
B104
B105
B106
B107

WESTBOUND I-44

EASTBOUND I-44

MELVILLE RD.
LIGHTING PLAN
1 OF 3

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

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DATE PREPARED
12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	35

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

REV.	DESCRIPTION	DATE

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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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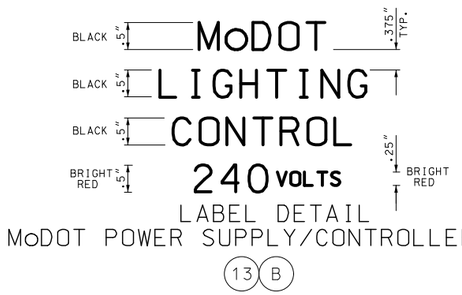
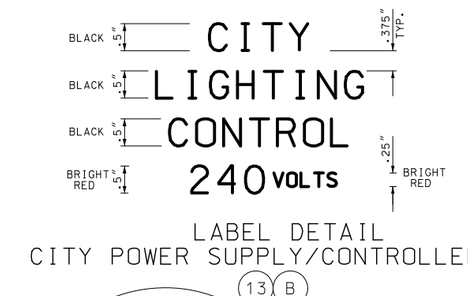
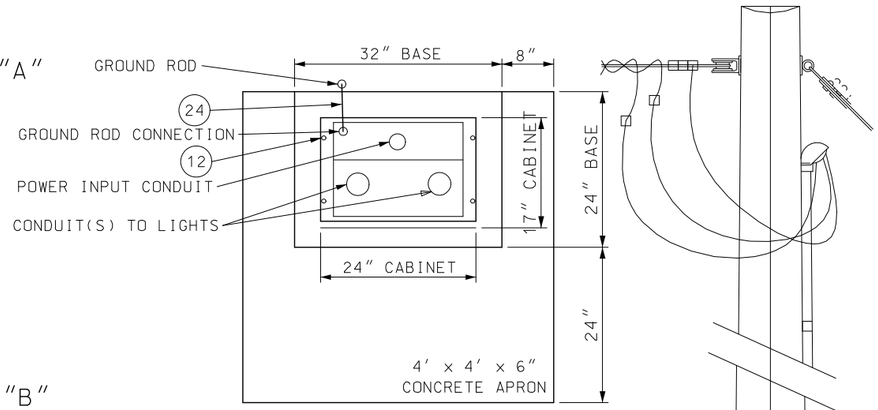


LABEL DETAIL
MoDOT POWER SUPPLY/CONTROLLER "A"
(13)(B)



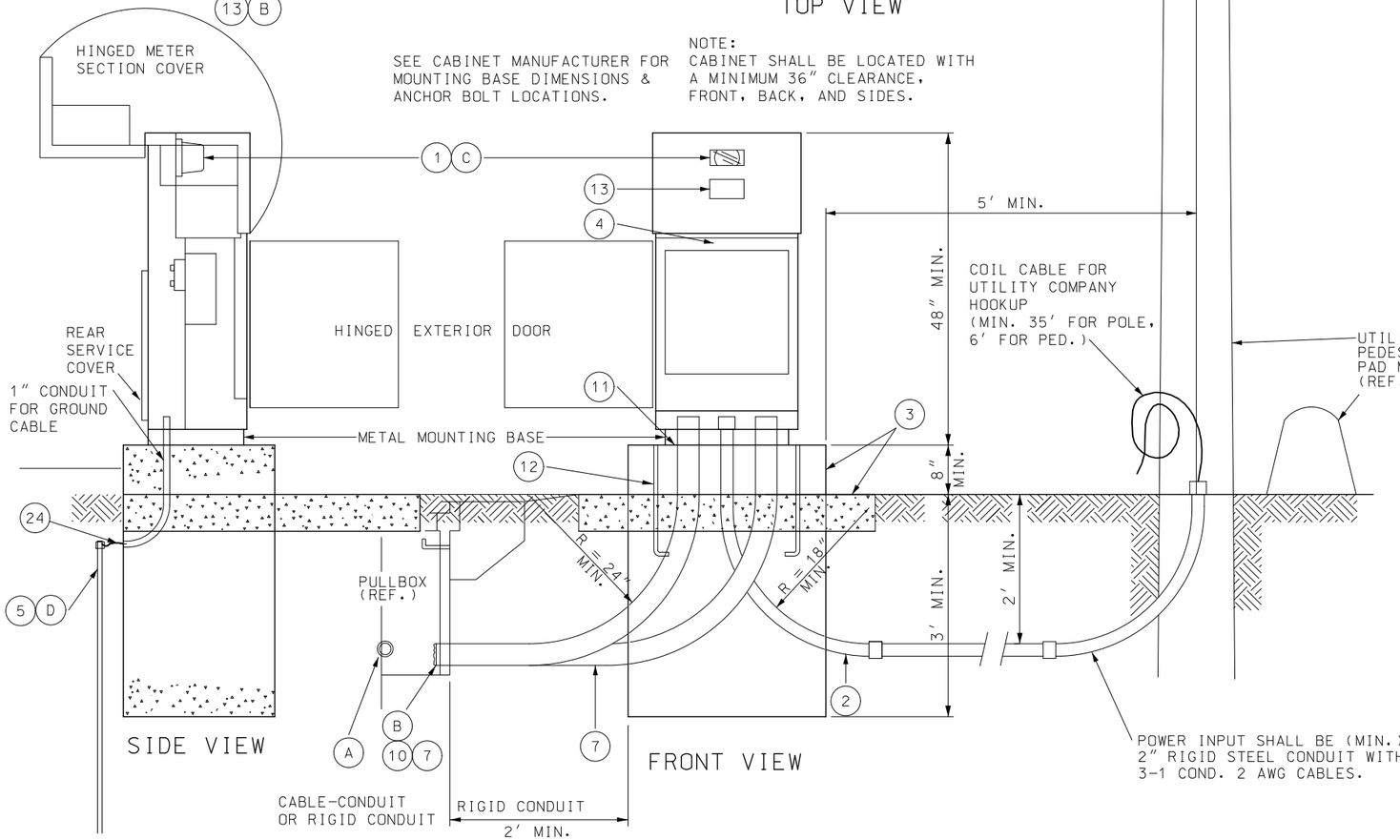
LABEL DETAIL
CITY POWER SUPPLY/CONTROLLER "B"
(13)(B)



TOP VIEW

SEE CABINET MANUFACTURER FOR MOUNTING BASE DIMENSIONS & ANCHOR BOLT LOCATIONS.

NOTE:
CABINET SHALL BE LOCATED WITH A MINIMUM 36" CLEARANCE, FRONT, BACK, AND SIDES.



LOCATED AT:

MODOT POWER SUPPLY/ CONTROLLER "A"
240V 4 CIRCUIT FOR MODOT LIGHTING

CITY POWER SUPPLY/ CONTROLLER "B"
240V 4 CIRCUIT FOR CITY BRIDGE MOUNTED DECORATIVE ROADWAY LIGHTING

LIST OF MATERIALS	
ITEM	DESCRIPTION
1	METER SOCKET, 200 AMP
2	RIGID STEEL CONDUIT, 2" MIN. TO UTILITY CO. FACILITIES
3	CLASS B CONCRETE, 0.9 C.Y.±
4	NEMA 4, DUST-TIGHT, WATERTIGHT, CABINET
5	GROUND ROD, 3/4" DIA. X 8' MIN. (MIN. 8' IN SOIL)
7	RIGID CONDUIT TO FIRST PULL BOX (SEE PLANS FOR SIZE)
10	PLIABLE DUCT SEALANT
11	LIFETIME SILICONE CAULK
12	ANCHOR BOLTS, 5/8 - 11 x 18" LONG BOLTS, HOT DIP GALVANIZED, 4 REQUIRED
13	WEATHERPROOF ADHESIVE LABEL, VINYL RAISED LETTERING (OR EQUIVALENT, SEE DETAIL)
24	GROUND WIRE, #2 AWG, MIN.

NOTES

(A) IF CABLE-CONDUIT IS SPECIFIED, THE CONDUIT SHALL BE CUT AWAY FROM CABLES BETWEEN PULL BOX AND CONTROL STATION.

(B) LIGHTING SYSTEM VOLTAGE AS SPECIFIED ON PLANS (120 OR 240 VOLTS). IF LIGHTS ARE TO BE MOUNTED ON SIGNAL POSTS, VOLTAGE MUST BE 120 VOLTS. 240 VOLT LIGHTS ARE NOT TO BE MOUNTED ON OR WIRED THROUGH SIGNAL POSTS, CONDUIT, OR PULL BOXES.

(C) CONTROLLER CABINET WITH POWER SUPPLY SHALL BE ALUMINUM OR STAINLESS STEEL. ALL HARDWARE, HINGES, CATCHES, ETC. SHALL BE STAINLESS STEEL. METER SOCKET AND OTHER EQUIPMENT AND MATERIALS SHALL BE U.L. APPROVED, AND CONFORM TO THE REQUIREMENTS OF THE UTILITY COMPANY OR MUNICIPALITY PROVIDING POWER.

(D) IF SUBSURFACE CONDITIONS EXIST WHICH PROHIBIT THE PLACEMENT OF THE GROUND ROD IN A VERTICAL POSITION, THE ROD MAY BE DRIVEN AT AN OBLIQUE ANGLE NOT TO EXCEED 45 DEGREES FROM VERTICAL OR BURIED IN A TRENCH AT LEAST 30 IN. DEEP. CONNECTION TO GROUND ROD SHALL BE CADWELDED.

(E) UTILITY COMPANY SHALL DECIDE IF LIGHTNING ARRESTERS ARE TO BE CONNECTED ON THE LOAD OR LINE SIDE OF THE METER. THE UTILITY COMPANY SHALL ALSO DECIDE WHERE THE LIGHTNING ARRESTER SHALL BE MOUNTED.

GENERAL NOTES:

1. ALTERNATE CABINET DIMENSIONS WILL BE ALLOWED AS APPROVED BY THE ENGINEER. INTERIOR CABINET VOLUME SHALL BE EQUAL TO OR GREATER THAN THAT SHOWN ON PLANS AND PROPER CLEARANCES SHALL BE PROVIDED FOR ALL EQUIPMENT. CONCRETE BASE DIMENSIONS SHALL BE MODIFIED TO FIT THE CABINET SUPPLIER AT NO ADDITIONAL COST.
2. PLACEMENT OF ALL ITEMS SHALL BE APPROVED BY THE ENGINEER.
3. CABINET SHALL BE LOCATED AWAY FROM TRAFFIC. TOP MOUNT PHOTO CONTROL SHALL FACE AN OPEN SKY. SIDE MOUNT PHOTO CONTROL SHALL FACE NORTH.
4. SEE PLANS FOR CIRCUIT WIRING; MAXIMUM LOADING PER CIRCUIT IS 7,400 WATTS.
5. SCHEMATIC DIAGRAM SHALL BE MOUNTED ON INSIDE OF CABINET DOOR.
6. THE UTILITY SHALL BE NOTIFIED IN WRITING 30 DAYS PRIOR TO DATE SERVICE WILL BE REQUIRED.
7. ALL CABINET OPENINGS SHALL BE COVERED AND SEALED WITH LIFETIME SILICONE CAULK.
8. ALL MATERIALS REQUIRED EXCLUDING REFERENCE ITEMS AS SHOWN ON DRAWING SHALL BE INCLUDED IN PRICE BID FOR '120/240V COMBINATION BASE MOUNTED POWER SUPPLY AND CONTROL STATION'.
9. CABLE AND CONDUIT FROM POWER SUPPLY ASSEMBLY TO UTILITY COMPANY FACILITIES SHALL BE INCLUDED IN PRICE BID FOR '120/240V COMBINATION BASE MOUNTED POWER SUPPLY AND CONTROL STATION'.

120/240v COMBINATION PAD MOUNTED POWER SUPPLY & LIGHTING CONTROL STATION DUAL METER

LIGHTING PLAN
2 OF 3

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

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DATE PREPARED
12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	36

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

CMT

CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

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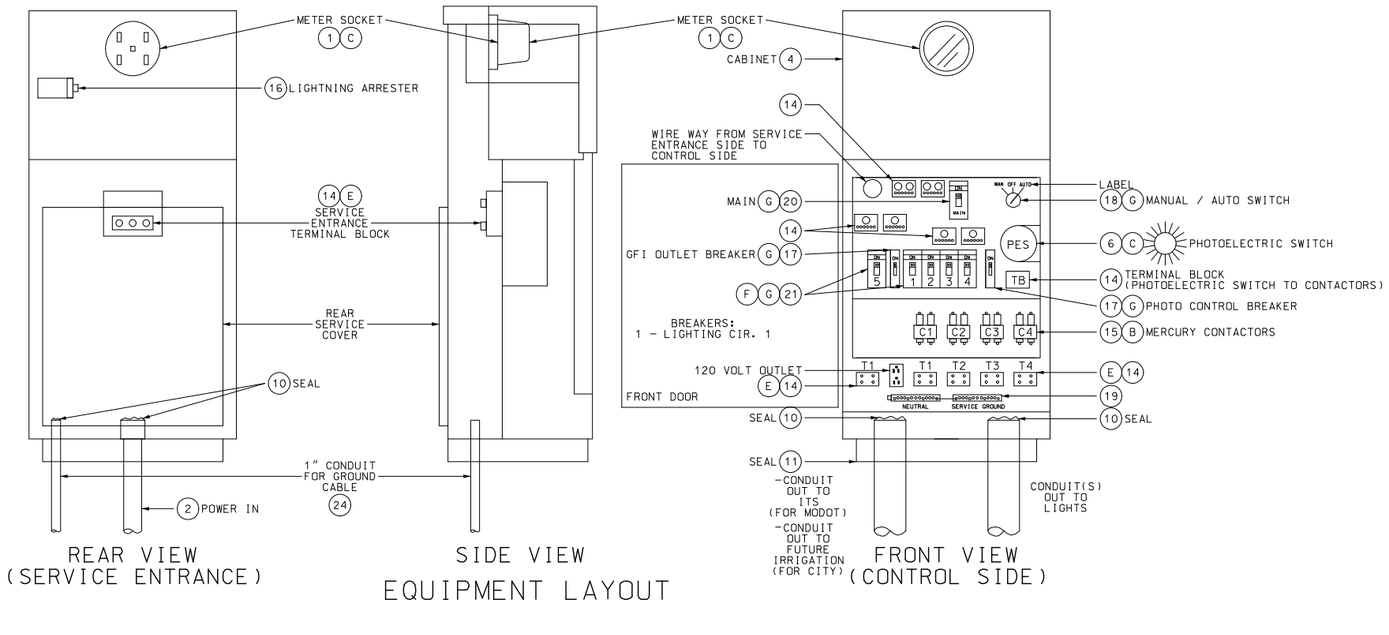

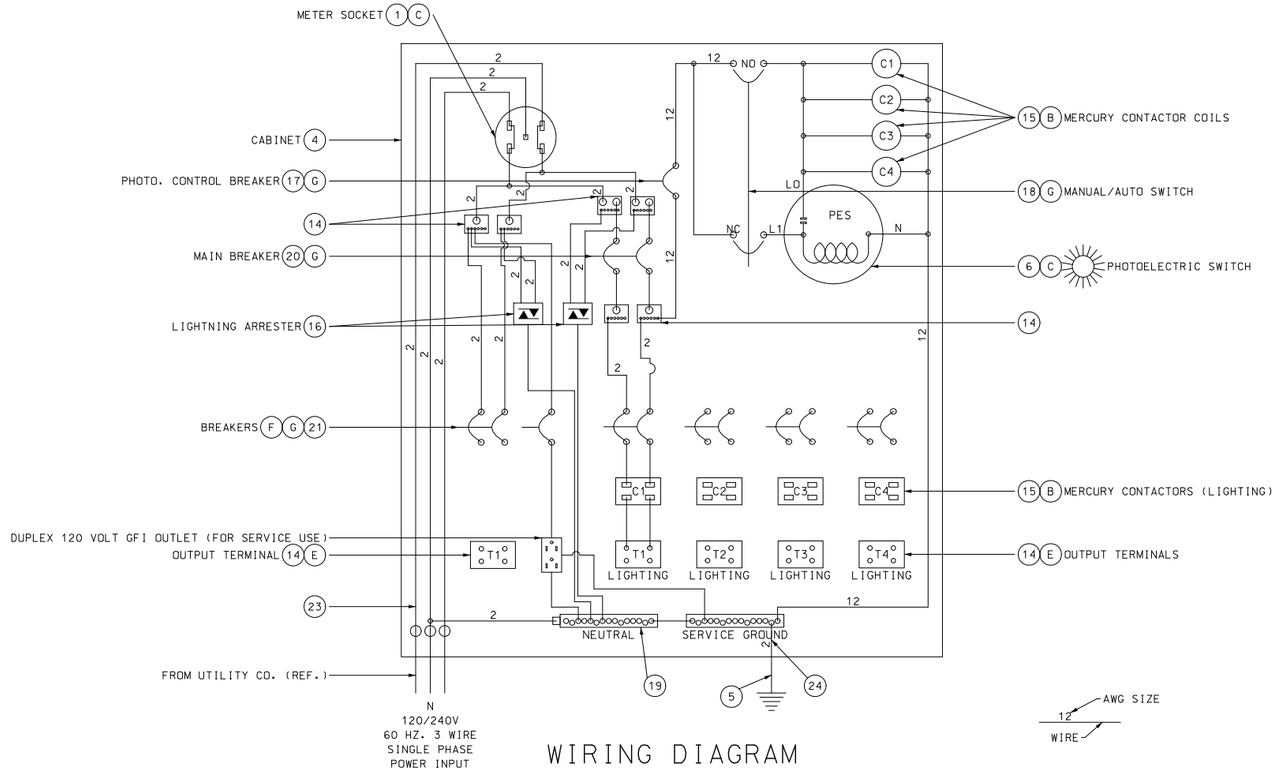

LOCATED AT:

MODOT POWER SUPPLY/ CONTROLLER "A"
240V 4 CIRCUITS FOR MODOT LIGHTING

CITY POWER SUPPLY/ CONTROLLER "B"
240V 4 CIRCUITS FOR CITY BRIDGE MOUNTED DECORATIVE ROADWAY LIGHTING

LIST OF MATERIALS	
ITEM	DESCRIPTION
1	METER SOCKET, 200 AMP, WITH LEVER TEST BYPASS
2	RIGID STEEL CONDUIT, 2" MIN. TO UTILITY CO. FACILITIES
4	NEMA 3R, DUST-TIGHT, WATERTIGHT CABINET
5	GROUND ROD, 3/4" DIA. X 8' MIN. (MIN. 8' IN SOIL)
6	PHOTOELECTRIC SWITCH AND SOCKET, 105/285 V., 1000 WATT
10	PLIABLE SEALANT
11	LIFETIME SILICONE CAULK
14	INSULATED TERMINAL BLOCK
15	2-POLE, 35 AMP, 120V COIL LIGHTING CONTACTOR (MERCURY)
16	2-POLE, 650 VOLT LIGHTNING ARRESTER
17	1-POLE, 15 AMP, TYPE B BREAKER TO PHOTOELECTRIC SWITCH
18	MANUAL-AUTO SWITCH
19	INSULATED GROUNDABLE NEUTRAL, 100 AMP
20	2-POLE, 100 AMP, TYPE A MAIN BREAKER
21	2-POLE, 15 AMP (MIN), TYPE A BREAKERS ✳
22	#12 AWG MIN., 600 V., CONTROL CABLE
23	#2 AWG MIN., 600 V., POWER CABLE ✳
24	#2 AWG MIN., 600 V., GROUND CABLE
✳	SEE PLANS FOR SIZE

NOTES

(B) LIGHTING SYSTEM VOLTAGE AS SPECIFIED ON PLANS (120 OR 240 VOLTS). IF LIGHTS ARE TO BE MOUNTED ON SIGNAL POSTS, VOLTAGE MUST BE 120 VOLTS. 240 VOLT LIGHTS ARE NOT TO BE MOUNTED ON OR WIRED THROUGH SIGNAL POSTS, CONDUIT, OR PULL BOXES.

(C) LOCATE PHOTOELECTRIC SWITCH AT CENTER OF WINDOW.

(E) IF FOR REASONS OF VOLTAGE DROP A WIRE SIZE IS SPECIFIED LARGER THAN #2 AWG, A LARGER TERMINAL BLOCK SHALL BE INSTALLED FOR THAT CIRCUIT.

(F) BREAKER SIZING:

SIZE (AMPS)	240V TOTAL CIRCUIT LOAD (WATTS)	120V TOTAL CIRCUIT LOAD (WATTS)
15	0-2800	0-1390
20	2850-3700	1400-1850
25	3750-4600	1860-2320
30	4650-5500	2330-2780
35	5550-6500	-
40	6550-7400	-

CIRCUIT LOAD INCLUDES LOAD DUE TO LINE LOSS, LAMP, AND BALLAST LOAD.

(G) ALL CIRCUIT BREAKERS SHALL CONFORM TO SECTION 901.4 OF THE STANDARD SPECIFICATIONS.

"MoDOT" & "CITY"
120/240v COMBINATION PAD MOUNTED POWER SUPPLY & LIGHTING CONTROL STATION
DUAL METER

LIGHTING PLAN
3 OF 3

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	37

COUNTY: GREENE
JOB NO.: J8S3156
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE	DESCRIPTION	REV.

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

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STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	38

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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ENGINEERING CORPORATION - 000631

REV.

Norton Rd.
Farm Rd. 127
STOP
CROSS TRAFFIC DOES NOT STOP
(a) D3-1c (RELOC.) 36" X 12"
(b) D3-1c (RELOC.) 36" X 12"
(c) R1-1 (NEW) 36" X 36"
(d) W4-4P (NEW) 36" X 18"
STA. 879+33.48 (NORTON)

(a) D3-1c (RELOC.) 36" X 12"
(b) D3-1c (RELOC.) 36" X 12"
(c) R1-1 (R) 36" X 36"
(d) W4-4P (R) 36" X 18"

25 M.P.H.
(a) W1-2L (NEW) 36" X 36"
(b) W13-1P (NEW) 18" X 24"
STA. 882+06.64 (NORTON)

R3-1 (UIP)

SPEED LIMIT 55
R2-1 (UIP)

WEIGHT LIMIT 40 TONS
R12-1 36" X 48" (R)

WEIGHT LIMIT 40 TONS
R12-1 36" X 48" (R)

Farm Rd. 127
Farm Rd. 112
STOP
(a) D3-1c 36" X 12"
(b) D3-1c 36" X 12"
(c) R1-1 36" X 36" (UIP)

(a) R1-1 (NEW) 36" X 36"
(b) W4-4P (NEW) 36" X 18"
STA. 878+65.05 (NORTON)

(a) R1-1 (R) 36" X 36"
(b) W4-4P (R) 36" X 18"

OM1-1 (UIP)

SPEED LIMIT 55
R2-1 36" X 48"
STA. 875+74.68 (NORTON)

SPEED LIMIT 55
R2-1 (R)

W3-1 36" X 36"
STA. 875+39.16 (NORTON)

4" SWP STA. +92.56
4" SWP STA. +36.89
4" SWP STA. +93.24
BEGIN 4" DSYP STA. +37.47
4" SWP STA. +48.96
4" SWP STA. +52.29
4" SWP STA. +93.03
4" SWP STA. +38.98
END 4" SWP MATCH EXIST. STA. +58.98
END 4" DSYP MATCH EXIST. STA. +58.98
END 4" SWP MATCH EXIST. STA. +58.98
4" SWP STA. +93.14
4" SWP STA. +1.69
END 4" DSYP STA. 4+36.74
4" SWP STA. +69.39
4" SWP STA. +43.30
4" SWP STA. +05.14
4" SWP STA. +24.95
END 4" SWP STA. +18.20
END 4" DSYP STA. +70.87
4" SWP STA. +51.87
END 4" SWP STA. +51.49
BEGIN 4" SWP MATCH EXIST. STA. 1+66.07
BEGIN 4" DSYP MATCH EXIST. STA. 1+66.07
BEGIN 4" SWP MATCH EXIST. STA. 1+66.07
END 4" SWP MATCH EXIST. STA. 874+76.67
BEGIN 4" DSYP MATCH EXIST. STA. 874+76.64
BEGIN 4" SWP MATCH EXIST. STA. 874+76.60

R = 350'
R = 372'
R = 50'
R = 50'
R = 50'
R = 100'
R = 488'

SIGN

STRIPING KEY

S - SOLID
I - INTERMITTENT (10' STRIPE, 30' GAP UNLESS NOTED OTHERWISE)
D - DOUBLE
W - WHITE
Y - YELLOW
T - PREFORMED THERMOPLASTIC PAVEMENT MARKING
H - HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS
P - STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS
DWT - DOTTED WHITE THERMOPLASTIC LINE (2 FT. LINE, 4 FT. GAPS)

NOTES:
1. SYMBOLS TO BE PREFORMED THERMOPLASTIC PAVEMENT MARKING
2. BLACK CONTRAST MARKINGS SHALL BE USED ON LANE LINES (INTERMITTENT, DOTTED/DASHED OR SOLID) ON ALL CONCRETE PAVEMENT.

SCALE
0 50 100 150

MELVILLE RD.

SIGNING & PAVEMENT MARKING
1 OF 2

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SIGNS

902 SIGNAL SIGNS TABULATED ON D37-A SHEET

PERFORATED SQUARE STEEL TUBE

SIGN NO.	SIGN SIZE	STATION	HORIZ CLEAR IF NOT STD	LOCATION	SIGN DTL. SHT. NO.	2 IN. POST						2.5 IN. POST						BREAK-AWAY ASSEMBLY	REMARKS AND OTHER REQUIRED ITEMS
						POST NO.1	POST NO.2	TOTAL	ANCHORS: DRIVEN 12-GA.	ANCHORS: DRIVEN 7-GA.	ANCHORS: CONCRETE 7-GA.	POST NO.1	POST NO.2	TOTAL	2.25" INSERT (6 FT)	ANCHORS: DRIVEN 7-GA.	ANCHORS: CONCRETE 7-GA.		
								ITEM NO. 9031270A	ITEM NO. 9031271A	ITEM NO. 9031273A	ITEM NO. 9031274			ITEM NO. 9031280	ITEM NO. 9031272A	ITEM NO. 9031281A	ITEM NO. 9031285	ITEM NO. 9031241	
						LF	LF	LF	EA	EA	EA	LF	LF	LF	EA	EA	EA	EA	
1	36"X36"	874+62.49	-	NORTON	-	-	-	-	-	-	-	16	-	16.00	-	-	1	1	
2	36"X48"	874+98.21	-	NORTON	-	-	-	-	-	-	-	16	-	16.00	1	-	1	1	
3	ASSEMBLY-2	877+88.68	-	NORTON	-	-	-	-	-	-	-	16	-	16.00	1	-	1	1	
4	ASSEMBLY-4	878+57.11	-	NORTON	-	-	-	-	-	-	-	16	-	16.00	1	-	1	1	
5	ASSEMBLY-2	882+06.64	-	NORTON	-	-	-	-	-	-	-	16	-	16.00	1	-	1	1	
				SUBTOTAL				-	-	-	-			80	4	-	5	5	
				TOTAL				-	-	-	-			80.00	4.00	-	5.00	5.00	

STANDARD SIGN ASSEMBLIES

SIGN NUMBER	STATION	LOCATION	TYPE: Street Name	TYPE: STOP	TYPE: SPEED LIMIT 55	TYPE:	TYPE:	TYPE: CROSS TRAFFIC DOES NOT STOP	TYPE: 25 M.P.H	REMARKS
			SIGN DESCRIPTION, SIZES & NUMBER OF EACH							
			D3-1c (36" X 12")	R1-1 (36" X 36")	R2-1 (36" X 48")	W1-2L (36" X 36")	W3-1 (36" X 36")	W4-4P (36" X 18")	W13-1P (18" X 24")	
1	874+62.49	NORTON	-	-	-	-	1	-	-	
2	874+98.21	NORTON	-	-	1	-	-	-	-	
3	877+88.68	NORTON	-	1	-	-	-	1	-	
4	878+57.11	NORTON	2	1	-	-	-	1	-	D3-1c TO BE RELOCATED
5	878+57.11	NORTON	-	-	-	1	-	-	1	

SIGN SUMMARY

STANDARD SIGN OR SPECIAL SIGN NUMBER	SIGN DETAIL SHEET NO.	NO. EACH	SIZE, TYPE & SQUARE FEET: SIZE (SQFT)	FLAT SHEET SH ITEM NO. 9035004A	FLAT SHEET FLOURESCENT SHF * ITEM NO. 9035069A	STRUCTURAL STRUCTURAL ITEM NO. 9035011A	STRUCTURAL FLOURESCENT STF * ITEM NO. 9035071A	RELOCATED SIGNS (SQFT) ITEM NO. 9039904
R1-1 - 3, 4	-	2	9.00	18.00	-	-	-	-
R2-1 - 2	-	1	12.00	12.00	-	-	-	-
W1-2L - 5	-	1	9.00	9.00	-	-	-	
W3-1 - 1	-	1	9.00	9.00	-	-	-	-
W4-4P - 3, 4	-	2	4.50	9.00	-	-	-	-
W13-1P - 5	-	1	3.00	3.00	-	-	-	-
D3-1c - 4	-	2	3.00	-	-	-	-	6.00
TOTAL		10		60.00	-	-	-	6.00

D-29 & D-30

SIGNING & PAVEMENT MARKING
2 OF 2

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/20/2024

ROUTE CRD 127 | STATE MO
DISTRICT SW | SHEET NO. 39
COUNTY GREENE
JOB NO. J8S3156
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

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DESCRIPTION | DATE | REV.

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

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ENGINEERING CORPORATION - 000631

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LEGEND:

EGL = EXISTING GROUND LINE

PGL = PROPOSED GROUND LINE

LIMITS OF CLASS 3 CULVERT EXCAVATION

LIMITS OF CLASS 3 INLET EXCAVATION

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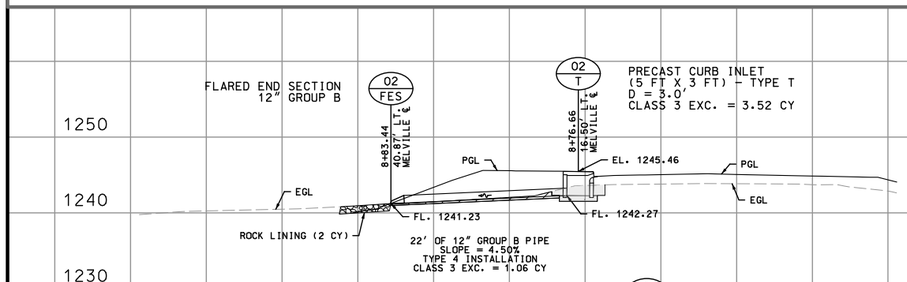
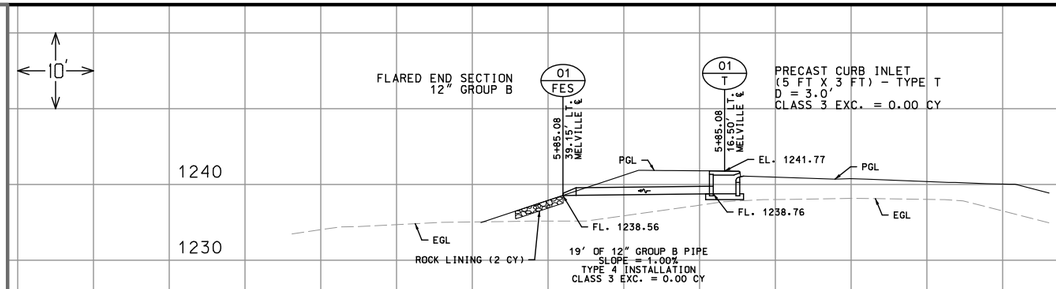
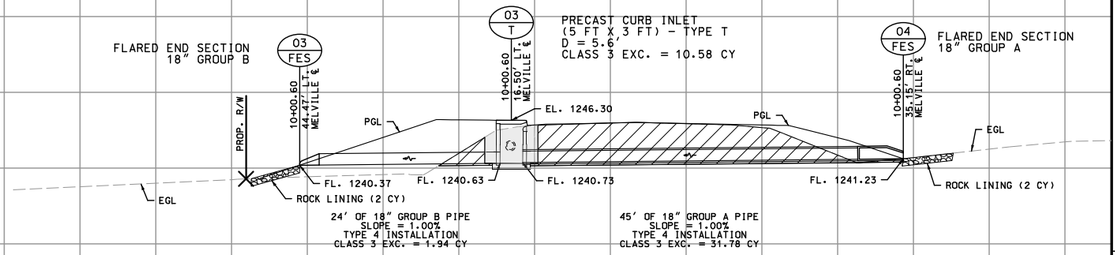
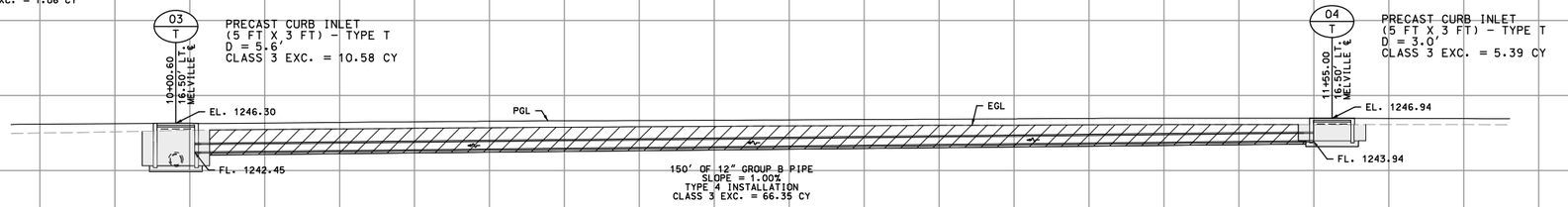
NOTES:

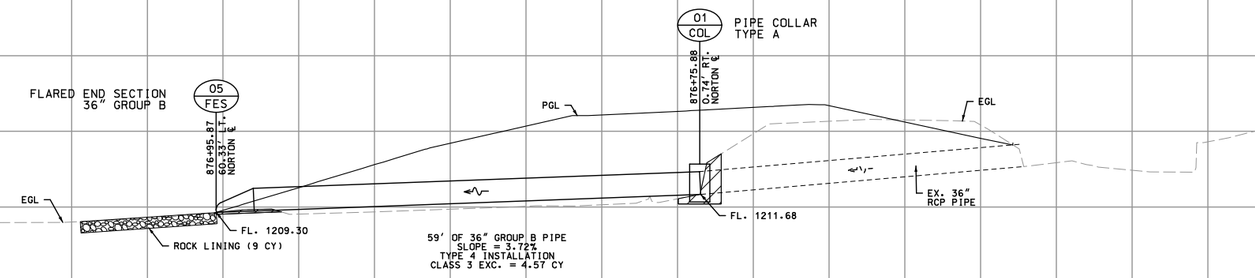
1. PROPOSED STATION, OFFSET AND RIM ELEVATION IS CALLED OUT AT THE CENTER OF STRUCTURES AND AT THE FLOW LINE OF FLARED END SECTIONS.
2. THE SEWER CONTRACTOR IS TO VERIFY ALL EXISTING PIPE SIZES AND INVERTS PRIOR TO CONSTRUCTION. DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER IN THE FIELD.
3. GRANULAR BACKFILL WILL BE PROVIDED PER MODOT STANDARD SPECIFICATIONS. THE COST OF GRANULAR BACKFILL WILL BE CONSIDERED INCIDENTAL TO THE UNIT BID PRICE FOR PIPES.
4. 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.
5. THE SEWER CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COSTS ASSOCIATED WITH THE FIELD VERIFICATION OF THE SEWER GRADE, OR REMOVAL AND REPLACEMENT OF THE SEWER PIPE OR ASSOCIATED APPURTENANCES.
6. CONTRACTOR SHALL EXPOSE ALL UTILITIES PRIOR TO STORM SEWER PIPE INSTALLATION AND VERIFY TOP ELEVATION OF UTILITIES.

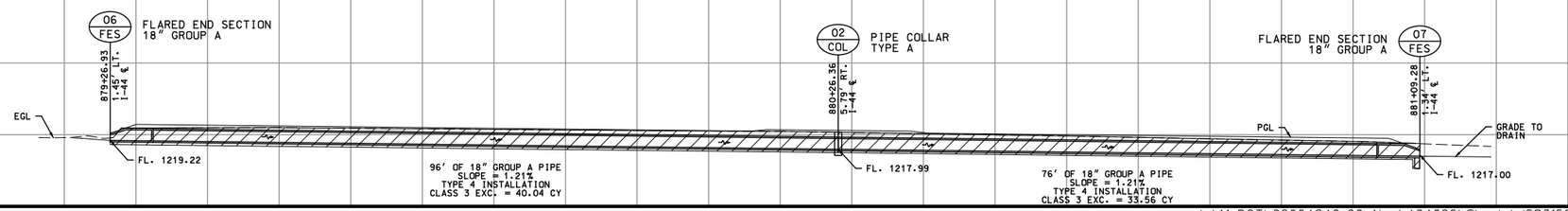












MELVILLE RD./
NORTON RD.

CULVERT SECTIONS
1 OF 1

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000086
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 12/20/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
SW	40

COUNTY: GREENE

JOB NO.: J8S3156

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.:

REV.	DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

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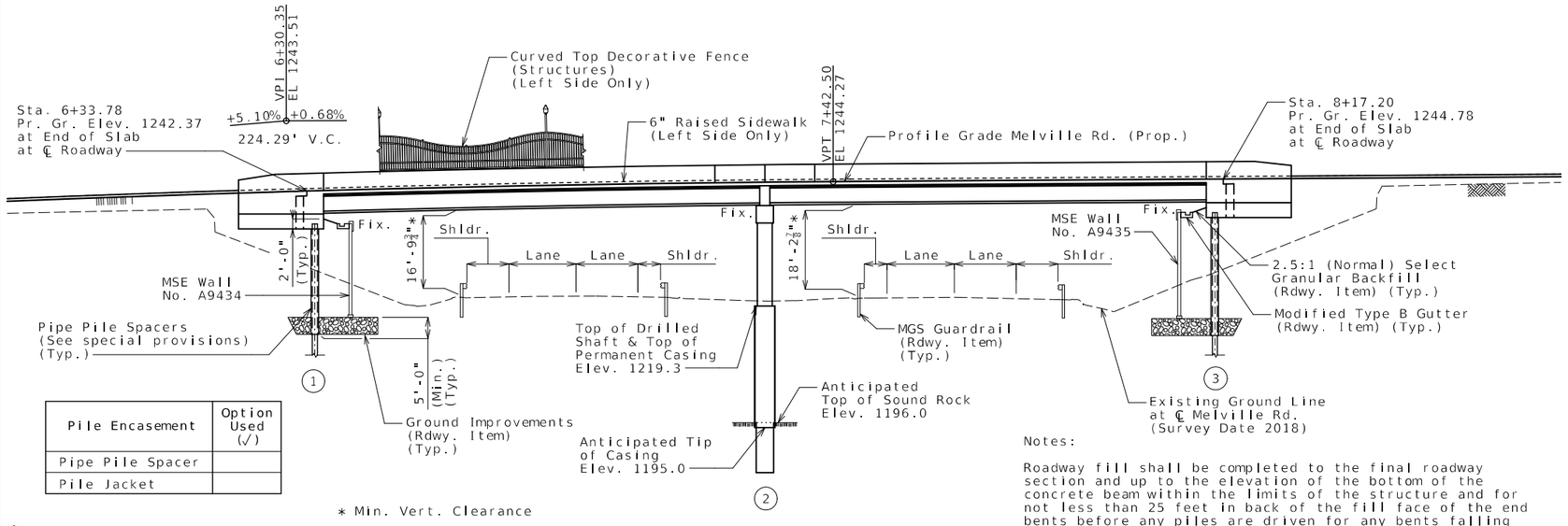
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

SEC/SUR 4 TWP 29N RGE 22W

(90'-90') PRESTRESSED CONCRETE NU-GIRDER SPANS



Pile Encasement	Option Used (✓)
Pipe Pile Spacer	
Pile Jacket	

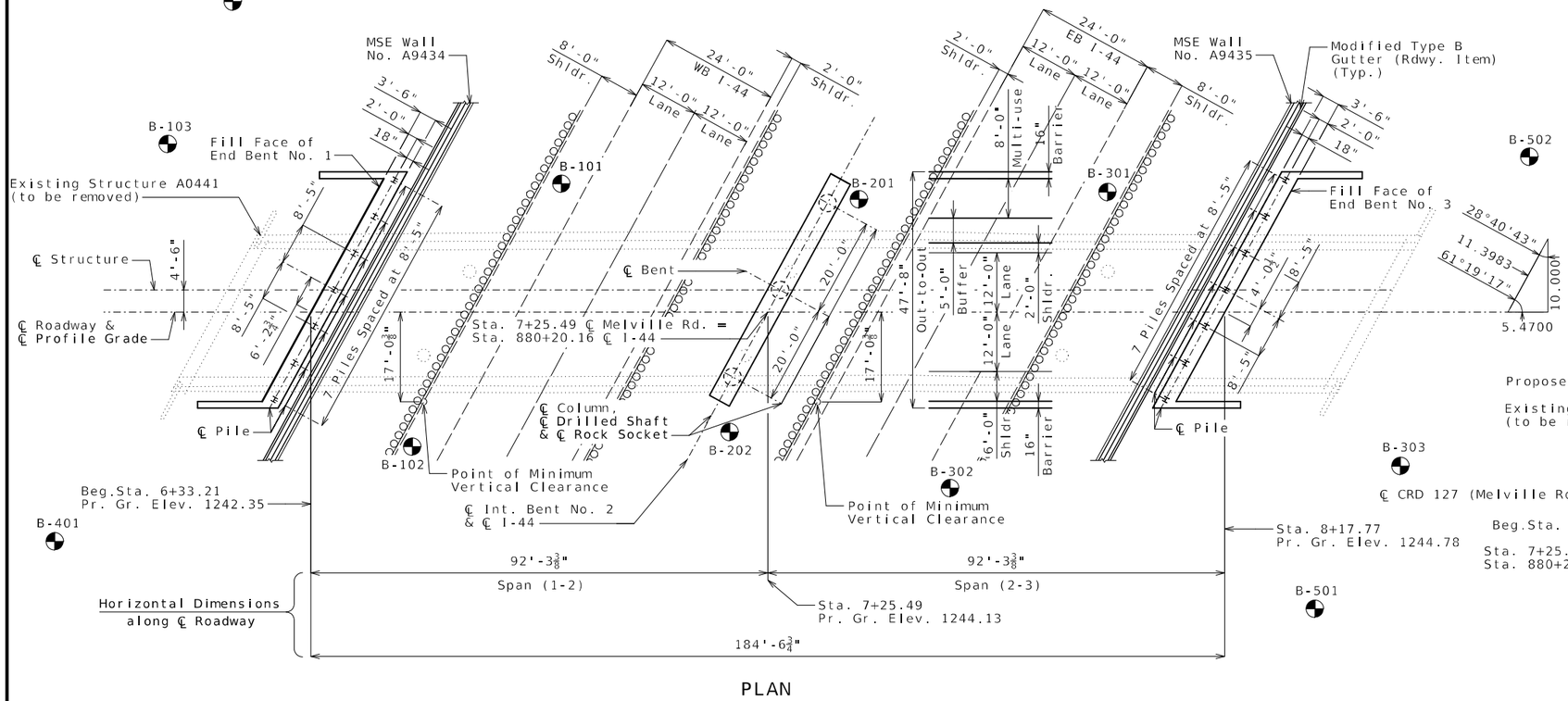
∗ Min. Vert. Clearance

GENERAL ELEVATION

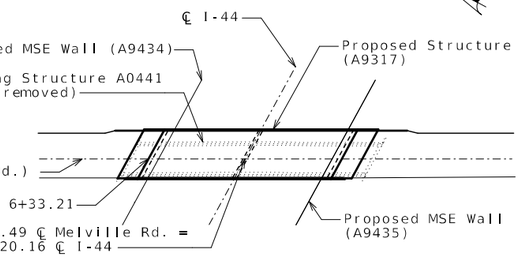
Notes:

Roadway fill shall be completed to the final roadway section and up to the elevation of the bottom of the concrete beam within the limits of the structure and for not less than 25 feet in back of the fill face of the end bents before any piles are driven for any bents falling within the embankment section.

For Ground Improvement details not shown. See roadway plans.



PLAN



LOCATION SKETCH

General Notes:

Longitudinal dimensions are measured horizontal.

For General Notes, Estimated Quantities and Foundation Data, see Sheet No. 2.

All Bents are parallel.

◒ Indicates location of borings.

Notice and Disclaimer Regarding Boring Log Data

The locations of all subsurface borings for this structure are shown on the plan sheet(s) for this structure. The boring data for all locations indicated, as well as any other boring logs or other factual records of subsurface data and investigations performed by the department for the design of the project, are shown on Sheet(s) No. 31 thru 39 and may be included in the Electronic Bridge Deliverables. They will also be available from the Project Contact upon written request. No greater significance or weight should be given to the boring data depicted on the plan sheets than is given to the subsurface data available from the district or elsewhere.

The Commission does not represent or warrant that any such boring data accurately depicts the conditions to be encountered in constructing this project. A contractor assumes all risks it may encounter in basing its bid prices, time or schedule of performance on the boring data depicted here or those available from the district, or on any other documentation not expressly warranted, which the contractor may obtain from the Commission.

CONTROL POINT #514
N: 517039.25
E: 1397801.35
MELVILLE RD.
STA. 3+28.73
395.06' RT.
ELEV. 1222.12
5/8" I.B. W/ ALUMINUM CAP

CONTROL POINT #515
N: 516847.15
E: 1399681.98
I-44
STA. 894+00.43 R1
90.54' RT.
ELEV. 1219.86
5/8" I.B. W/ ALUMINUM CAP

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
01/17/2025 11:38:14 AM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
1/17/2025

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
BR	1

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9317

DATE	DESCRIPTION

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1631 WEST ELFINDALE STREET
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ENGINEERING CORPORATION - 000631

BRIDGE: MELVILLE ROAD OVER ROUTE I-44

CRD 127 (MELVILLE ROAD) OVER ROUTE I-44
ABOUT 1.2 MILES WEST OF ROUTE 13
BEGINNING STATION 6+33.21

Designed Nov. 2024
Detailed Dec. 2024
Checked Dec. 2024

GENERAL PLAN AND ELEVATION

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

L:\MoDOT\22004246-00_New\Deliverable\!!!!2025 0120 J8S3156 Bridge Final PS&E\A9317 - Melville over I-44_Bridge\Plan Sheet DGNs\B_A9317_001_J8S3156_General_Plan_and_Elevation.dgn 10:13:47 AM 1/17/2025

General Notes:

Design Specifications:

2020 AASHTO LRFD Bridge Design Specifications (9th Ed.)
Seismic Design Category = A
Design earthquake response spectral acceleration coefficient at 1.0 second period, S_{D1} = 0.103
Acceleration Coefficient (effective peak ground acceleration coefficient), A_S = 0.088

Design Loading:

Vehicular = HL-93
Future Wearing Surface = 35 lb/sf
Earth = 120 lb/cf
Equivalent Fluid Pressure = 45 lb/cf (Min.)
Superstructure: Simply-Supported, Non-composite for dead load.
Continuous Composite for live load.

Design Unit Stresses:

Class B Concrete (Substructure)	f'c = 3,000 psi
Class B-2 Concrete (Drilled Shaft and Rock Sockets)	f'c = 4,000 psi
Class B-2 Concrete (Superstructure, except Prestressed NU-Girders and Barrier)	f'c = 4,000 psi
Class B-1 Concrete (Barrier)	f'c = 4,000 psi
Reinforcing Steel (ASTM A615 Grade 60)	fy = 60,000 psi
Structural Steel HP Pile (ASTM A709 Grade 50)	fy = 50,000 psi

For prestressed panel stresses, see Sheet No. 15.

For prestressed girder stresses, see Sheets No. 12 & 13.

Neoprene Pads:

Neoprene bearing pads shall be 60 durometer and shall be in accordance with Sec 716.

Joint Filler:

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

Reinforcing Steel:

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

Minimum clearance between galvanized piles and uncoated (plain) reinforcing steel including bar supports shall be 1 1/2". Nylon, PVC, or polyethylene spacers shall be used to maintain clearance. Nylon cable ties shall be used to bind the spacers to the reinforcement.

Traffic Handling:

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

Vertical clearance for Interstate 44 traffic during construction shall be 15'-6" minimum over a 24'-0" wide horizontal opening of the roadway in each direction.

Miscellaneous:

MoDOT Construction personnel will indicate the type of joint filler option used under the precast panels for this structure:

☐ Constant Joint Filler
☐ Variable Joint Filler

Estimated Quantities for Slab on Concrete NU-Girder

Item		Total
Class B-2 Concrete	cu. yard	295.1
Reinforcing Steel (Epoxy Coated)	pound	75,820

The table of Estimated Quantities for Slab on Concrete NU-Girder represents the quantities used by the State in preparing the cost estimate for concrete slabs. The area of the concrete slab will be measured to the nearest square yard longitudinally from end of slab to end of slab and transversely from out to out of bridge slab (or with the horizontal dimensions as shown on the plan of slab). Payment for prestressed panels, conventional forms, all concrete and epoxy coated reinforcing steel will be considered completely covered by the contract unit price for the slab. Variations may be encountered in the estimated quantities but the variations cannot be used for an adjustment in the contract unit price.

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

The Estimated Quantities for Slab on Concrete NU-Girder are based on skewed precast prestressed end panels.

Class B-2 Concrete quantity is based on minimum top flange thickness and minimum joint material thickness.

The prestressed panel quantities are not included in the table of Estimated Quantities for Slab on Concrete NU-Girder.

Estimated Quantities

Item		Substr.	Superstr.	Total
Removal of Miscellaneous ACM (Non-Friable)	sq. foot	-	-	21
Removal of Bridges	lump sum	-	-	1
Bridge Approach Slab (Minor)	sq. yard	-	204	204
Curved Top Decorative Fence (Structures)	linear foot	-	208	208
Drilled Shafts (4 ft. 0 in. Dia.)	linear foot	69.9	-	69.9
Rock Sockets (3 ft. 6 in. Dia.)	linear foot	33.0	-	33.0
Video Camera Inspection	each	3	-	3
Foundation Inspection Holes	linear foot	63.0	-	63.0
Sonic Logging Testing	each	3	-	3
Galvanized Structural Steel Piles (12 inch)	linear foot	525	-	525
Pre-Bore for Piling	linear foot	252	-	252
Pile Point Reinforcement	each	14	-	14
Class B Concrete (Substructure)	cu. yard	110.6	-	110.6
Aesthetic Concrete Stain	lump sum	-	1	1
Type D Barrier	linear foot	-	435	435
Slab on Concrete NU-Girder	sq. yard	-	972	972
Sidewalk (Bridges)	sq. foot	-	2,905	2,905
Stamped Concrete Pattern	sq. foot	-	1,006	1,006
NU 43, Prestressed Concrete NU-Girder	linear foot	-	903	903
Reinforcing Steel (Bridges)	pound	5,170	-	5,170
Conduit System on Structure	lump sum	-	1	1
Reinforcing Steel (Epoxy Coated)	pound	27,420	-	27,420
Vertical Drain at End Bents	each	2	-	2
Plain Neoprene Bearing Pad	each	-	5	5
Laminated Neoprene Bearing Pad (Tapered)	each	-	15	15
Pipe Pile Spacers	each	14	-	14

All concrete above the construction joint in the end bents is included in the Estimated Quantities for Slab on Concrete NU-Girder.

All reinforcement in the end bents is included in the Estimated Quantities for Slab on Concrete NU-Girder.

All reinforcement in the intermediate bent concrete diaphragms except reinforcement embedded in the beam cap is included in the Estimated Quantities for Slab on Concrete NU-Girder.

All concrete above the intermediate beam cap is included in the Estimated Quantities for Slab on Concrete NU-Girder.

All concrete and reinforcing steel in sidewalk will be considered completely covered by the contract unit price for Sidewalk (Bridges).

Foundation Data

Type	Design Data		Bent 1	Bent 2	Bent 3
Load Bearing Pile	Pile Type and Size		HP 12x53	-	HP 12x53
	Number	ea	7	-	7
	Approximate Length Per Each	ft	41	-	34
	Pile Point Reinforcement	ea	All	-	All
	Min. Galvanized Penetration (Elev.)	ft	Full length	-	Full length
	Min. Tip Penetration (Elev.)	ft	1207	-	1205
	Pile Driving Verification Method		*	-	*
	Resistance Factor		*	-	*
	Minimum Nominal Axial Compressive Resistance	kip	732	-	731
Rock Socket	Number	ea	-	3	-
	Layer 1 Foundation Material		-	Strong rock	-
	Layer 1 Elevation Range	ft	-	1193-1185	-
	Layer 1 Minimum Nominal Axial Compressive Resistance (Side Resistance)	ksf	-	14.9	-
	Minimum Nominal Axial Compressive Resistance (Tip Resistance)	ksf	*	400	*

Notes:

Load Bearing Pile

Minimum Nominal Axial Compressive Resistance = $\frac{\text{Maximum Factored Loads}}{\text{Resistance Factor (0.35)}}$

Rock Socket (Drilled Shaft)

Minimum Nominal Axial Compressive Resistance = $\frac{\text{Maximum Factored Loads}}{\text{Resistance Factors}}$
(Side Resistance + Tip Resistance)

* Prebore for piles at Bent No. 1 to bear on competent rock.

Prebore for piles at Bent No. 3 to elevation 1205.

The prebore hole shall be cleared to meet the requirements of Sec 701.4.10.2. The piles shall be inserted into the prebore holes and are to be seated on bedrock and not rubble in the bottom of the hole. Once the piles are seated, the minimum nominal compressive resistance shall be considered verified. Verification of the pile driving is not required. Backfill the prebore hole with sand or other approved material.

All piles shall be galvanized down to the minimum galvanized penetration (elevation).

Pile point reinforcement need not be galvanized. Shop drawings will not be required for pile point reinforcement.

The contractor shall make every effort to achieve minimum galvanized penetration (elevation) shown on the plans for all piles. Deviation in penetration less than 5 feet minimum will be considered acceptable provided the contractor makes the necessary corrections to ensure the minimum penetration is achieved in subsequent piles.

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
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Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED 1/17/2025
ROUTE CRD 127 | STATE MO
DISTRICT BR | SHEET NO. 2
COUNTY GREENE
JOB NO. J8S3156
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9317

DESCRIPTION | DATE

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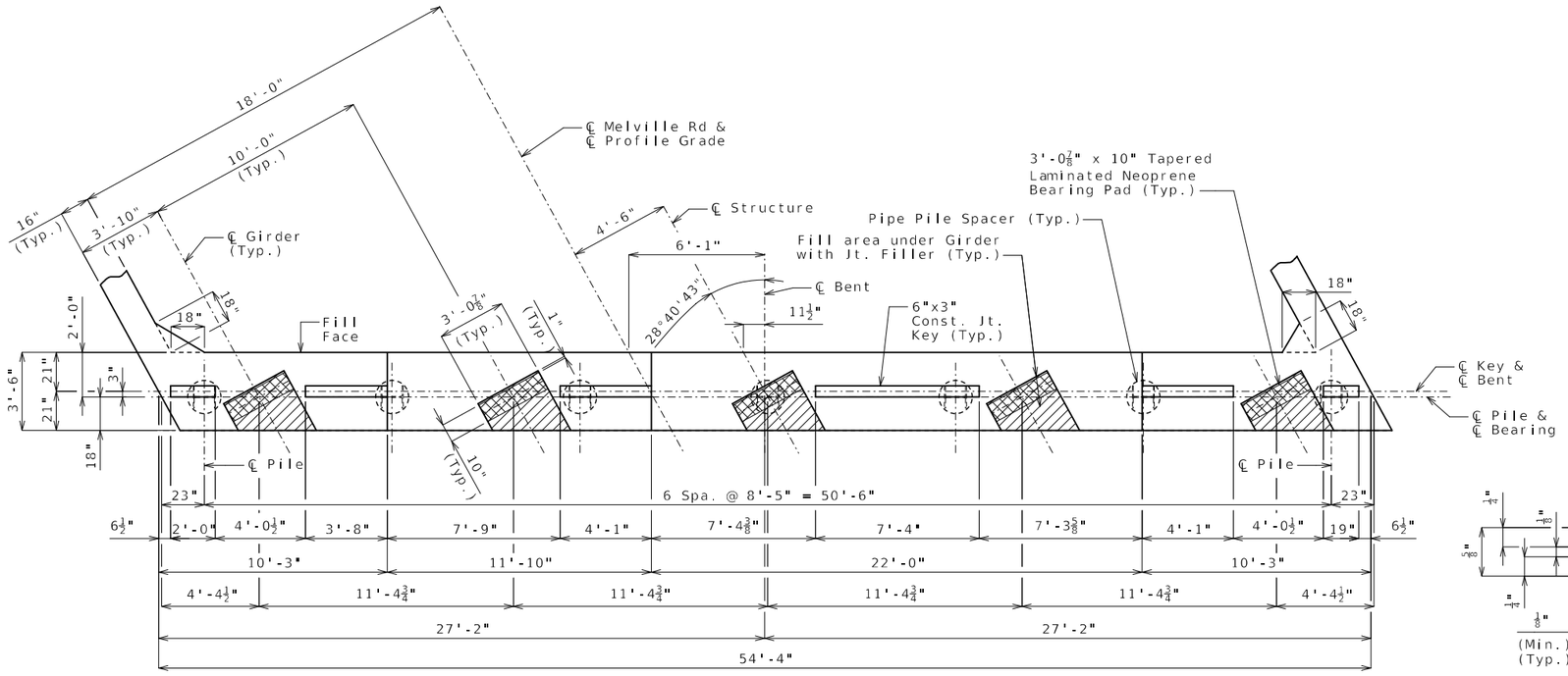
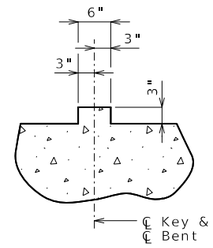
ESTIMATED QUANTITIES AND GENERAL NOTES

Detailed Dec 2024
Checked Dec 2024

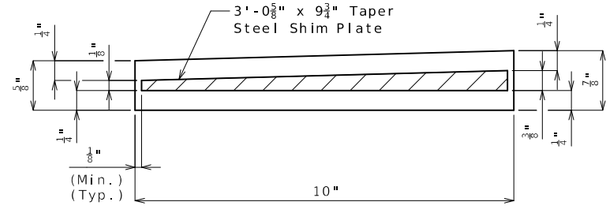
Note: This drawing is not to scale. Follow dimensions.



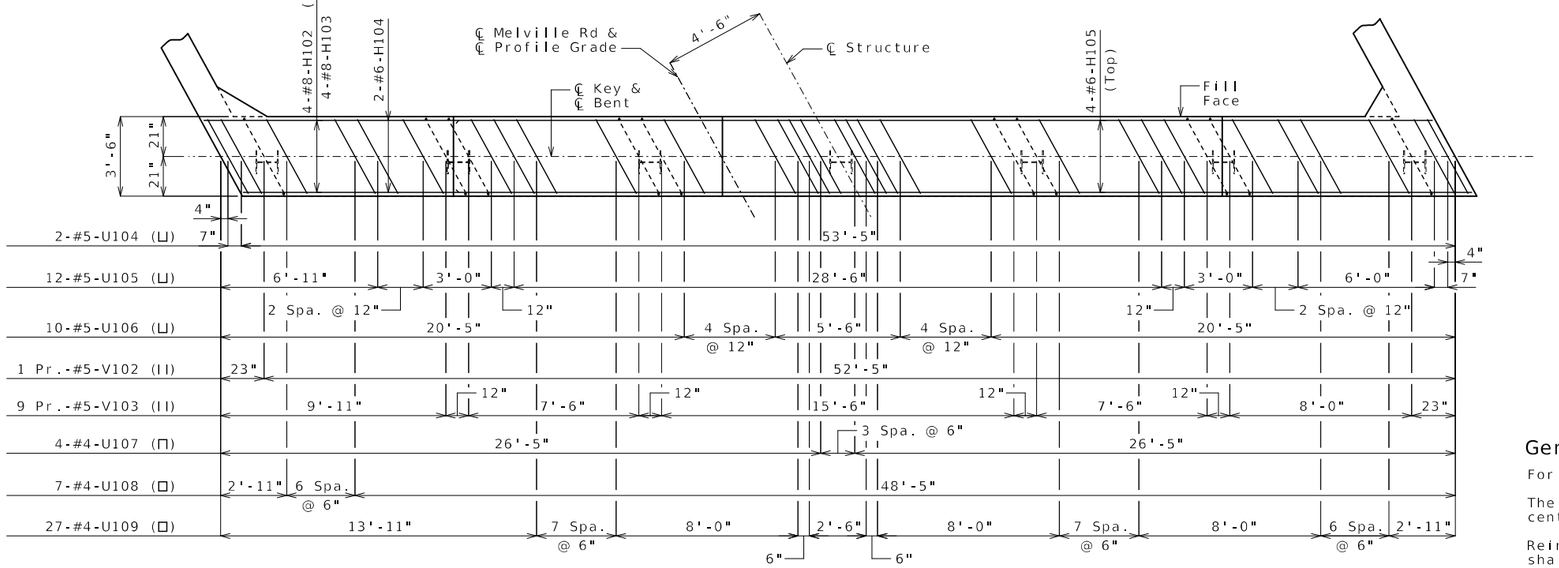
PLAN OF BEAM



SECTION THRU KEY

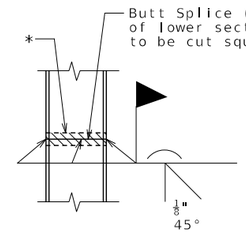


DETAIL OF LAMINATED NEOPRENE BEARING PADS (TAPERED) AT END BENT NO. 1



PLAN OF BEAM SHOWING REINFORCEMENT

Keys not shown for clarity.



STEEL PILE SPLICE

(If required)

* Galvanizing material shall be omitted or removed one inch clear of weld locations in accordance with Sec 702.

General Notes:

For details of End Bent No. 1 not shown, see Sheets No. 4 & 5.

The U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles, U bars shall clear piles by at least 1 1/2".

DETAILS OF END BENT NO. 1

Detailed Dec 2024
Checked Dec 2024

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

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ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
BR	3

COUNTY: GREENE
JOB NO.: J8S3156
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9317

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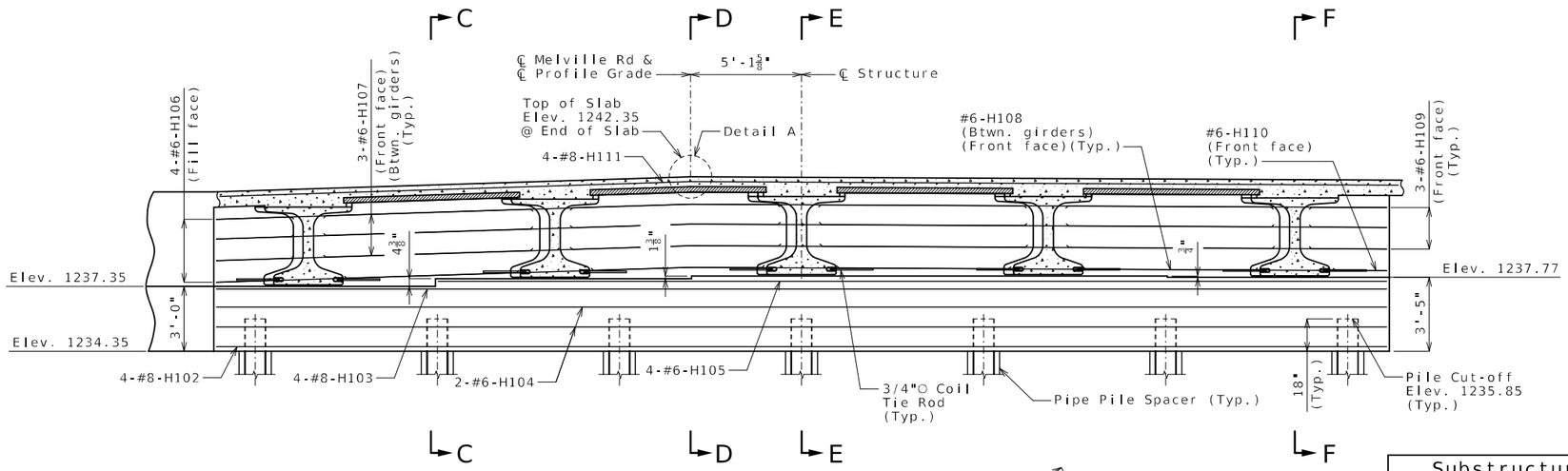


SECTION NEAR END BENT

Key not shown for clarity.

General Notes:

For details of End Bent No. 1 not shown, see Sheets No. 3 & 5.

For Sections C-C, D-D, E-E, & F-F, see Sheet No. 5.

For Elevations A-A & B-B, see Sheet No. 5.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

For location of Coil Tie Rods and #5-H112 (Strand Tie Bar), see Sheets No. 12 & 13.

For details of Vertical Drain at End Bents, see Sheet No. 6.

The #6-F103 and #6-F104 bars shall be bent in the field to clear girders.

The U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2-inch minimum clearance to fill face of end bent.

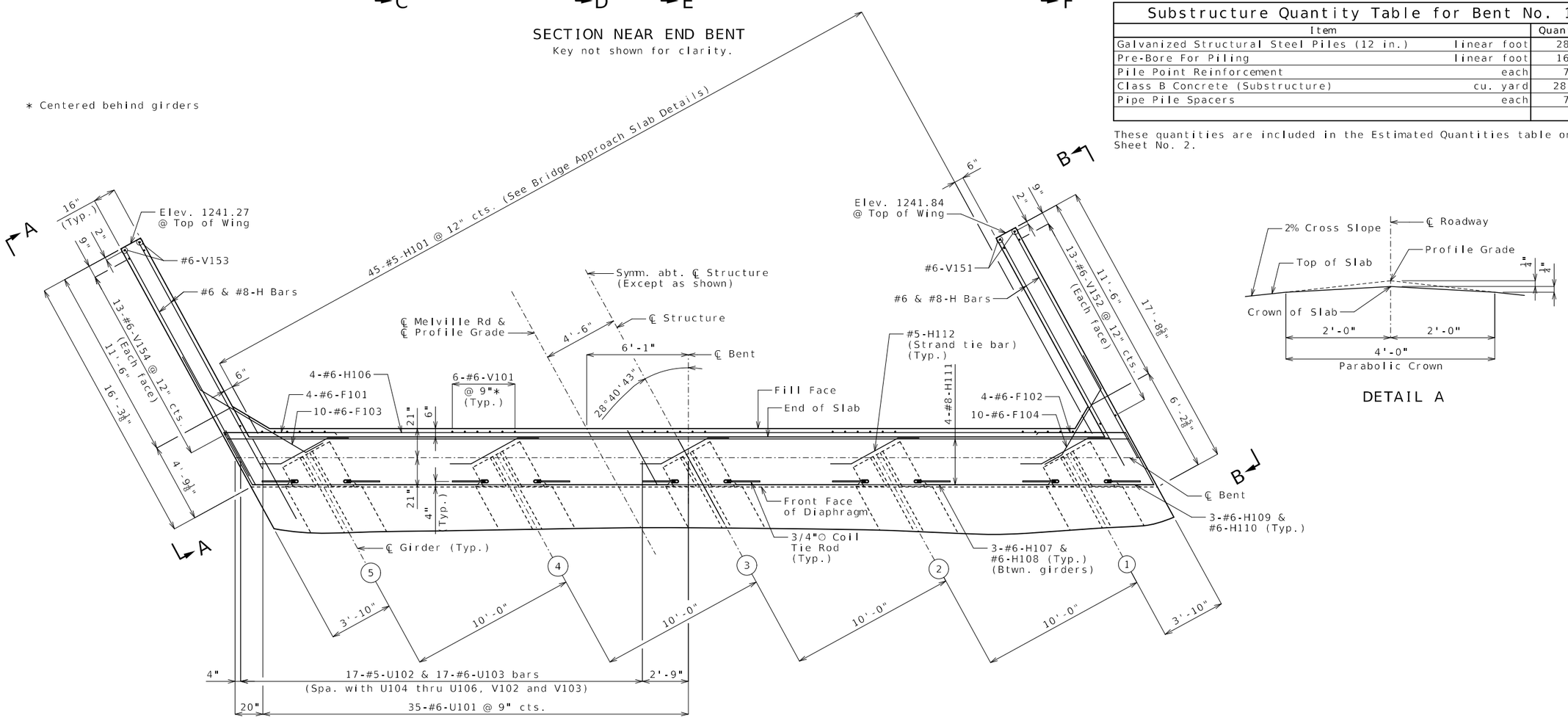
For details of Bridge Approach Slab, see Sheet No. 26.

Substructure Quantity Table for Bent No. 1

Item		Quantity
Galvanized Structural Steel Piles (12 in.)	linear foot	287
Pre-Bore For Piling	linear foot	168
Pile Point Reinforcement	each	7
Class B Concrete (Substructure)	cu. yard	28.1
Pipe Pile Spacers	each	7

These quantities are included in the Estimated Quantities table on Sheet No. 2.

∗ Centered behind girders



PART PLAN

DETAIL A

DETAILS OF END BENT NO. 1

Sheet No. 4 of 39

Detailed Dec 2024
Checked Dec 2024

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MO PE-2006002824

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ROUTE: CRD 127 | STATE: MO
DISTRICT: BR | SHEET NO.: 4
COUNTY: GREENE
JOB NO.: J8S3156
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9317

DESCRIPTION	DATE

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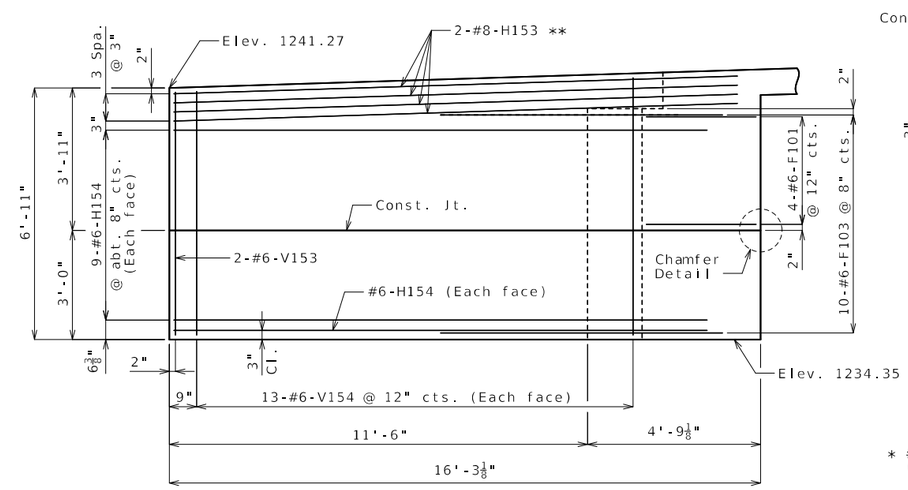
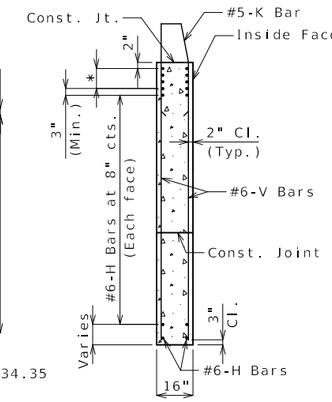


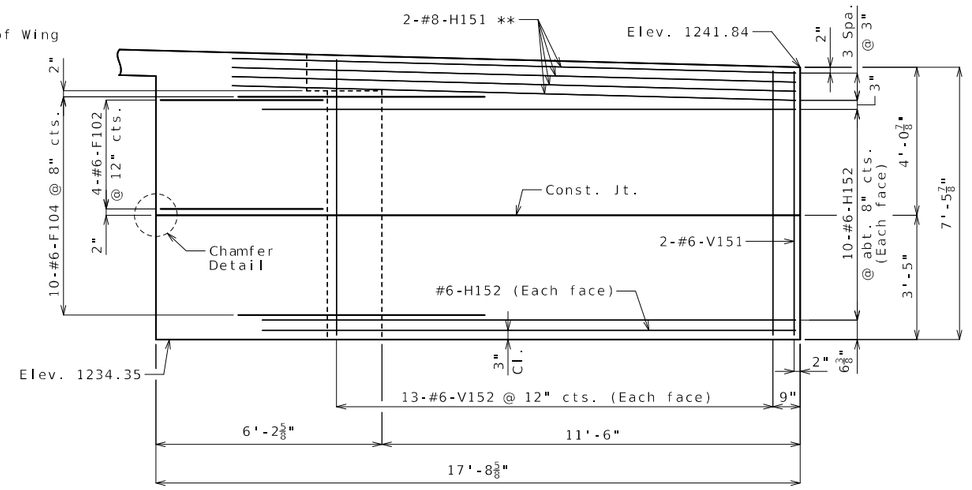
ELEVATION A-A



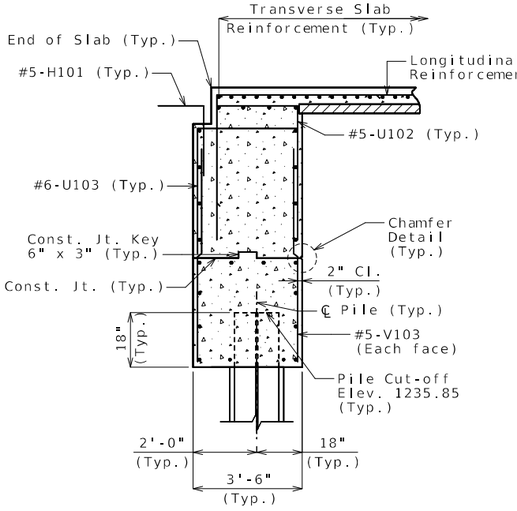
TYPICAL SECTION THRU WING

* #8-H Bars at 3" cts. (Each face)(Place with grade)

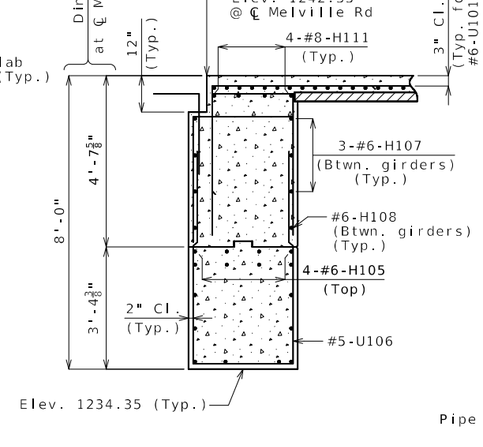
** (Place with grade)



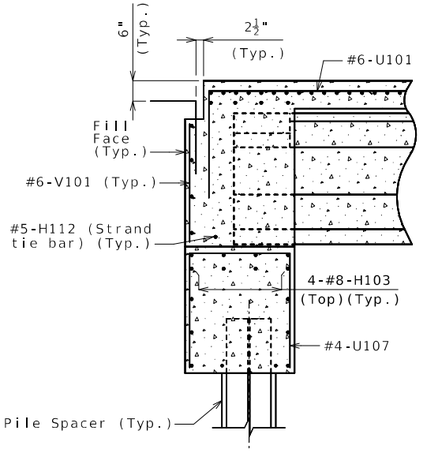
ELEVATION B-B



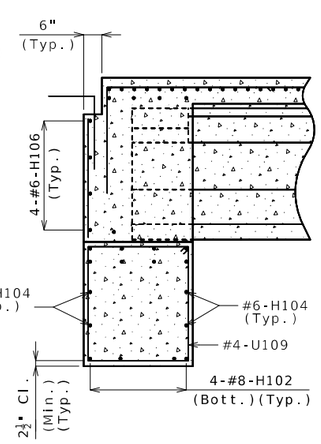
SECTION C-C



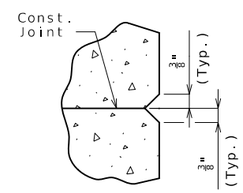
SECTION D-D



SECTION E-E



SECTION F-F



CHAMFER DETAIL

General Notes:

For details of End Bent No. 1 not shown, see Sheets No. 3 & 4.

For details and reinforcement of the Type D Barrier, see Sheets No. 20 thru 23.

For location of Sections C-C, D-D, E-E, & F-F, see Sheet No. 4.

For location of Elevations A-A & B-B, see Sheet No. 4.

For Conduit Details, see Sheet No. 24.

DETAILS OF END BENT NO. 1

Detailed Dec 2024
Checked Dec 2024

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STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
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Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED: 1/17/2025
ROUTE: CRD 127 | STATE: MO
DISTRICT: BR | SHEET NO.: 5
COUNTY: GREENE
JOB NO.: J8S3156
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9317

DESCRIPTION | DATE

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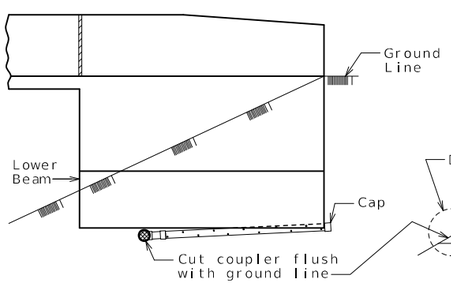
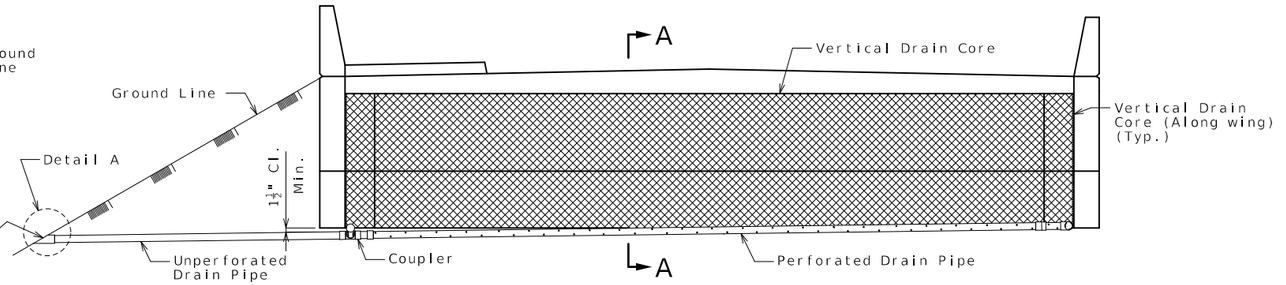
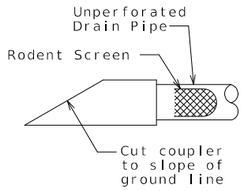


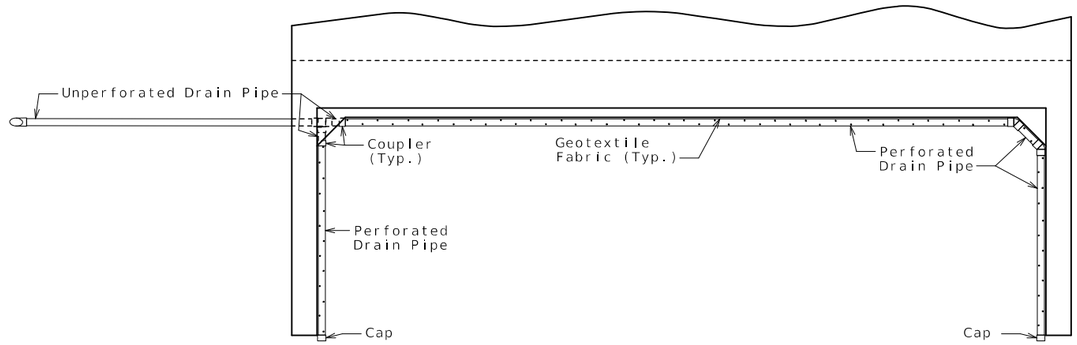
ELEVATION OF WING



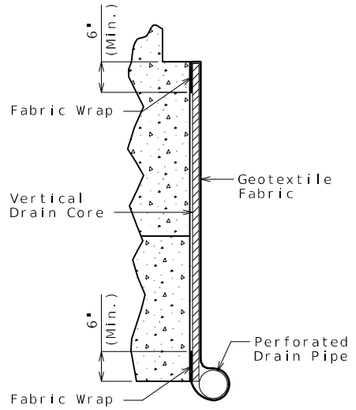
ELEVATION OF END BENT



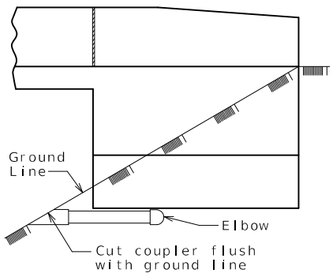
DETAIL A



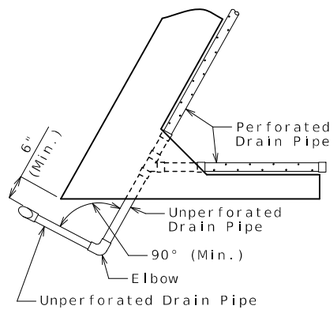
PLAN OF END BENT



PART SECTION A-A
(Section thru wing similar)



ELEVATION OF WING



PART PLAN

OPTIONAL TURNED DRAIN
(Use only when straight drain is not practical.)

Note: Tie unperforated Drain Pipe into Type B Gutter located behind the MSE walls A9434 and A9435.

General Notes:

All drain pipe shall be sloped 1 to 2 percent.

Drain pipe may be either 6-inch diameter corrugated metallic-coated steel pipe underdrain, 4-inch diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4-inch diameter corrugated polyethylene (PE) drain pipe.

Drain pipe shall be placed at fill face of end bent and inside face of wings. The pipe shall slope to lowest grade of ground line, also missing the lower beam of end bent by a minimum of 1 1/2 inches.

Perforated pipe shall be placed at fill face side and inside face of wings at the bottom of end bent and plain pipe shall be used where the vertical drain ends to the exit at ground line.

VERTICAL DRAIN AT END BENTS

(Squared end bent shown, skewed end bent similar)

Detailed Dec 2024
Checked Dec 2024

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

DATE PREPARED
1/17/2025

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
BR	6

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9317

DESCRIPTION	DATE

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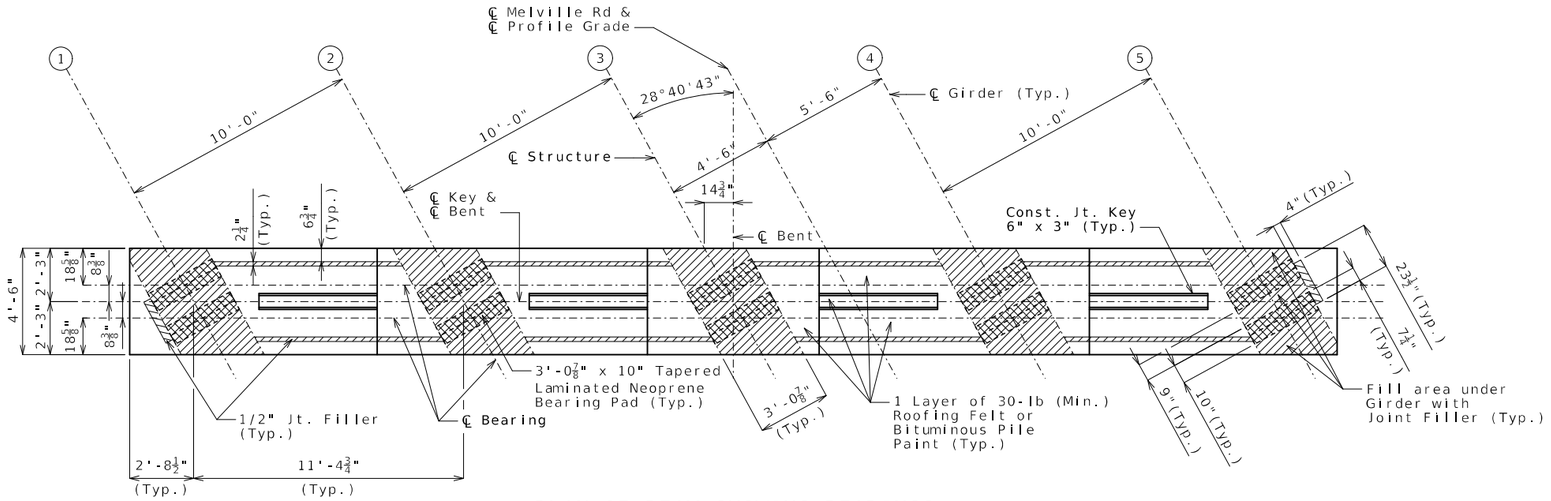
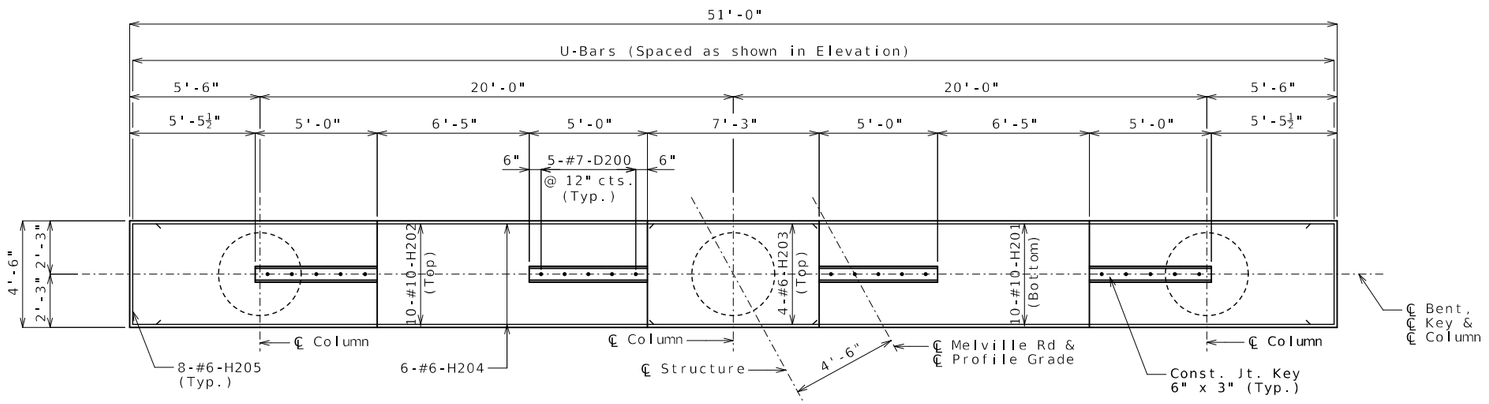


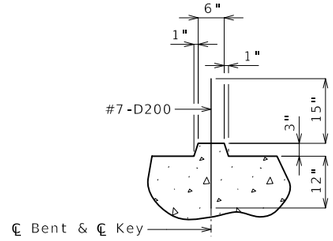
PLAN OF BEAM SHOWING BEARINGS

Note: Columns, drilled shafts and rock sockets not shown for clarity.

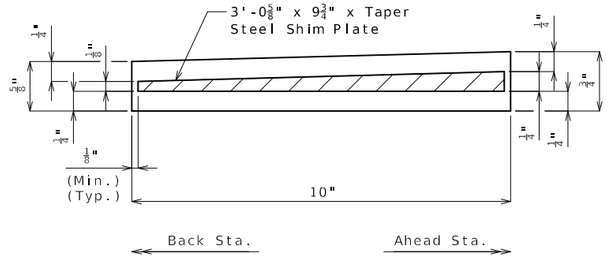


PLAN OF BEAM SHOWING REINFORCEMENT

Note: Drilled shafts and rock sockets not shown for clarity.



SECTION THRU KEY



DETAIL OF LAMINATED NEOPRENE BEARING PADS (TAPERED) AT INT. BENT NO. 2 (SPANS 1 AND 2)

Substructure Quantity Table for Bent No. 2

	Item		Quantity
	Drilled Shafts (4 ft. 0 in. Diameter)	linear foot	69.9
	Rock Sockets (3 ft. 6 in. Diameter)	linear foot	33.0
	Video Camera Inspection	each	3
*	Foundation Inspection Holes	linear foot	63.0
	Sonic Logging Testing	each	3
	Class B Concrete (Substructure)	cu. yard	55.9
	Reinforcing Steel (Bridges)	pound	5,170
	Reinforcing Steel (Epoxy Coated)	pound	27,420

Notes:

These quantities are included in the Estimated Quantities table on Sheet No. 2.

All reinforcement in drilled shafts and rock sockets is included in the substructure quantities

* Foundation Inspection Holes shall be drilled at least 15 days prior to drilled shaft construction in accordance with Sec 701.4.11.

General Notes:

For details of Intermediate Bent No. 2 not shown, see Sheet No. 8.

For steps 2 inches or more, use 2 1/4 x 1/2 inch joint filler up vertical face.

DETAILS OF INTERMEDIATE BENT NO. 2

Detailed Dec 2024
Checked Dec 2024

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

DATE PREPARED
1/17/2025

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
BR	7

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9317

DATE	DESCRIPTION

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

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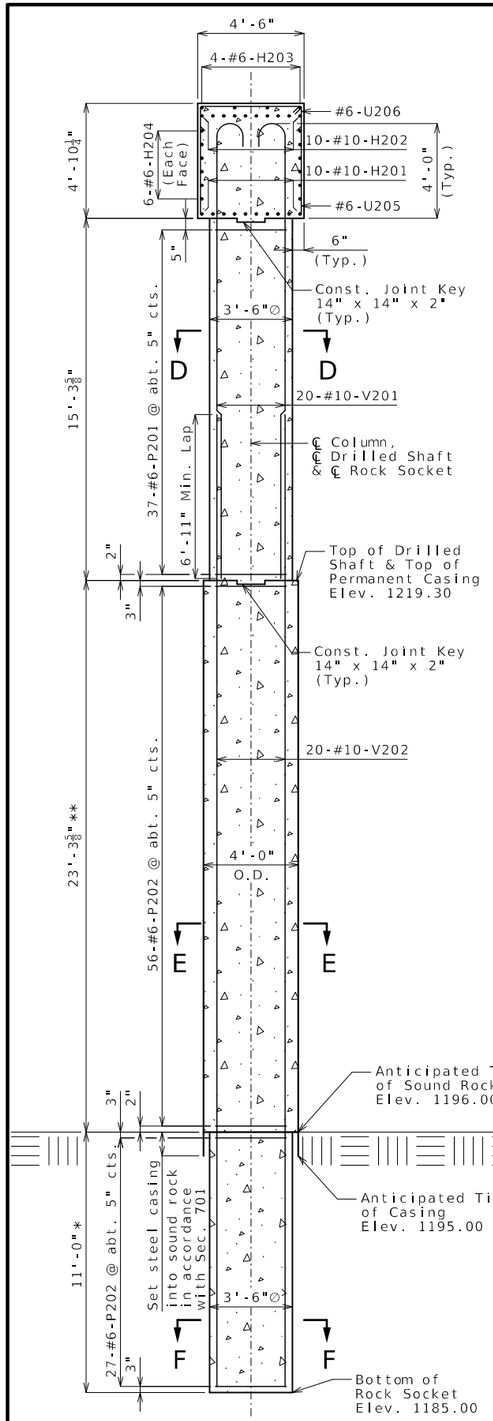
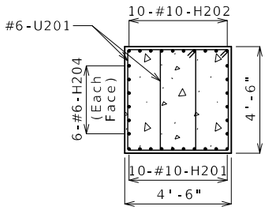
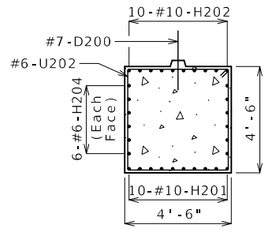


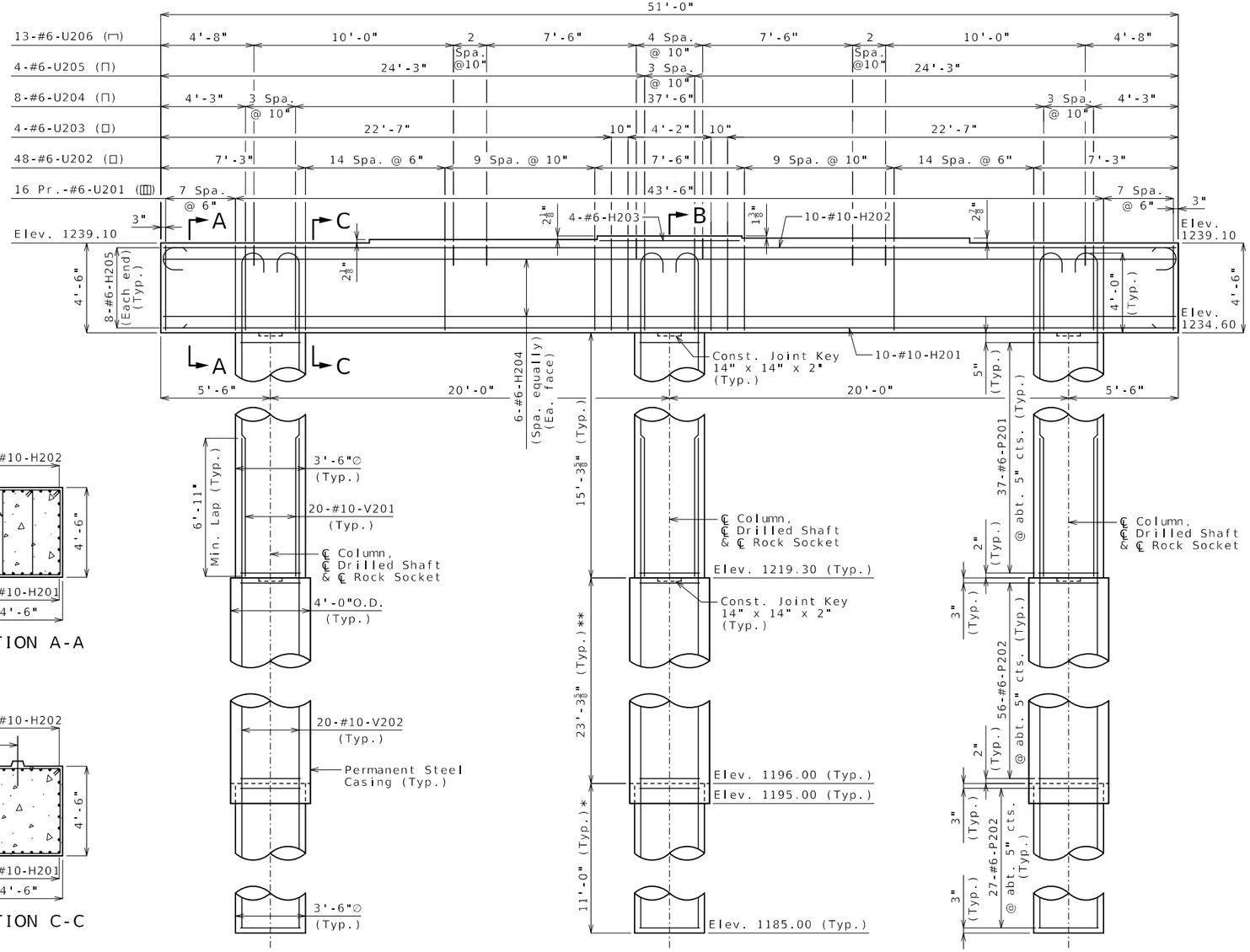
SECTION B-B



SECTION A-A

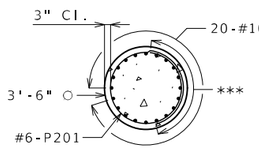


SECTION C-C

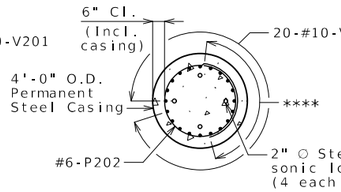


B

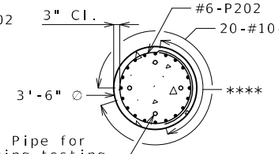
ELEVATION



SECTION D-D



SECTION E-E



SECTION F-F

∗ Rock Socket (3'-6" diameter)
∗∗ Drilled Shaft (4'-0" diameter)
∗∗∗ Minimum Lap 4'-3" (Stagger adjacent bar splices)
∗∗∗∗ Minimum Lap 3'-1" (Stagger adjacent bar splices)

Detailed Dec 2024
Checked Dec 2024

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

DETAILS OF INTERMEDIATE BENT NO. 2

Sheet No. 8 of 39

General Notes:

Thickness of permanent steel casing shall be in accordance with Sec 701.

An additional 4 feet has been added to V202 lengths and an additional 30-#6-P202 bars have been added in the quantities, if required, for possible change in drilled shaft or rock socket length. The additional V-bar length shall be cut off or included in the reinforcement lap if not required. The additional P bars shall be spaced similarly to that shown in elevation, if required.

Sonic logging testing shall be performed on all drilled shafts and rock sockets.

At the contractor's option, the hooks of vertical bars embedded in the beam cap may be oriented inward or outward.

The cost of any required excavation to the top of the drilled shafts will be considered completely covered by the contract unit price for other items.

For steps 2 inches or more, use 2 1/4 x 1/2 inch joint filler up vertical face.

Key not shown in elevation for clarity.

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
01/17/2025 11:39:05 AM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
1/17/2025

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
BR	8

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9317

DESCRIPTION	DATE

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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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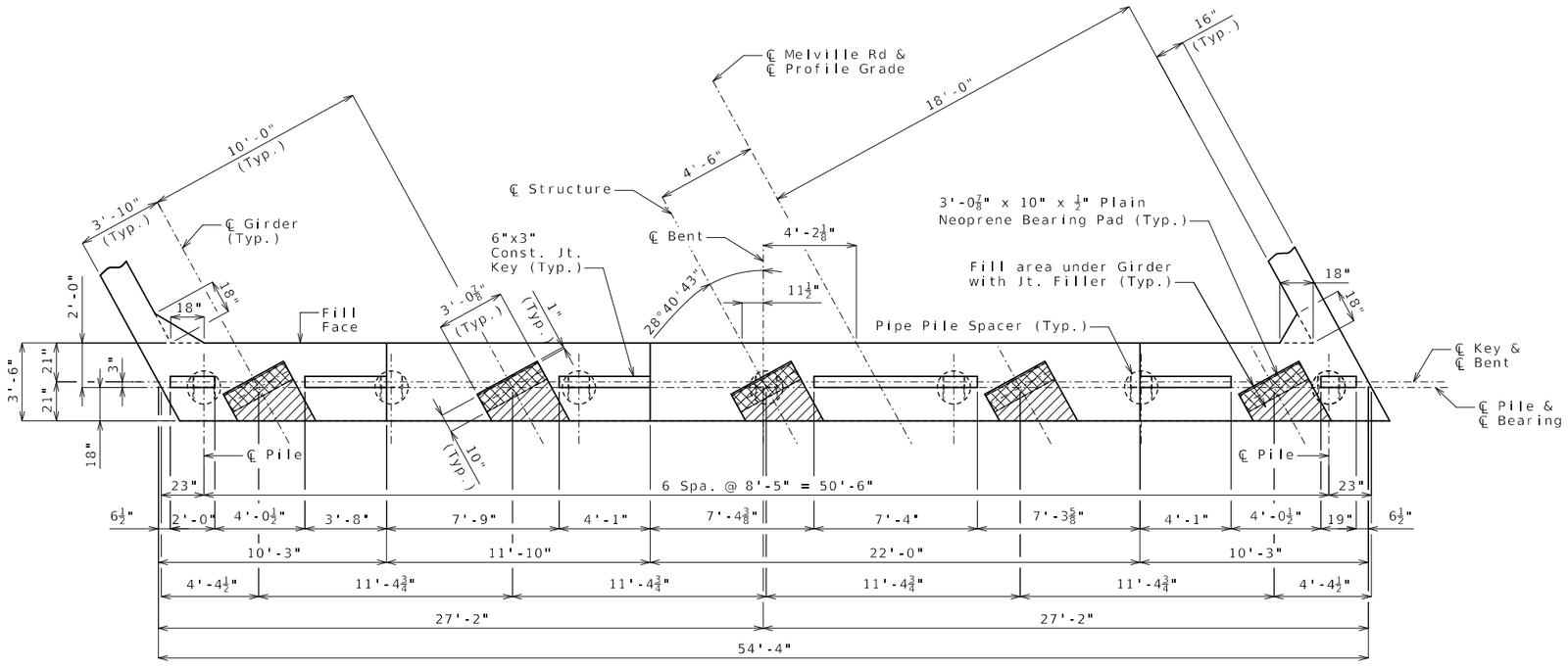
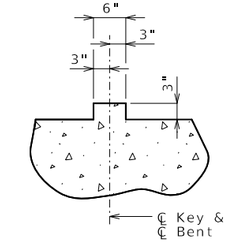
L:\MoDOT\22004246-00_New\Deliverable\!!!!2025 0120 J8S3156 Bridge Final PS&E\A9317 - Melville over I-44_Bridge\Plan Sheet DGNs\B_A9317_008_J8S3156_Intermediate_Bent_2_Details.dgn 10:14:27 AM 1/17/2025



PLAN OF BEAM



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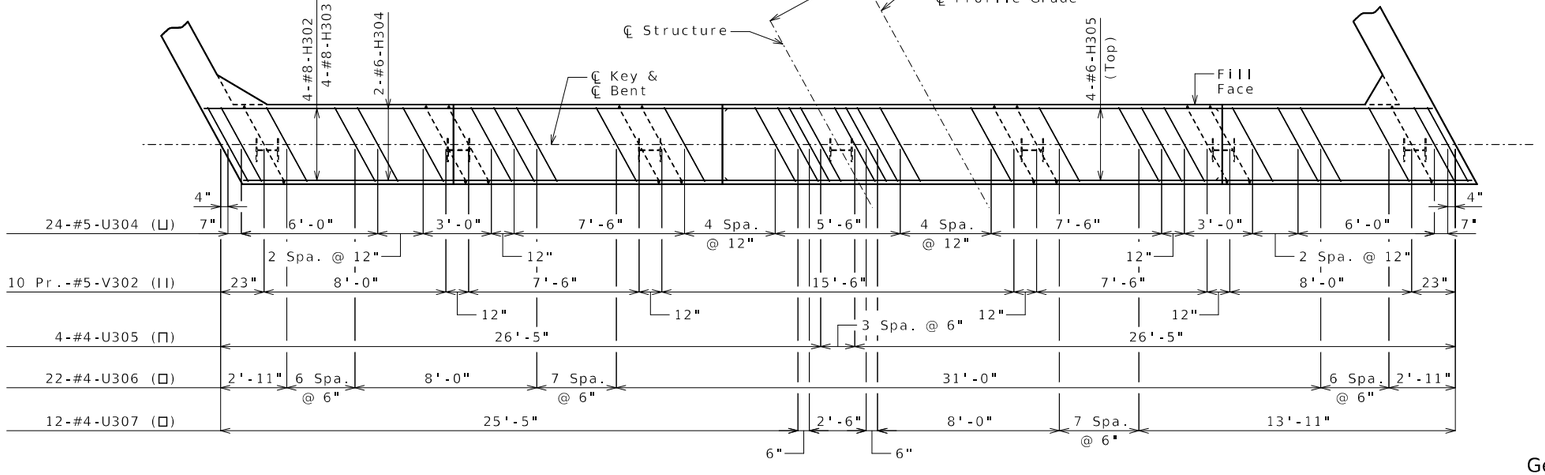
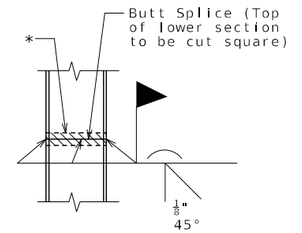


PLAN OF BEAM SHOWING REINFORCEMENT

Keys not shown for clarity.



STEEL PILE SPLICE

(If required)

* Galvanizing material shall be omitted or removed one inch clear of weld locations in accordance with Sec 702.

General Notes:

For details of End Bent No. 3 not shown, see Sheets No. 10 & 11.

The U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles, U bars shall clear piles by at least 1 1/2".

DETAILS OF END BENT NO. 3

Detailed Dec 2024
Checked Dec 2024

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

L:\MoDOT\22004246-00_New\Deliverable\!!!!2025 0120 J8S3156 Bridge Final PS&E\A9317 - Melville over I-44_Bridge\Plan Sheet DGNs\B_A9317_009_J8S3156_End_Bent_3_Details.dgn 10:14:32 AM 1/17/2025

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
01/17/2025 11:39:10 AM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
1/17/2025

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
BR	9

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9317

DATE	DESCRIPTION

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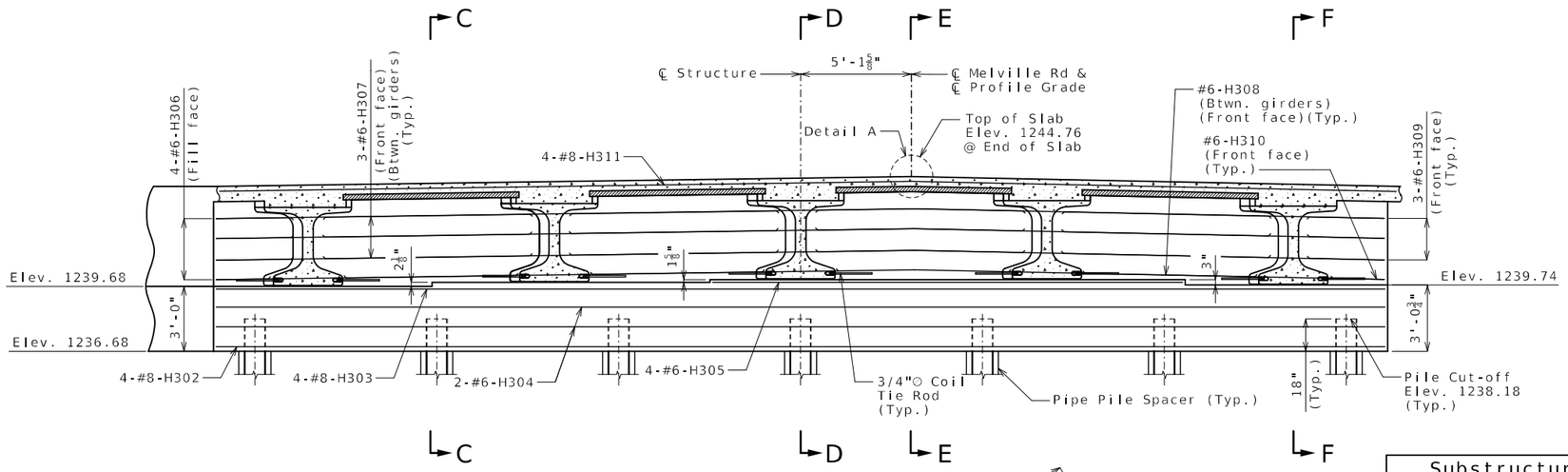
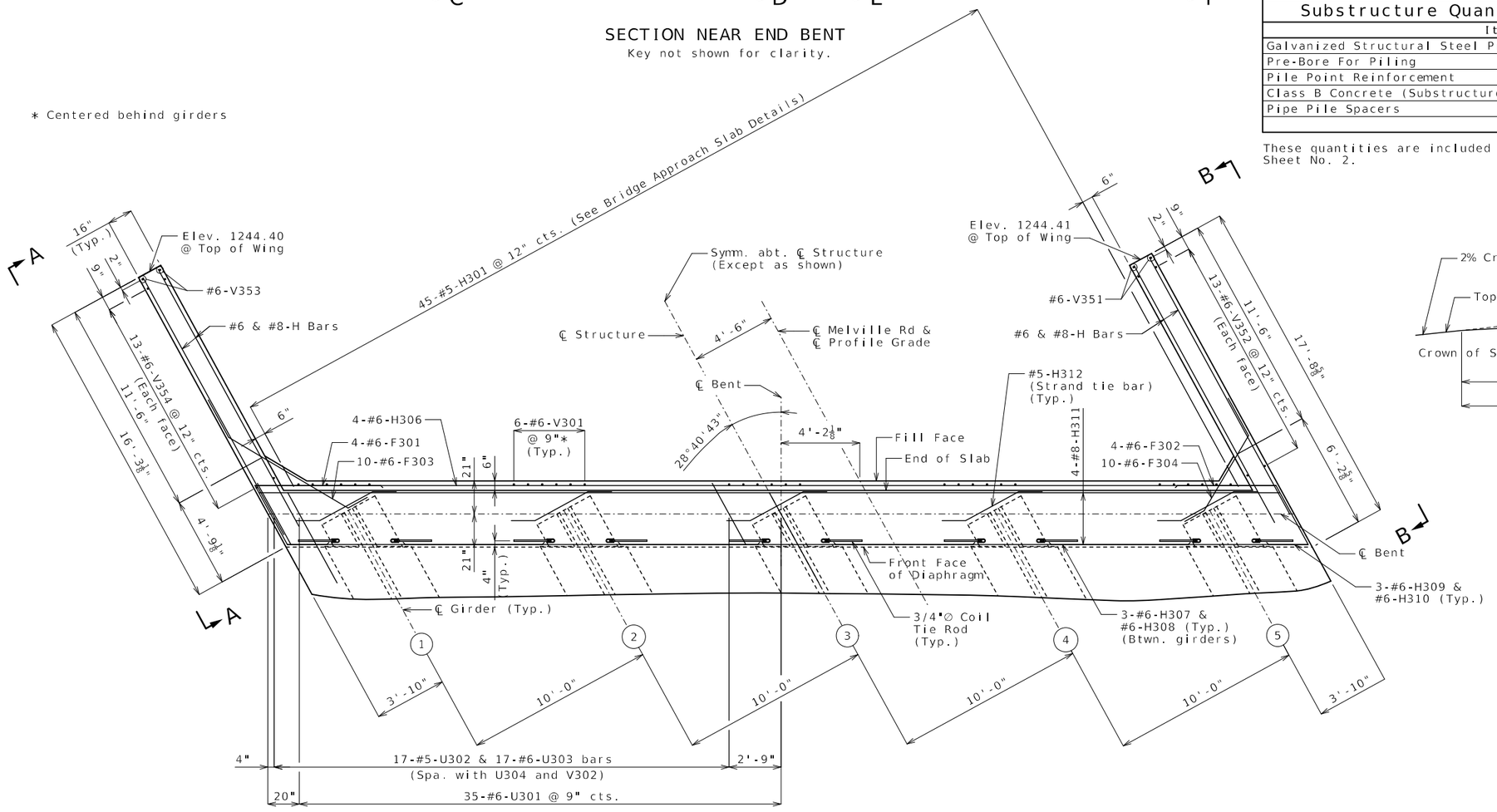
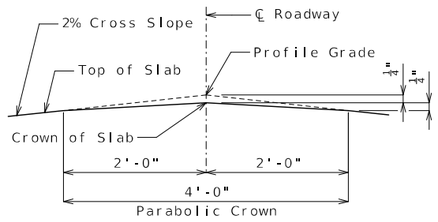


SECTION NEAR END BENT

Key not shown for clarity.



* Centered behind girders



DETAIL A

General Notes:

For details of End Bent No. 3 not shown, see Sheets No. 9 & 11.

For Sections C-C, D-D, E-E, & F-F, see Sheet No. 11.

For Elevations A-A & B-B, see Sheet No. 11.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

For location of Coil Tie Rods and #5-H312 (Strand Tie Bar), see Sheets No. 12 & 13.

For details of Vertical Drain at End Bents, see Sheet No. 6.

The #6-F303 and #6-F304 bars shall be bent in the field to clear girders.

The U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2-inch minimum clearance to fill face of end bent.

For details of Bridge Approach Slab, see Sheet No. 26.

Substructure Quantity Table for Bent No. 3

Item		Quantity
Galvanized Structural Steel Piles (12 in.)	linear foot	238
Pre-Bore For Piling	linear foot	84
Pile Point Reinforcement	each	7
Class B Concrete (Substructure)	cu. yard	26.6
Pipe Pile Spacers	each	7

These quantities are included in the Estimated Quantities table on Sheet No. 2.

PART PLAN DETAILS OF END BENT NO. 3

Detailed Dec 2024
Checked Dec 2024

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

DATE PREPARED 1/17/2025

ROUTE CRD 127 | STATE MO

DISTRICT BR | SHEET NO. 10

COUNTY GREENE

JOB NO. J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9317

DESCRIPTION

DATE

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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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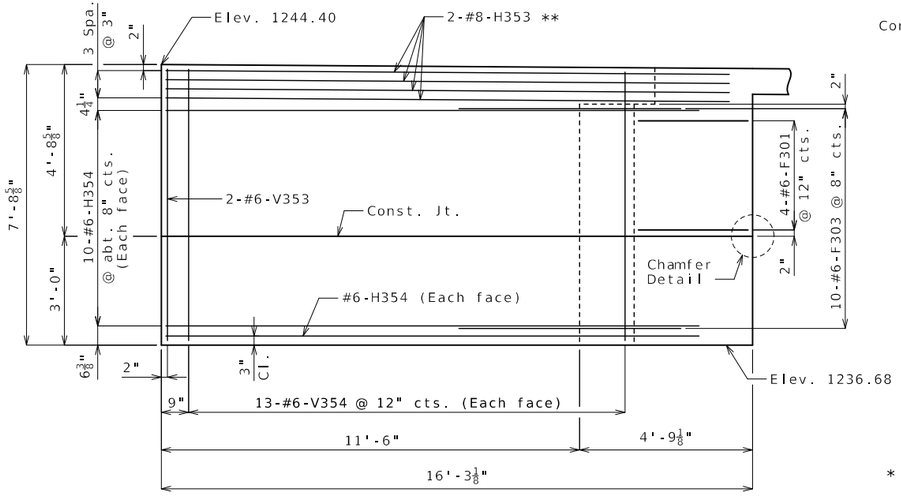
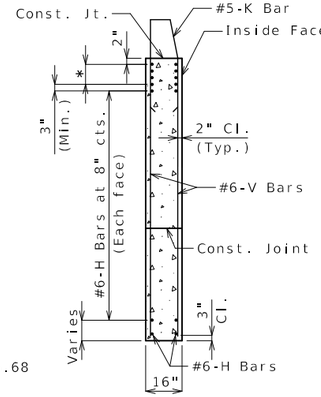
ENGINEERING CORPORATION - 000631



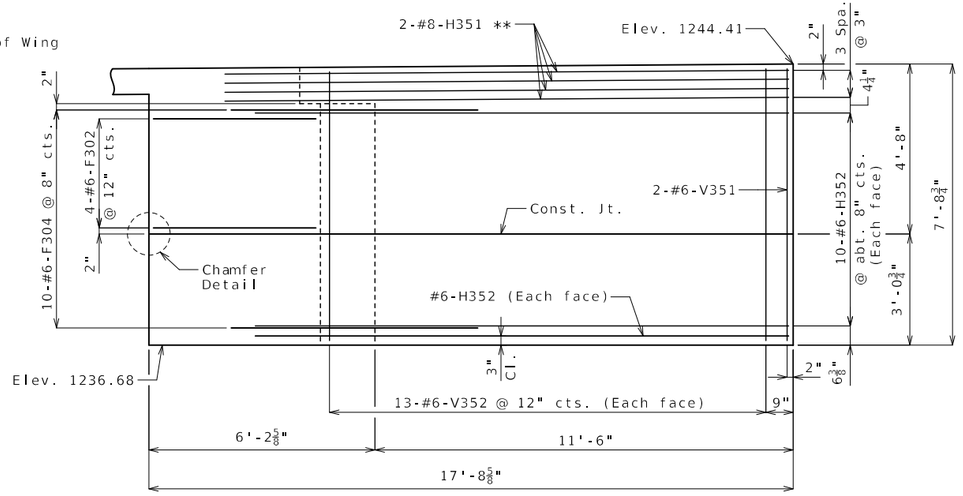
ELEVATION A-A



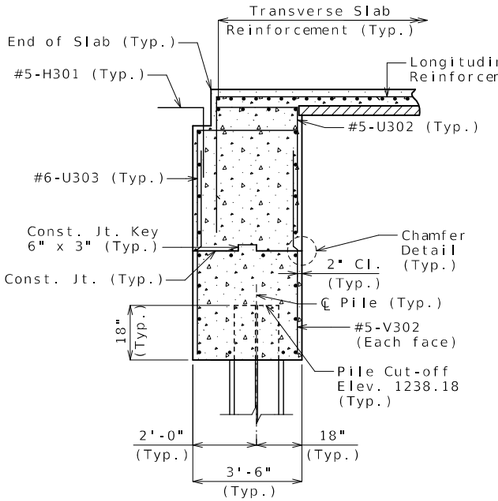
TYPICAL SECTION THRU WING

* #8-H Bars at 3" cts. (Each face)(Place with grade)

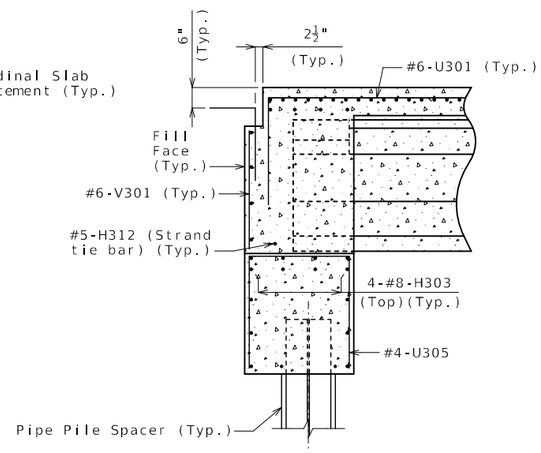
** (Place with grade)



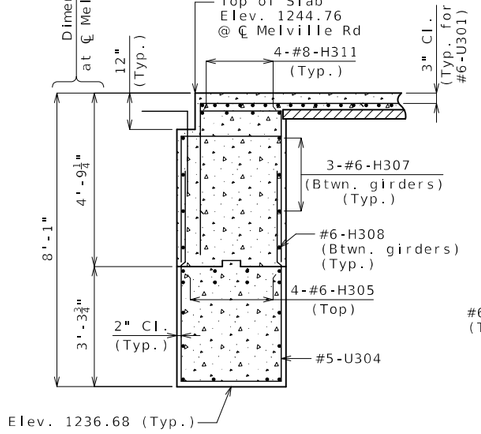
ELEVATION B-B



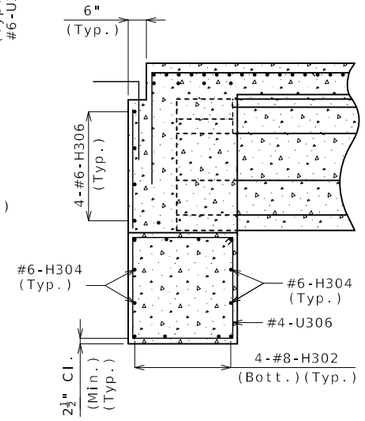
SECTION C-C



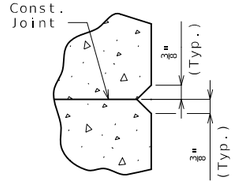
SECTION D-D



SECTION E-E



SECTION F-F



CHAMFER DETAIL

General Notes:

For details of End Bent No. 3 not shown, see Sheets No. 9 & 10.

For details and reinforcement of the Type D Barrier, see Sheets No. 20 thru 23.

For location of Sections C-C, D-D, E-E, & F-F, see Sheet No. 10.

For location of Elevations A-A & B-B, see Sheet No. 10.

For Conduit Details, see Sheet No. 24.

DETAILS OF END BENT NO. 3

Detailed Dec 2024
Checked Dec 2024

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

DATE PREPARED
1/17/2025

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
BR	11

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9317

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

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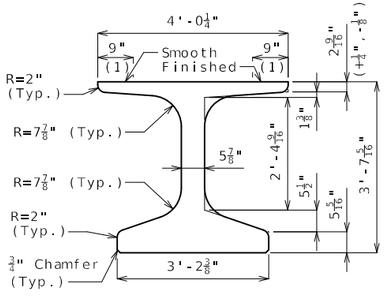
(1) Fabricator shall apply a bond breaker to this region excluding where joint filler will be applied.

(2) Outer strands tensioned to 2.02 kips/strand and inner strands to 8 kips/strand. Placed symmetrical about ℄ Girder. May be moved laterally in pairs.



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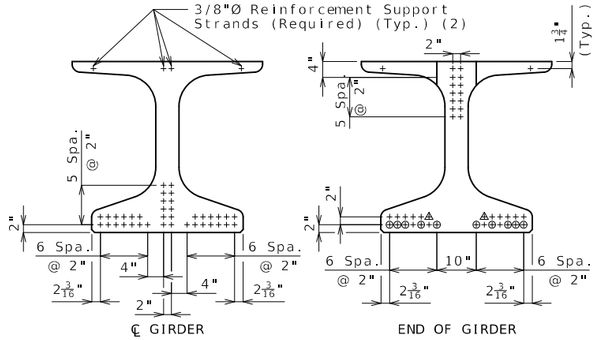


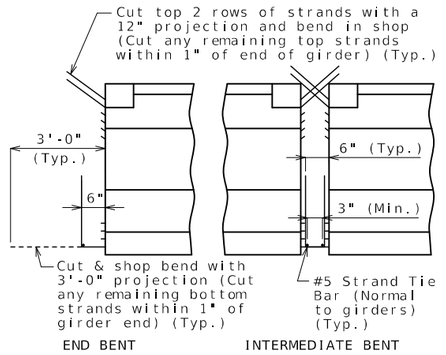
℄ GIRDER END OF GIRDER

STRAND ARRANGEMENT

\+ Indicates prestressing strand.

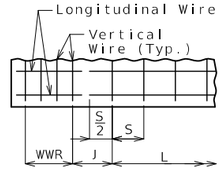
○ Indicates cut & shop bend with 3'-0" projection.

△ Indicates debonded for 4'-0" from end of girder



END BENT INTERMEDIATE BENT

STRANDS AT GIRDER ENDS



WELDED WIRE PLACEMENT

S = Vertical wire spacing

L = Length of WWR mats

J = Distance between WWR mats

Bill of Reinforcing Steel

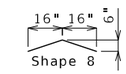
Bars Each Girder

No.	Size/Mark	Length	Shape
112	3 G1	2'-10"	8
2	4 G3	4'-4"	20
2	4 G4	2'-3"	20
2	4 G5	3'-0"	20
8	4 G6	Varies	20

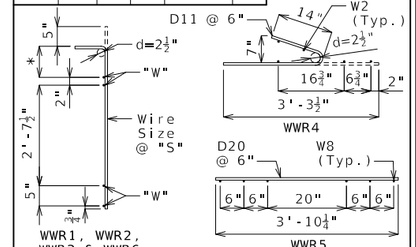
Welded Wire Each Girder

Mark	Size	S	W	L	J
WWR1	D31	4"	W12	5'-0"	8"
WWR2	D31	8"	W12	8'-8"	12"
WWR3	D31	12"	W12	56'-0"	--
WWR6	D31	2"	W12	16"	3½"

Bending Diagrams



Shape 20



* 8½" for WWR3 & WWR6
9½" for WWR1 & WWR2

All dimensions are out to out.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

Actual bar lengths are measured along centerline of bar to the nearest inch.

Minimum clearance to reinforcing shall be 1", unless otherwise shown.

All bar reinforcement shall be Grade 60.

WWR shall not be epoxy coated.

G4 and G5 not required for interior girders. Half no. of G3, G4, G5 and G6 not required for ext. girders of end spans.

General Notes:

Concrete for prestressed beams shall be Class A-1 with f'c = 8000 psi and f'ci = 6500 psi.

Use 38 strands, 0.6"Ø Grade 270, with an initial prestress force of 1670 kips.

Pretensioned members shall be in accordance with Sec 1029.

Fabricator shall be responsible for location and design of lifting devices.

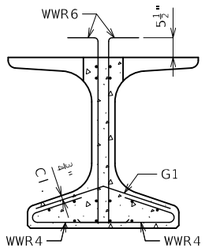
Exterior and interior girders are the same except: top flange blockout, and application of bond breaker.

The contractor shall provide bracing necessary for lateral and torsional stability of the girders during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not drill holes in the girders.

For Girder Camber Diagram, see Sheet No. 16.

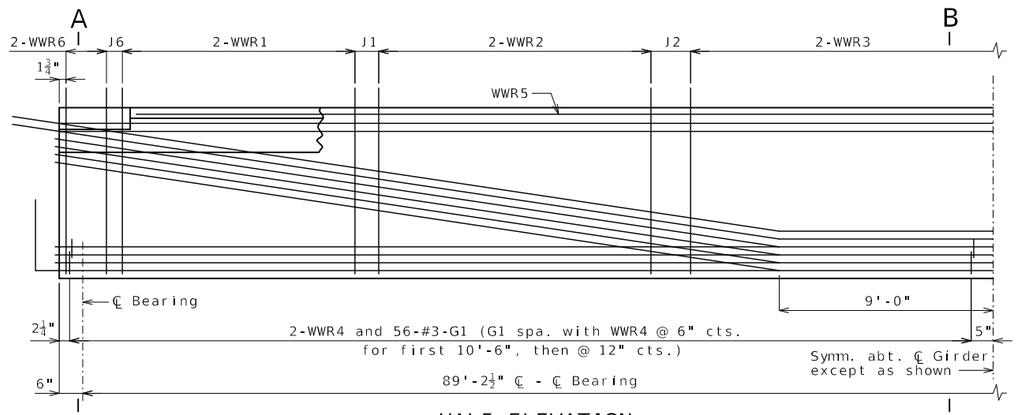
For location of coil ties at concrete diaphragms and integral bents, see Sheets No. 4, 10 and 14.

Alternate bar reinforcing steel details are provided and may be used. The same type of reinforcing steel shall be used for all girders in all spans.



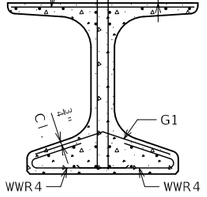
SECTION A-A

Strands not shown for clarity.



HALF ELEVATION

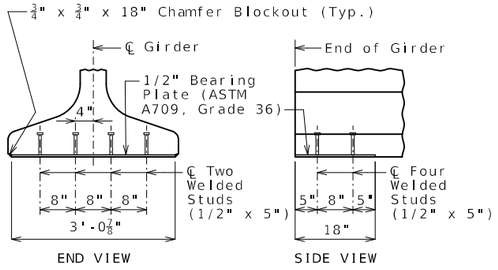
Reinforcement support strands not shown for clarity.



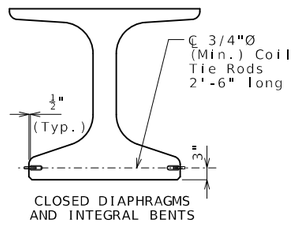
SECTION B-B

Strands not shown for clarity.

** 5½" (WWR3)
6½" (WWR1 & WWR2)



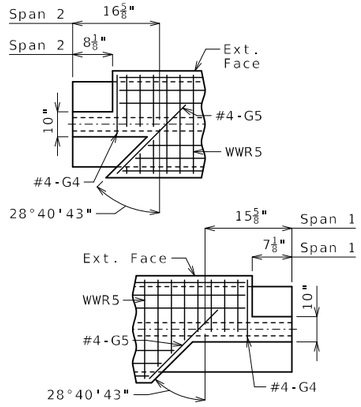
BEARING PLATE



CLOSED DIAPHRAGMS AND INTEGRAL BENTS

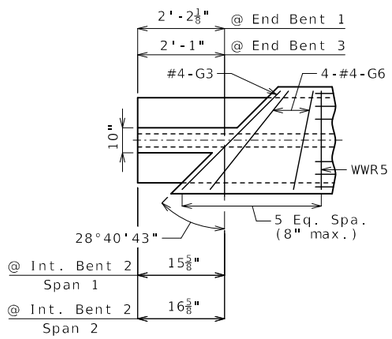
COIL TIES

Exclude coil tie at exterior face of exterior girders except at integral end bents.



LEFT EXTERIOR GIRDER AT INTERMEDIATE BENT

Rotate 180° for right ext.



INTERIOR GIRDER AT ALL BENTS & EXTERIOR GIRDER AT END BENT

TOP FLANGE BLOCKOUT

NU-GIRDERS - SPANS (1-2) AND (2-3)

Detailed Dec 2024
Checked Dec 2024

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

L:\MoDOT\22004246-00_New\Deliverable\!!!!2025 0120 J8S3156 Bridge Final PS&E\A9317 - Melville over I-44_Bridge\Plan Sheet DGNs\B_A9317_012_J8S3156_NU_Girder_WWR.dgn 10:14:47 AM 1/17/2025

STATE OF MISSOURI
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01/17/2025 11:39:28 AM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
1/17/2025

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
BR	12

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9317

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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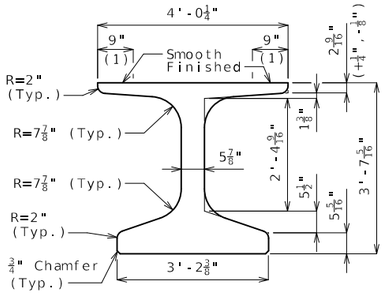
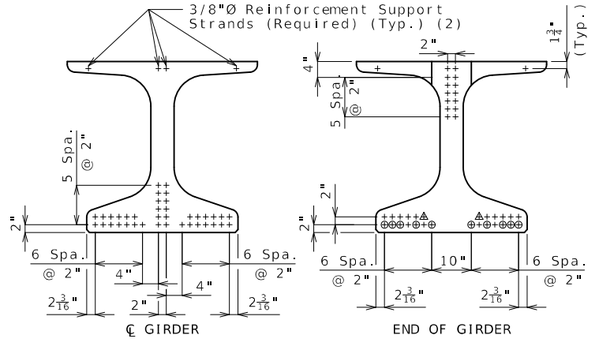
(1) Fabricator shall apply a bond breaker to this region excluding where joint filler will be applied.



DIMENSIONS

(2) Outer strands tensioned to 2.02 kips/strand and inner strands to 8 kips/strand. Placed symmetrical about ℄ Girder. May be moved laterally in pairs.

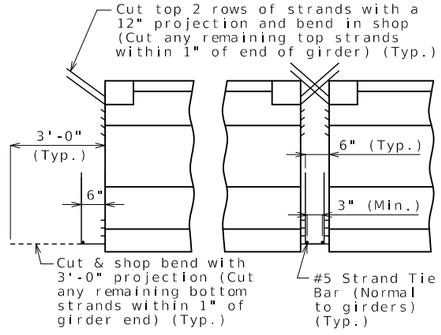


STRAND ARRANGEMENT

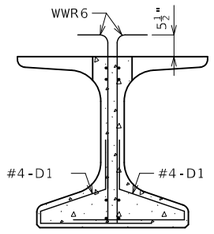
+ Indicates prestressing strand.

○ Indicates cut & shop bend with 3'-0" projection.

△ Indicates debonded for 4'-0" from end of girder.

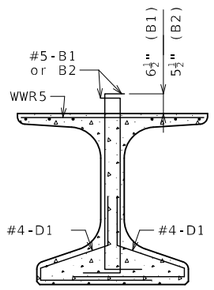


STRANDS AT GIRDER ENDS



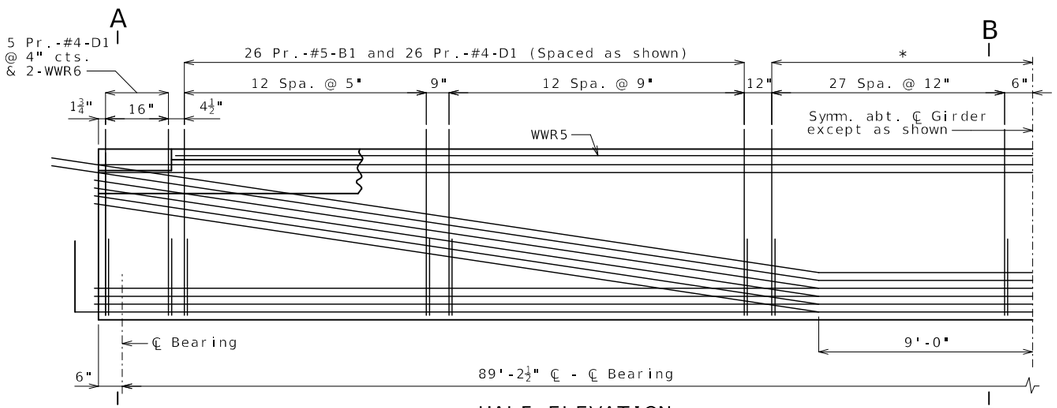
SECTION A-A

Strands not shown for clarity.



SECTION B-B

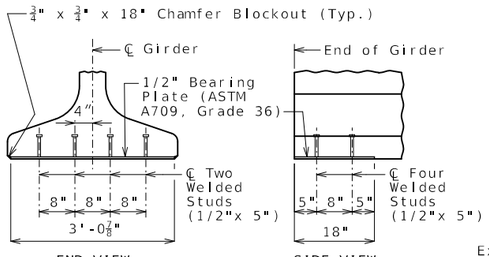
Strands not shown for clarity.



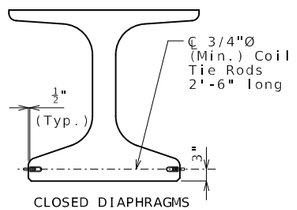
HALF ELEVATION

Reinforcement support strands not shown for clarity.

∗ 28 Pr.-#5-B2 and 28 Pr.-#4-D1 (Spaced as shown)



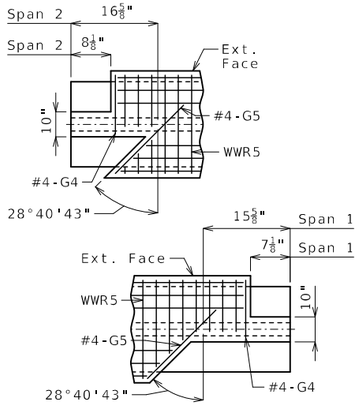
BEARING PLATE



CLOSED DIAPHRAGMS AND INTEGRAL BENTS

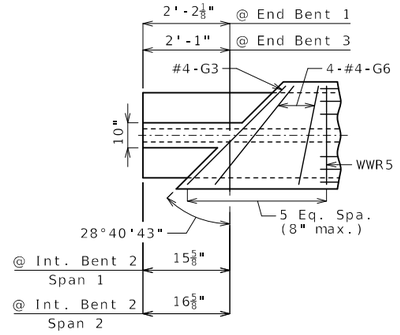
COIL TIES

Exclude coil tie at exterior face of exterior girders except at integral end bents.



LEFT EXTERIOR GIRDER AT INTERMEDIATE BENT

Rotate 180° for right ext.

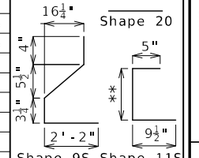


INTERIOR GIRDER AT ALL BENTS & EXTERIOR GIRDER AT END BENT

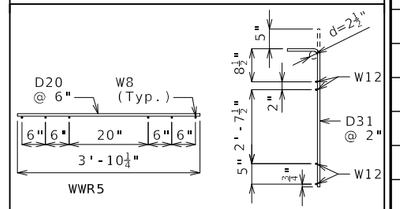
TOP FLANGE BLOCKOUT

Bill of Reinforcing Steel - Each Girder			
No.	Size/ Mark	Length	Shape
104	5 B1	5'-1"	11S
112	5 B2	5'-0"	11S
236	4 D1	4'-0"	9S
2	4 G3	4'-4"	20
2	4 G4	2'-3"	20
2	4 G5	3'-0"	20
8	4 G6	Varies	20

Bending Diagrams



Welded Wire Reinforcement - Each Girder



All dimensions are out to out.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

Actual bar lengths are measured along centerline of bar to the nearest inch.

Minimum clearance to reinforcing shall be one inch.

All bar reinforcement shall be Grade 60.

The two D1 bars may be furnished as one bar at the fabricator's option.

All B1 bars shall be epoxy coated.

G4 and G5 not required for interior girders. Half no. of G3, G4, G5 and G6 not required for ext. girders of end spans.

General Notes:

Concrete for prestressed girders shall be Class A-1 with f'c = 8000 psi and f'ci = 6500 psi.

Use 38 strands, 0.6"Ø Grade 270, with an initial prestress force of 1670 kips.

Pretensioned members shall be in accordance with Sec 1029.

Fabricator shall be responsible for location and design of lifting devices.

Exterior and interior girders are the same except: top flange blockout and application of bond breaker.

The contractor shall provide bracing necessary for lateral and torsional stability of the girders during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not drill holes in the girders.

For Girder Camber Diagram, see Sheet No. 16.

For location of coil ties at concrete diaphragms and integral bents, see Sheets No. 4, 10 and 14.

Alternate bar reinforcing steel details are provided and may be used. The same type of reinforcing steel shall be used for all girders in all spans.

STATE OF MISSOURI
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DATE PREPARED 1/17/2025

ROUTE CRD 127 | STATE MO

DISTRICT BR | SHEET NO. 13

COUNTY GREENE

JOB NO. J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9317

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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CMT
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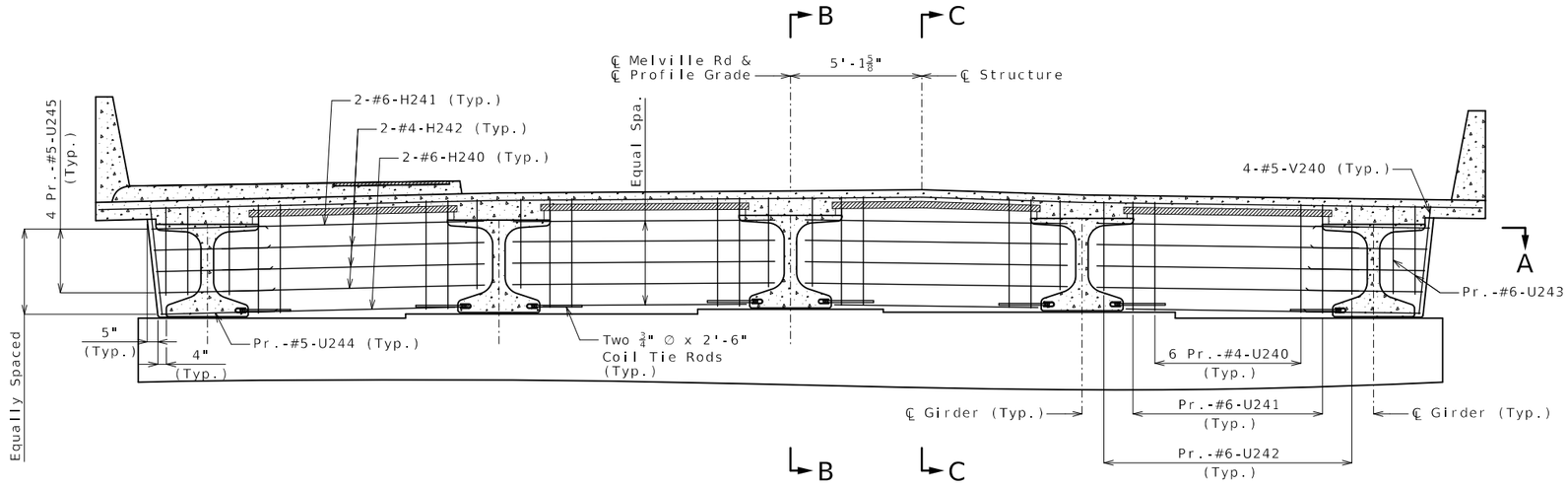
NU-GIRDERS (ALTERNATE REINFORCEMENT) - SPANS (1-2) AND (2-3)

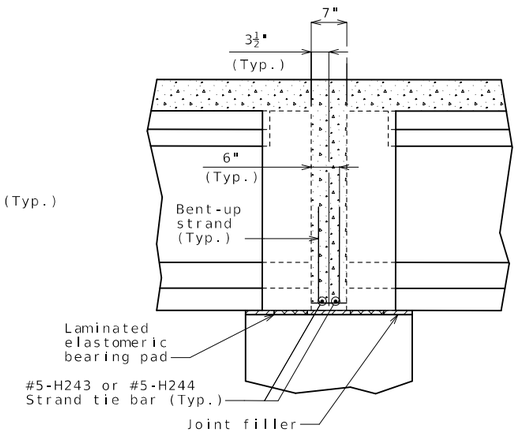
Detailed Dec 2024
Checked Dec 2024

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



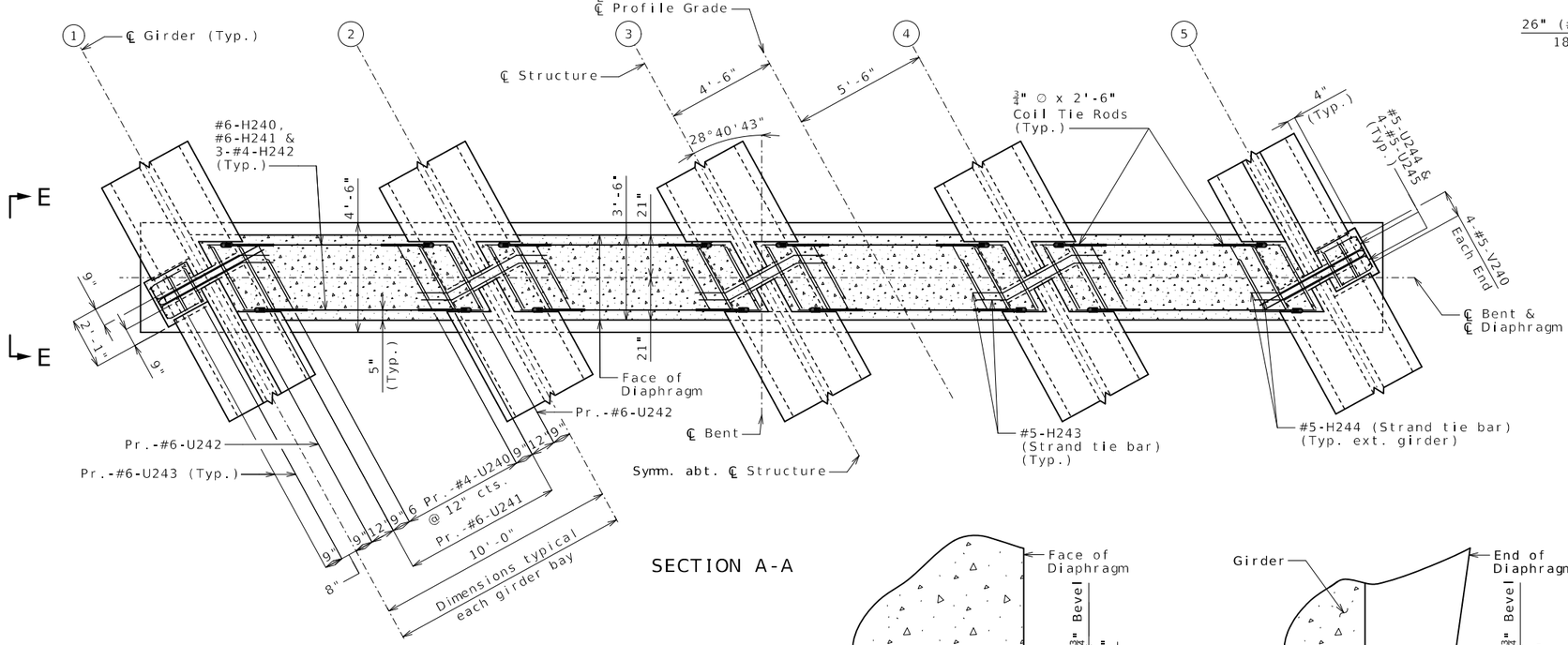
SECTION NEAR INTERMEDIATE BENT

Keys not shown for clarity.

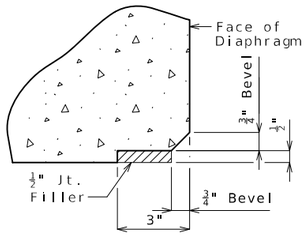


SECTION B-B

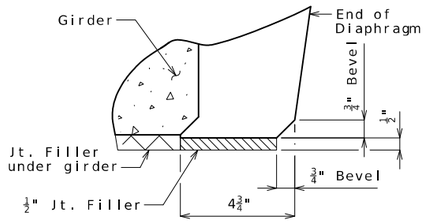
(Dimensions parallel to ℄ Roadway)



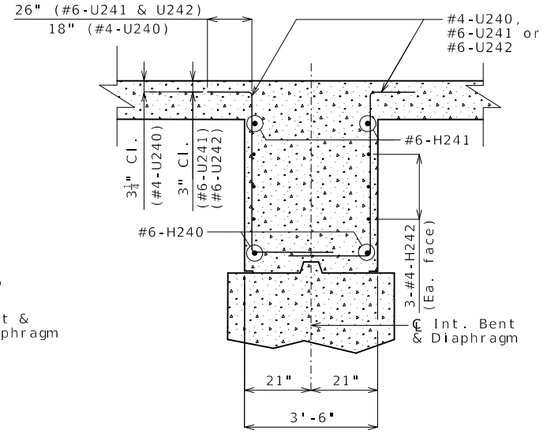
SECTION A-A



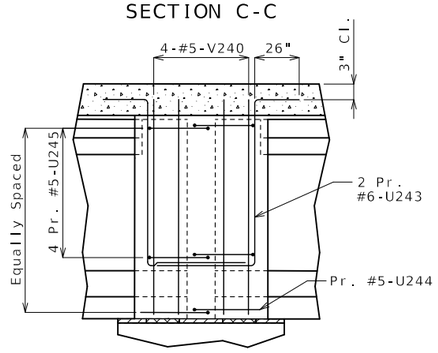
EDGE DETAIL



END DETAIL



SECTION C-C



SECTION E-E

General Notes:

For location of Strand Tie Bars and Coil Tie Rods, see Sheets No. 12 and 13.

Diaphragm at intermediate bent shall be built vertical.

All U-bars in diaphragm are to be placed parrallel to ℄ Roadway.

DETAILS OF CONCRETE DIAPHRAGM AT INTERMEDIATE BENT NO. 2

Detailed Dec 2024
Checked Dec 2024

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

STATE OF MISSOURI
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DATE PREPARED
1/17/2025

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
BR	14

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9317

DESCRIPTION	DATE

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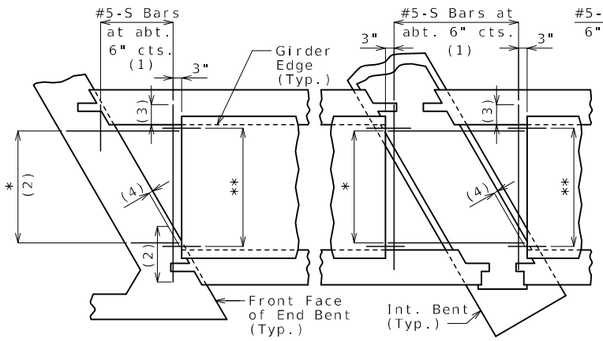
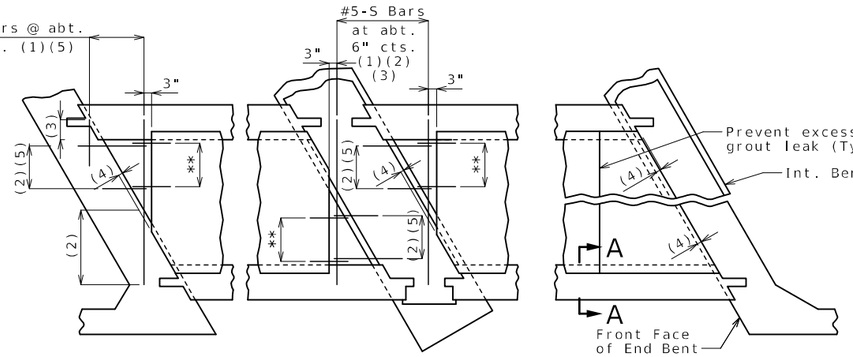
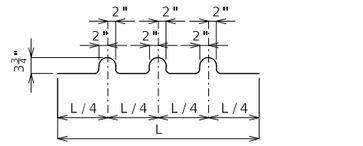




SQUARED END PANELS OR TRUNCATED END PANELS

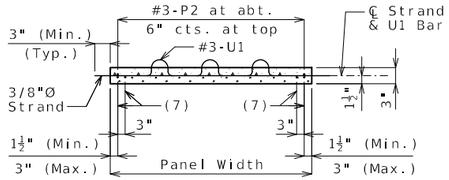
PLAN SHOWING PANEL PLACEMENT

* #5-S Bars at abt. 9" cts. (1)
** #3-P1 at 12" cts. (End panels only)

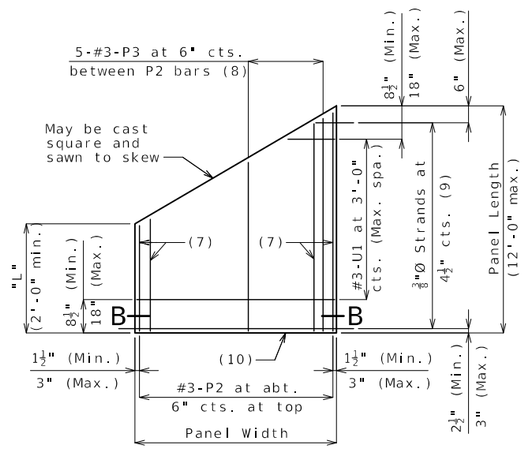


BENDING DIAGRAM FOR U1 BAR

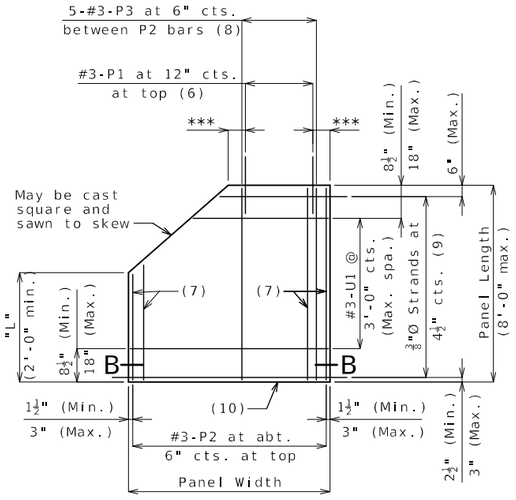
U1 Bars may be oriented at right angles to location and spacing shown. U1 Bars shall be placed between P1 bars.



SECTION B-B

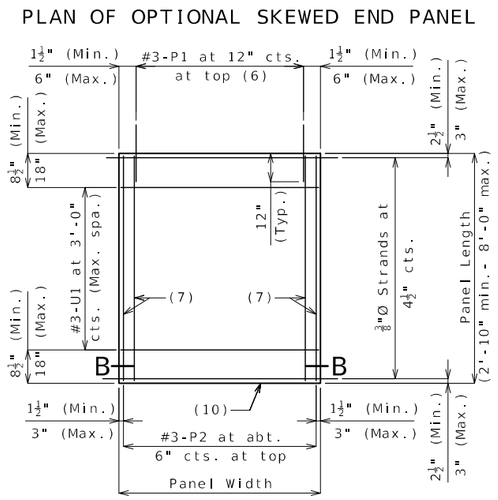


PLAN OF OPTIONAL SKEWED END PANEL



PLAN OF OPTIONAL TRUNCATED END PANEL

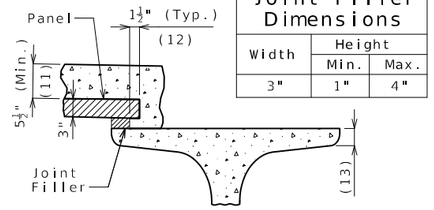
*** 3" (Min.), 6" (Max.)



PLAN OF SQUARED PANEL

SKEWED END PANELS

Joint Filler Dimensions		
Width	Height	
	Min.	Max.
3"	1"	4"



SECTION A-A

Reference Notes:

Plan of Panel Placement:
(1) S-bars shown are bottom steel in slab between panels and used with squared and truncated end panels only.

(2) Extend S-bars 18 inches beyond the front face of end bents and int. bents for squared and truncated end panels only.

(3) Extend S-bars 9 inches beyond edge of girder (Typ.).

(4) End panels shall be dimensioned 1/2" min. to 1 1/2" max. from the inside face of diaphragm.

(5) For truncated end panels, use a min. of #5-S bars at 6" crossings in openings, or min. 4x4-W7xW7.

Plans of Panels:
(6) For end panels only, P1 bars shall be 2'-0" in length and embedded 12". P1 bars will not be required for panels at squared integral end bents.

(7) #3-P2 bars near edge of panel at bottom (under strands).

(8) Use #3-P3 bars if panel is skewed 45° or greater.

(9) Any strand 2'-0" or shorter shall have a #4 reinforcing bar on each side of it, centered between strands. Strands 2'-0" or shorter may then be debonded at the fabricator's option.

(10) Optional 1/2" x 45° Chamfer one or both sides at bottom.

Section A-A:
(11) Slab thickness over prestressed panels varies due to girder camber. In order to maintain minimum slab thickness, it may be necessary to raise the grade uniformly throughout the structure. No payment will be made for additional labor or materials required for necessary grade adjustment.

(12) Contractor shall ensure proper consolidation under and between panels.

(13) At the contractor's option, the variation in slab thickness over prestressed panels may be eliminated or reduced by increasing and varying the girder top flange thickness. Dimensions shall be shown on the shop drawings.

General Notes:

Prestressed Panels:
Concrete for prestressed panels shall be Class A-1 with f'c = 6,000 psi, f'ci = 4,000 psi.

The top surface of all panels shall receive a scored finish with a depth of scoring of 1/8" perpendicular to the prestressing strands in the panels.

Prestressing tendons shall be high-tensile strength, uncoated, seven-wire, low-relaxation strands for prestressed concrete in accordance with AASHTO M 203 Grade 270, with nominal diameter of strand = 3/8" and nominal area = 0.085 sq.in. and minimum ultimate strength = 22.95 kips (270 ksi). Larger strands may be used with the same spacing and initial tension.

Initial prestressing force = 17.2 kips/strand.

The method and sequence of releasing the strands shall be shown on the shop drawings.

Suitable anchorage devices for lifting panels may be cast in panels, provided the devices are shown on the shop drawings and approved by the engineer. Panel lengths shall be determined by the contractor and shown on the shop drawings.

When squared end panels are used at skewed bents, the skewed portion shall be cast full depth. No separate payment will be made for additional concrete and reinforcing required.

Support from diaphragm forms is required under the optional skewed end until cast-in-place concrete has reached 3,000 psi compressive strength.

Prestressed panels shall be brought to saturated surface-dry (SSD) condition just prior to the deck pour. There shall be no free standing water on the panels or in the area to be cast.

The prestressed panel quantities are not included in the table of estimated quantities for the slab.

Reinforcing Steel:
All dimensions are out to out.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

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

If U1 bars interfere with placement of slab steel, U1 loops may be bent over, as necessary, to clear slab steel.

Deformed welded wire reinforcement (WWR) providing a minimum area of reinforcing perpendicular to strands of 0.22 sq in./ft, with spacing parallel to strands sufficient to ensure proper handling, may be used in lieu of the #3-P2 bars shown. Wire diameter shall not be larger than 0.375 inch. The above alternative reinforcement criteria may be used in lieu of the #3-P3 bars, when required, and placed over a width not less than 2 feet.

The following reinforcing steel shall be tied securely to the strands with the following maximum spacing in each direction:
#3-P2 bars at 16 inches.
WWR at 24 inches.

The #3-U1 bars shall be tied securely to #3-P2 bars, to WWR or to strands (when placed between P1 bars) at about 3-foot centers.

Minimum reinforcement steel length shall be 2'-0".

All reinforcement other than prestressing strands shall be epoxy coated.

Precast panels may be in contact with stirrup reinforcing in diaphragms.

S-bars are not listed in the bill of reinforcing.

Cost of S-bars will be considered completely covered by the contract unit price for the slab.

Joint Filler:
Joint filler shall be preformed fiber expansion joint material in accordance with Sec 1057 or expanded or extruded polystyrene bedding material in accordance with Sec 1073.

Use Slab Haunching Diagram on Sheet No. 16 for determining thickness of joint filler within the limits noted in the table of Joint Filler Dimensions.

Thicker material may be used on one or both sides of the girder to reduce cast-in-place concrete thickness to within tolerances.

The same thickness of preformed fiber expansion joint material shall be used under any one edge of any panel except at locations where top flange thickness may be stepped. The maximum change in thickness between adjacent panels shall be 1/2 inch. The polystyrene bedding material may be cut with a transition to match haunch height above top of flange.

Joint filler shall be glued to the girder. When thickness exceeds 1 1/2 inches, the joint filler shall be glued top and bottom. The glue used shall be the type recommended by the joint filler manufacturer.

Edges of panels shall be uniformly seated on the joint filler before slab reinforcement is placed.

PRESTRESSED PANELS

Detailed Dec 2024
Checked Dec 2024

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

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
01/17/2025 11:39:45 AM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED: 1/17/2025
ROUTE: CRD 127 | STATE: MO
DISTRICT: BR | SHEET NO.: 15
COUNTY: GREENE
JOB NO.: J8S3156
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9317

DESCRIPTION	DATE

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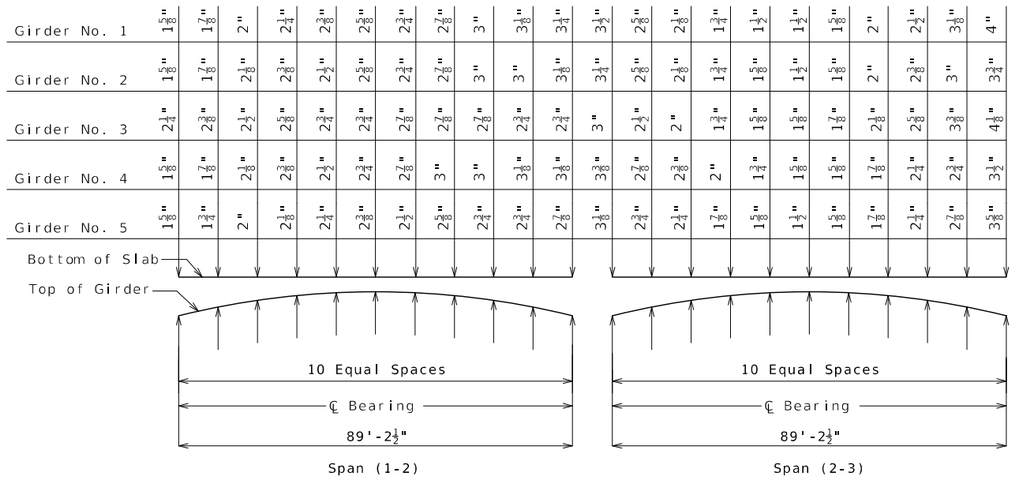
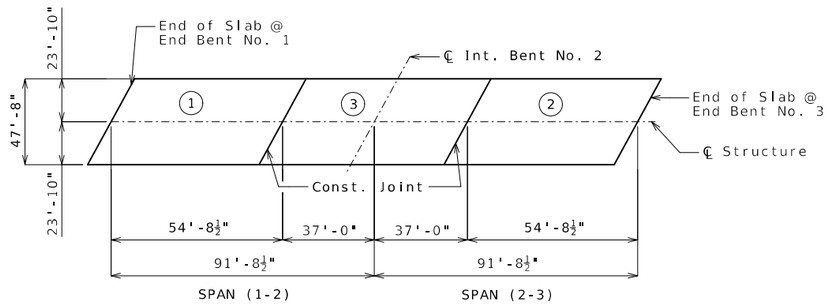


THEORETICAL SLAB HAUNCHING DIAGRAM

Girder Number	Span (1-2) (89'-2½" ℄ Brg. - ℄ Brg.)										
	℄ Brg.	.10	.20	.30	.40	.50	.60	.70	.80	.90	℄ Brg.
1	1241.57	1241.84	1242.08	1242.30	1242.49	1242.65	1242.78	1242.88	1242.95	1243.01	1243.04
2	1241.63	1241.91	1242.16	1242.39	1242.60	1242.77	1242.91	1243.02	1243.10	1243.16	1243.20
3	1241.69	1241.97	1242.24	1242.48	1242.69	1242.87	1243.02	1243.14	1243.23	1243.30	1243.35
4	1241.51	1241.81	1242.08	1242.33	1242.55	1242.74	1242.90	1243.03	1243.13	1243.21	1243.27
5	1241.15	1241.45	1241.73	1241.99	1242.22	1242.42	1242.59	1242.73	1242.84	1242.93	1243.01
Girder Number	Span (2-3) (89'-2½" ℄ Brg. - ℄ Brg.)										
	℄ Brg.	.10	.20	.30	.40	.50	.60	.70	.80	.90	℄ Brg.
1	1243.05	1243.16	1243.26	1243.35	1243.43	1243.50	1243.55	1243.60	1243.62	1243.64	1243.66
2	1243.21	1243.32	1243.43	1243.52	1243.61	1243.68	1243.73	1243.77	1243.80	1243.81	1243.82
3	1243.36	1243.48	1243.59	1243.69	1243.77	1243.84	1243.89	1243.93	1243.96	1243.97	1243.99
4	1243.29	1243.42	1243.53	1243.63	1243.71	1243.78	1243.84	1243.88	1243.90	1243.92	1243.93
5	1243.03	1243.16	1243.28	1243.38	1243.46	1243.53	1243.59	1243.63	1243.66	1243.68	1243.69

Elevations are based on a constant slab thickness of 8 1/2" and include allowance for theoretical dead load deflections due to weight of slab (including precast panel), sidewalk, fencing and barrier.



	Sequence of Pours			Min. Rate of Pour Cu. Yds./Hr.
	Direction			With Retarder
Basic Sequence	1	2	3	25
	Either Direction			
Alternate pours to the basic skip sequence are subject to the approval of the engineer in accordance with Sec 703.				
Alternate A Pours	1	3 + 2		36
	End to 3	1 to End		
Alternate B Pours	1 + 3 + 2			50
	End to End			

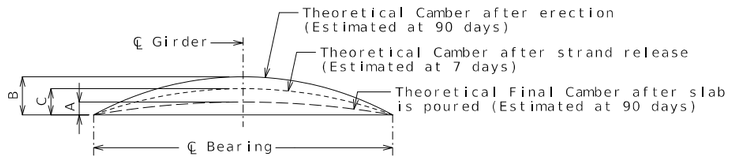
SLAB POURING SEQUENCE

Notes:

Longitudinal dimensions are measured horizontal.

The contractor shall furnish an approved retarder to retard the set of the concrete to 2.5 hours, and shall pour and satisfactorily finish the slab pours at the rate given.

The concrete diaphragm at the intermediate bents and integral end bents shall be poured a minimum of 30 minutes and a maximum of 2 hours before the slab is poured.

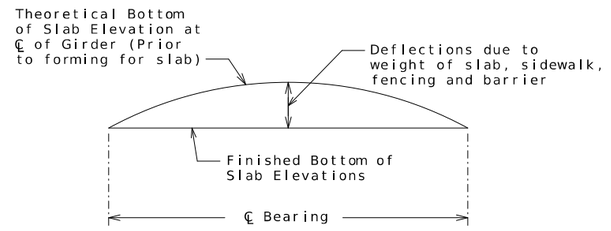


Girder	Span (1-2)			Span (2-3)		
	A	B	C	A	B	C
Exterior	2¼"	3⅞"	2¼"	2¼"	3⅞"	2¼"
Interior	2"			2"		

GIRDER CAMBER DIAGRAM

Conversion Factors for Girder Camber (Estimated at 90 days):

0.1 pt. = 0.314 x 0.5 pt.
0.2 pt. = 0.593 x 0.5 pt.
0.3 pt. = 0.813 x 0.5 pt.
0.4 pt. = 0.952 x 0.5 pt.



TYPICAL SLAB ELEVATIONS DIAGRAM

If girder camber is different from that shown in the camber diagram, in order to maintain minimum slab thickness, an adjustment of the slab haunches, an increase in slab thickness or a raise in grade uniformly throughout the structure shall be necessary. No payment will be made for additional labor or materials required for variation in haunching, slab thickness or grade adjustment.

Concrete in the slab haunches is included in the Estimated Quantities for Slab on Concrete NU-Girder.

TBOS, HAUNCHING AND CAMBER

Detailed Dec 2024
Checked Dec 2024

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

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STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
REGISTERED PROFESSIONAL ENGINEER
01/17/2025 11:39:50 AM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
1/17/2025

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
BR	16

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
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DATE	DESCRIPTION

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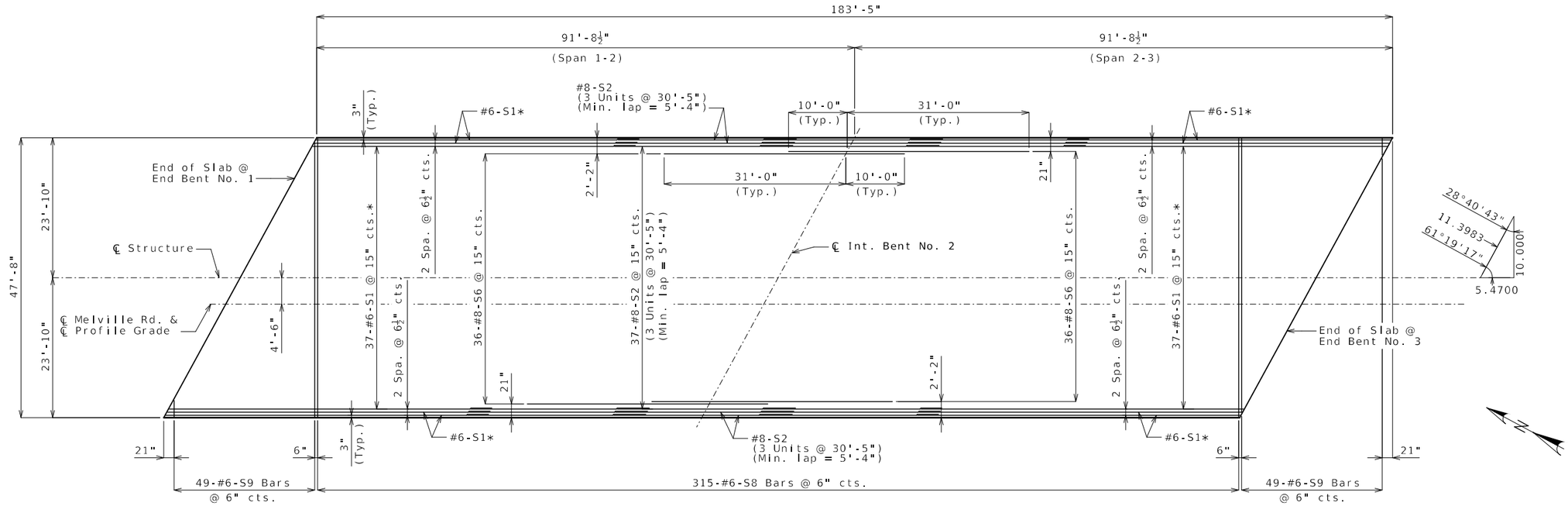
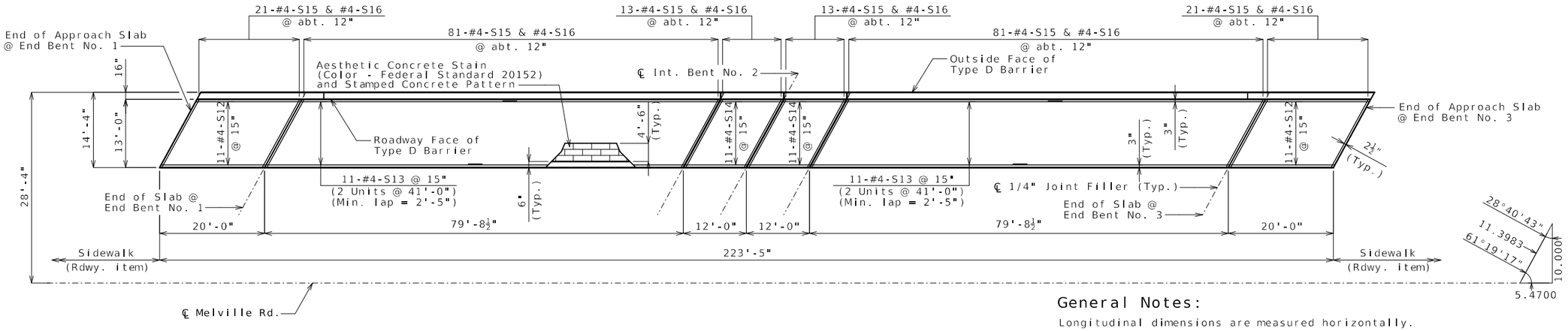


* Lap with #8-S2 (Min. lap = 3'-7")

PLAN OF SLAB SHOWING TOP REINFORCEMENT



PLAN OF SIDEWALK SHOWING REINFORCEMENT

General Notes:

Longitudinal dimensions are measured horizontally.

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

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for Sidewalk (Bridges) per sq. foot.

Concrete in the sidewalk shall be Class B-2.

Measurement of the sidewalk is to the nearest square foot for each structure, measured horizontally from the roadway face of barrier to the inside edge of sidewalk and from end of approach slab to end of approach slab.

For details of Precast Prestressed Panels, see Sheet No. 15.

For Theoretical Bottom of Slab Elevations, Girder Camber Diagram, Theoretical Slab Haunching Diagram and Slab Pouring Sequence, see Sheet No. 16.

For Plan of Slab Showing Bottom Reinforcement, see Sheet No. 18.

For Section Thru Slab, see Sheet No. 19.

For details and reinforcement of Type D Barrier not shown, see Sheets No. 20 thru 23.

SLAB REINFORCEMENT DETAILS

Detailed Dec 2024
Checked Dec 2024

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

STATE OF MISSOURI — JOSHUA D. JOLLIFF — NUMBER PE-2006002824 — PROFESSIONAL ENGINEER

01/17/2025 11:39:56 AM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED: 1/17/2025
ROUTE: CRD 127 | STATE: MO
DISTRICT: BR | SHEET NO.: 17
COUNTY: GREENE
JOB NO.: J8S3156
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9317

DESCRIPTION | DATE

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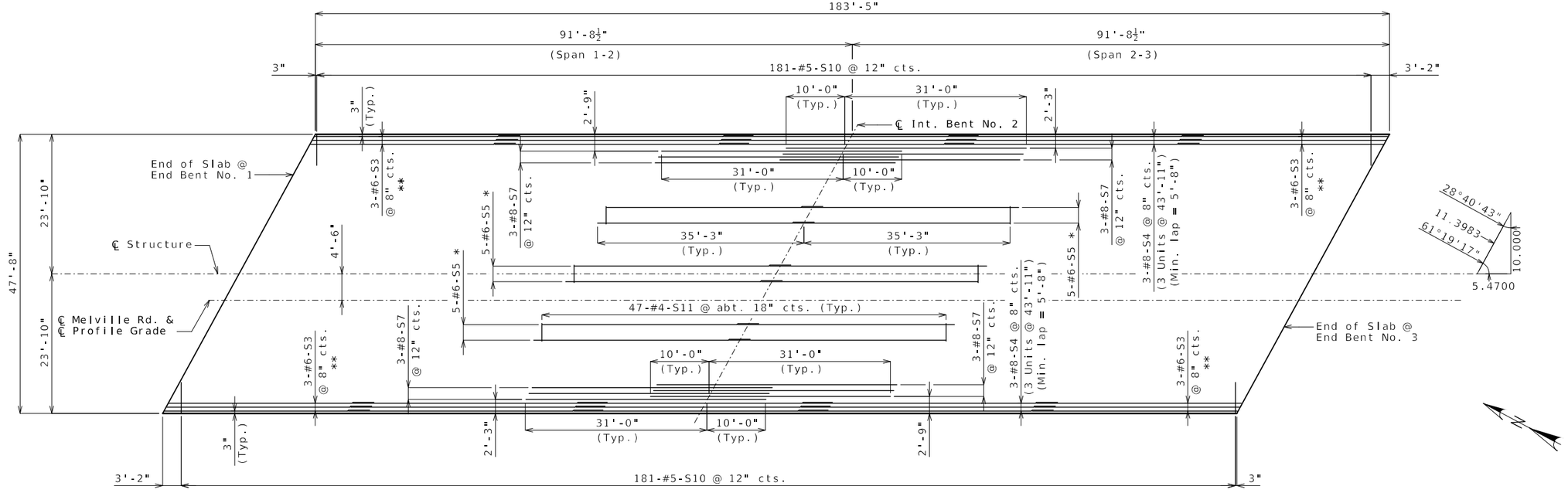

PLAN OF SLAB SHOWING BOTTOM REINFORCEMENT

* Spa. @ 8" cts.
(2 Units @ 36'-10")
(Min. lap = 2'-10")

** Lap with #8-S4
(Min. lap = 3'-7")

General Notes:

Longitudinal dimensions are measured horizontally.

For details of Precast Prestressed Panels, see Sheet No. 15.

For Theoretical Bottom of Slab Elevations, Girder Camber Diagram, Theoretical Slab Haunching Diagram and Slab Pouring Sequence, see Sheet No. 16.

For Plan of Showing Top Reinforcement, see Sheet No. 17.

For Section Thru Slab, see Sheet No. 19.

For details and reinforcement of Type D Barrier not shown, see Sheets No. 20 thru 23.

SLAB REINFORCEMENT DETAILS

Detailed Dec 2024
Checked Dec 2024

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JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
01/17/2025 11:40:01 AM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
1/17/2025

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
BR	18

COUNTY
GREENE

JOB NO.
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CONTRACT ID.

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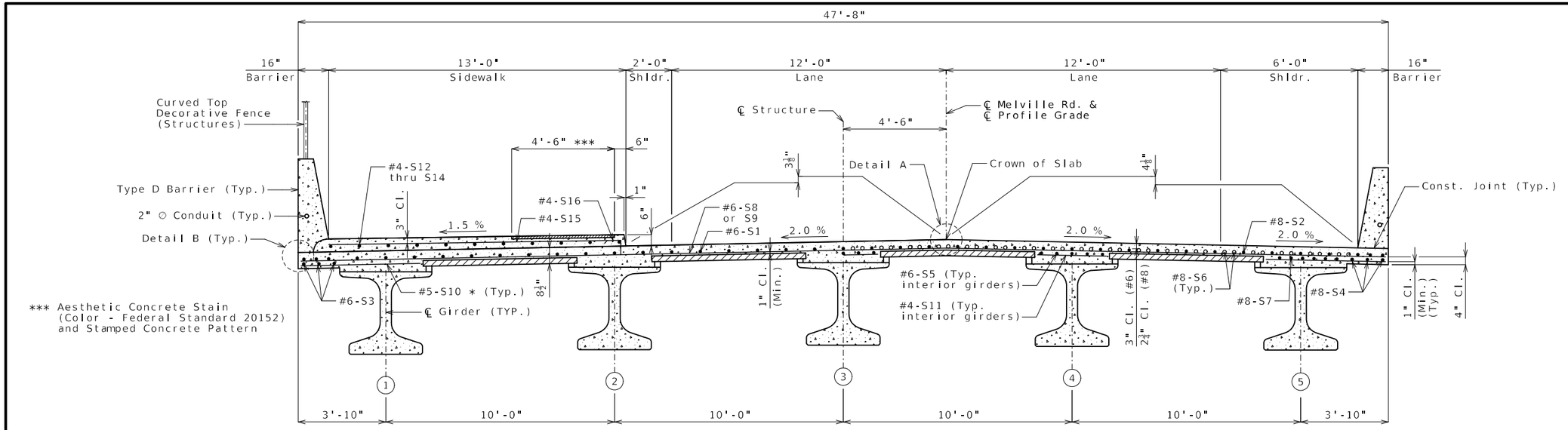
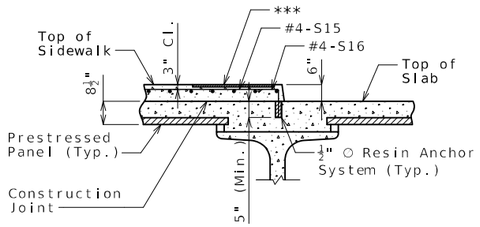


HALF SECTION NEAR ℄ SPAN

HALF SECTION NEAR INTERMEDIATE BENT

SECTION THRU SLAB

* Alternate bar shape available, see barrier sheets.



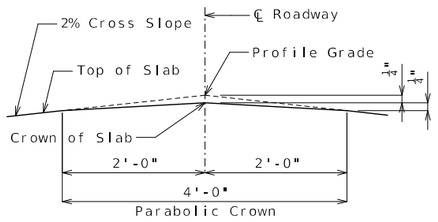
RESIN ANCHOR OPTION

Notes:

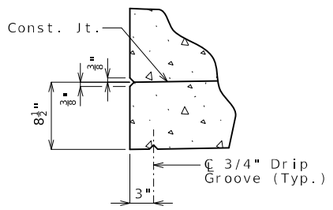
At the contractor's option, the #4-S16 bars may be replaced with a 1/2" Resin Anchor System as shown. No additional payment will be made for substitution.

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

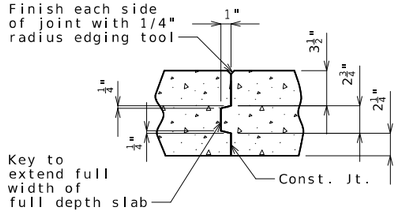
The minimum embedment depth in concrete with f'c = 4,000 psi for the resin anchor systems shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5".



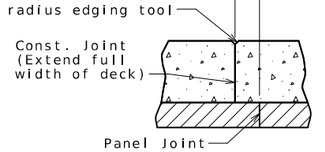
DETAIL A



DETAIL B



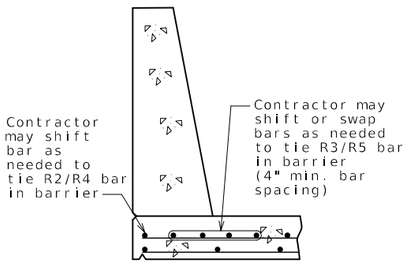
FULL DEPTH SLAB



** Adjust the construction joint to a clearance of 6 inches minimum from the panel joint.

SLAB ON PANELS

SLAB CONSTRUCTION JOINT



OPTIONAL SHIFTING TOP BARS AT BARRIER

General Notes:

For details of Precast Prestressed Panels, see Sheet No. 15.

For Theoretical Bottom of Slab Elevations, Girder Camber Diagram, Theoretical Slab Haunching Diagram and Slab Pouring Sequence, see Sheet No. 16.

For Plan of Slab Showing Top Reinforcement and Sidewalk Reinforcement, see Sheet No. 17.

For Plan of Slab Showing Bottom Reinforcement, see Sheet No. 18.

For details and reinforcement of Type D Barrier not shown, see Sheets No. 20 thru 23.

For Conduit details, see Sheet No. 24.

For Pedestrian Fence details, see Sheet No. 25.

SLAB DETAILS

Detailed Dec 2024
Checked Dec 2024

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DATE PREPARED
1/17/2025

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
BR	19

COUNTY
GREENE

JOB NO.
J8S3156

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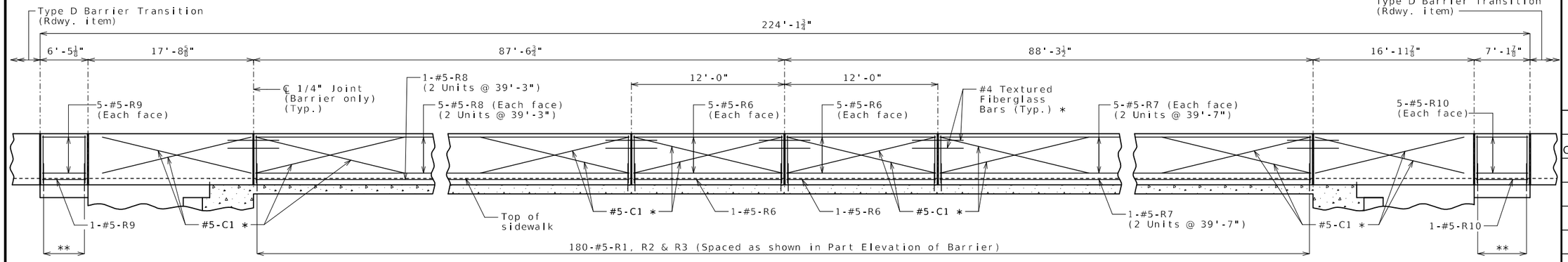
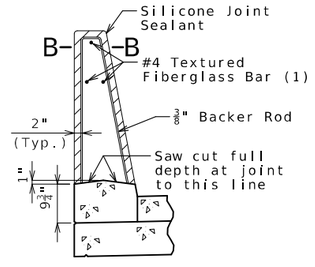


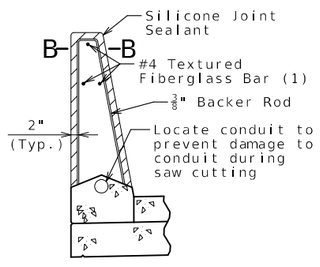
ELEVATION OF LEFT BARRIER

Longitudinal dimensions are horizontal.

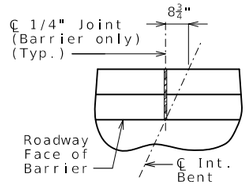
** 8-#5-R1, R2 & R3 (Spaced as shwon in Part Elevation of Barrier)



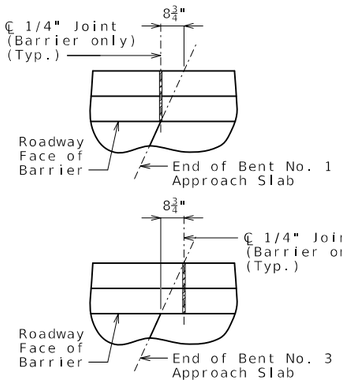
SECTION THRU SAW CUT JOINT



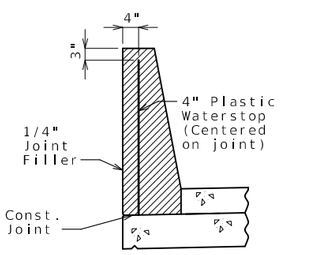
SECTION THRU SAW CUT JOINT AT CONDUIT



PART PLAN SHOWING JOINT LOCATION



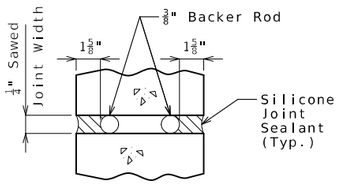
PART PLAN SHOWING JOINT AT END OF APPROACH SLAB



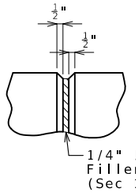
WATERSTOP DETAIL

Plastic waterstop shall be placed in all formed joints, except structures with superelevation, use on lower joints only.

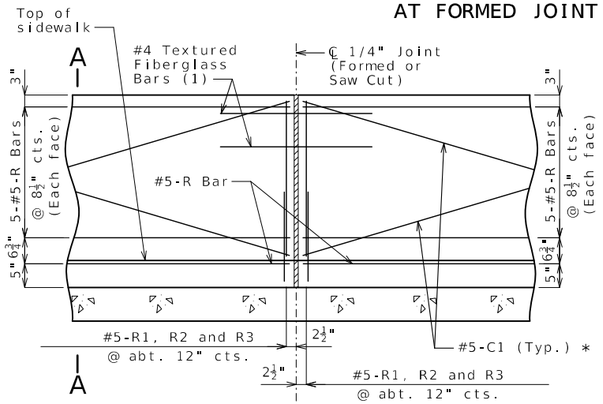
Cost of plastic waterstop, complete in place, will be considered completely covered by the contract unit price for Type D Barrier.



SECTION B-B

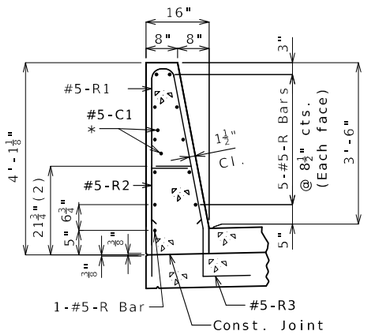


PART ELEVATION AT FORMED JOINT



PART ELEVATION OF BARRIER

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

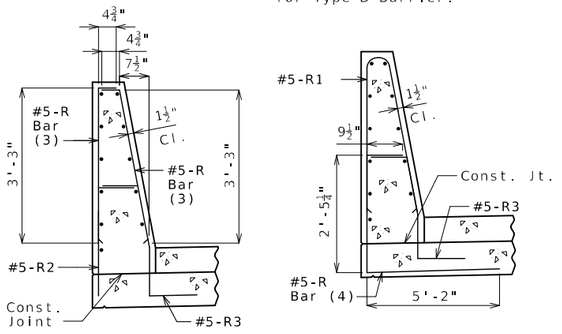


SECTION A-A

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

The cross-sectional area above the slab is 4.27 square feet.

(2) To top of bar



R-BAR PERMISSIBLE ALTERNATE SHAPE

(3) The R1 bar may be separated into two bars as shown, at the contractor's option, only when slip forming is not used. (All dimensions are out to out.)

(4) The R2 bar and #5 bottom transverse slab bar in cantilever (prestressed panels only) combination may be furnished as one bar as shown, at the contractor's option.

General Notes:

* Slip-formed option only.

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

Top of barrier shall be built parallel to grade and barrier joints (except at end bents) normal to grade.

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

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for Type D Barrier per linear foot.

Concrete in barrier shall be Class B-1.

Measurement of left barrier is to the nearest linear foot for each structure, measured along the outside top of slab from end of approach slab to end of approach slab.

Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Type D Barrier.

Joint sealant and backer rods shall be in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

Plastic waterstop shall not be used with saw cut joints.

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

For Conduit details, see Sheet No. 24.

For Decorative Pedestrian Fence details, see Sheet No. 25.

LEFT TYPE D BARRIER

Detailed Dec 2024
Checked Dec 2024

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STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
01/17/2025 11:40:13 AM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
1/17/2025

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
BR	20

COUNTY
GREENE

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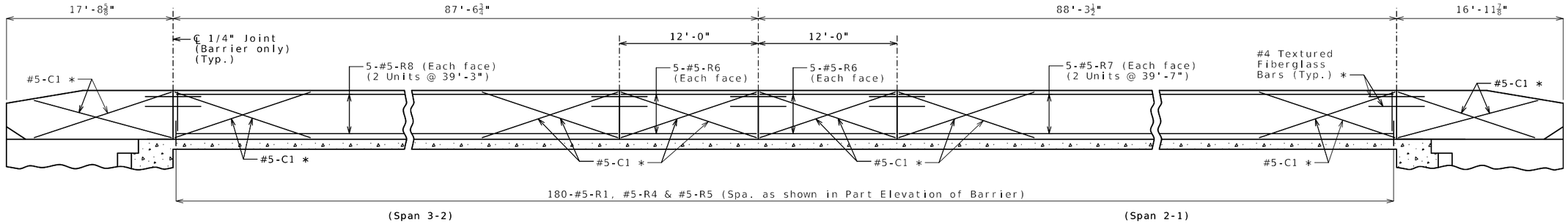
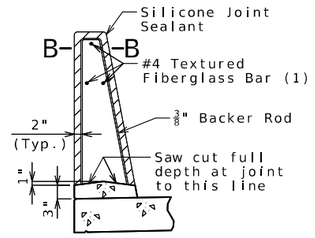
ENGINEERING CORPORATION - 000631

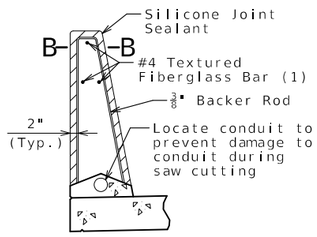


ELEVATION OF RIGHT BARRIER

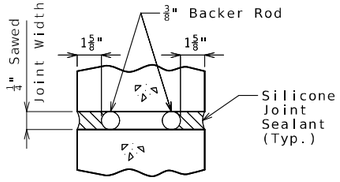
Longitudinal dimensions are horizontal.



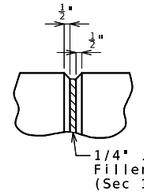
SECTION THRU SAW CUT JOINT



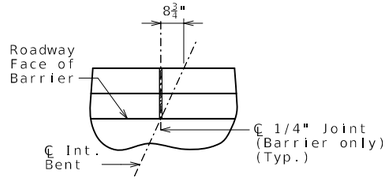
SECTION THRU SAW CUT JOINT AT CONDUIT



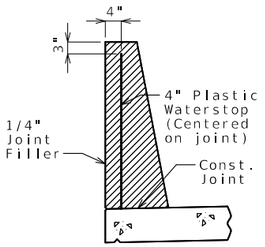
SECTION B-B



PART ELEVATION AT FORMED JOINT



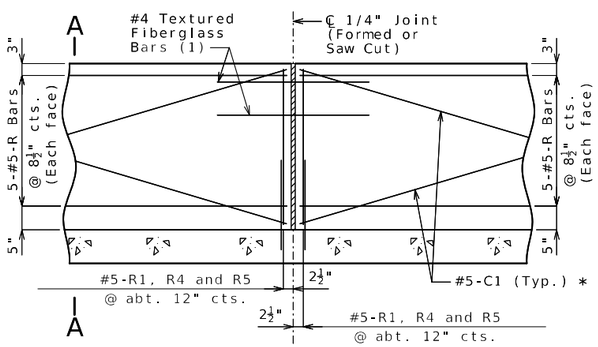
PART PLAN SHOWING JOINT LOCATION



WATERSTOP DETAIL

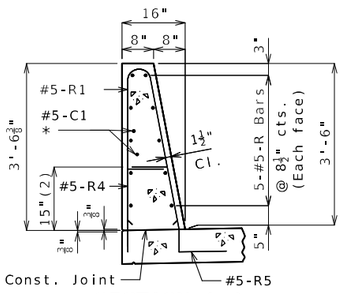
Plastic waterstop shall be placed in all formed joints, except structures with superelevation, use on lower joints only.

Cost of plastic waterstop, complete in place, will be considered completely covered by the contract unit price for Type D Barrier.



PART ELEVATION OF BARRIER

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

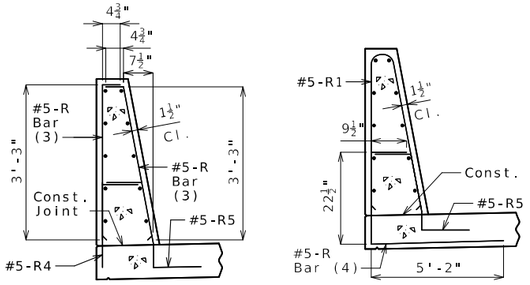


SECTION A-A

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

The cross-sectional area above the slab is 3.52 square feet.

(2) To top of bar



R-BAR PERMISSIBLE ALTERNATE SHAPE

(3) The R1 bar may be separated into two bars as shown, at the contractor's option, only when slip forming is not used. (All dimensions are out to out.)

(4) The R4 bar and #5 bottom transverse slab bar in cantilever (prestressed panels only) combination may be furnished as one bar as shown, at the contractor's option.

General Notes:

* Slip-formed option only.

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

Top of barrier shall be built parallel to grade and barrier joints (except at end bents) normal to grade.

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

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for Type D Barrier per linear foot.

Concrete in barrier shall be Class B-1.

Measurement of barrier is to the nearest linear foot for each structure, measured along the outside top of slab from end of wing to end of wing.

Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Type D Barrier.

Joint sealant and backer rods shall be in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

Plastic waterstop shall not be used with saw cut joints.

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

For Conduit details, see Sheet No. 24.

RIGHT TYPE D BARRIER

Detailed Dec 2024
Checked Dec 2024

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

DATE PREPARED 1/17/2025

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
BR	21

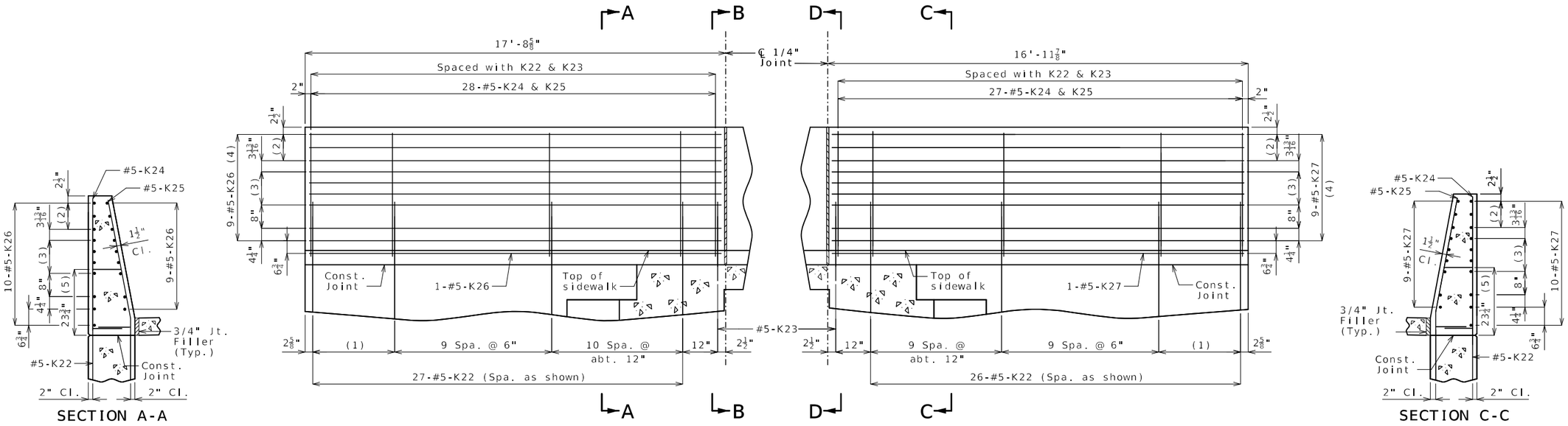
COUNTY: GREENE
JOB NO.: J8S3156
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9317

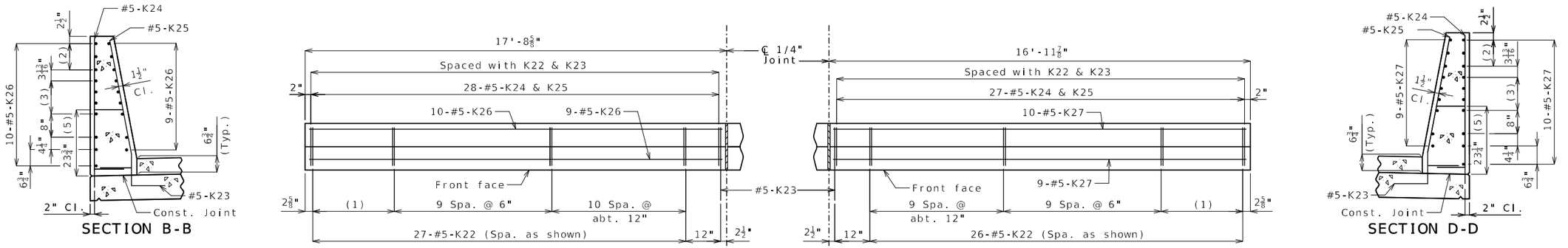
DESCRIPTION | DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631





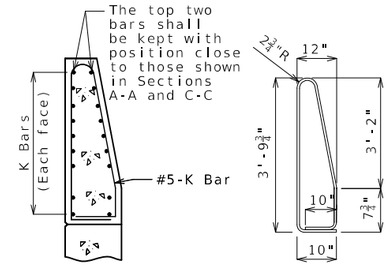
(1) 7 spaces @ 4"

(2) 2 spaces @ 4½"

(3) 3 spaces @ 3 13/16"

(4) Spaced as shown, each face

(5) To top of bar



K24-K25 BAR PERMISSIBLE ALTERNATE SHAPE

(Other K bars not shown for clarity)

The K24-K25 bar combination may be furnished as one bar as shown, at the contractor's option.

All dimensions are out to out.

General Notes:

Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Type D Barrier.

Reinforcing Steel:
Minimum clearance to reinforcing steel shall be 1 1/2" except as shown for bars embedded into end bent.

LEFT TYPE D BARRIER AT END BENTS

Detailed Dec 2024
Checked Dec 2024

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

L:\MoDOT\22004246-00_New\Deliverable\!!!!2025 0120 J8S3156 Bridge Final PS&E\A9317 - Melville over I-44_Bridge\Plan Sheet DGNs\B_A9317_022_J8S3156_Left_Barrier_Details_at_End_Bents.dgn 10:15:39 AM 1/17/2025

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
01/17/2025 11:40:24 AM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
1/17/2025

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
BR	22

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9317

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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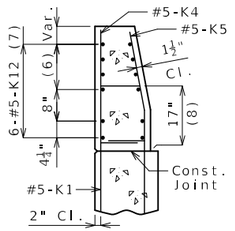
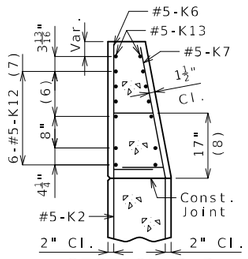
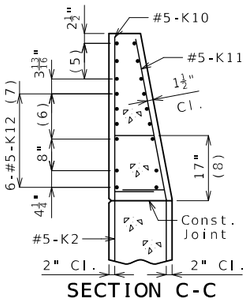


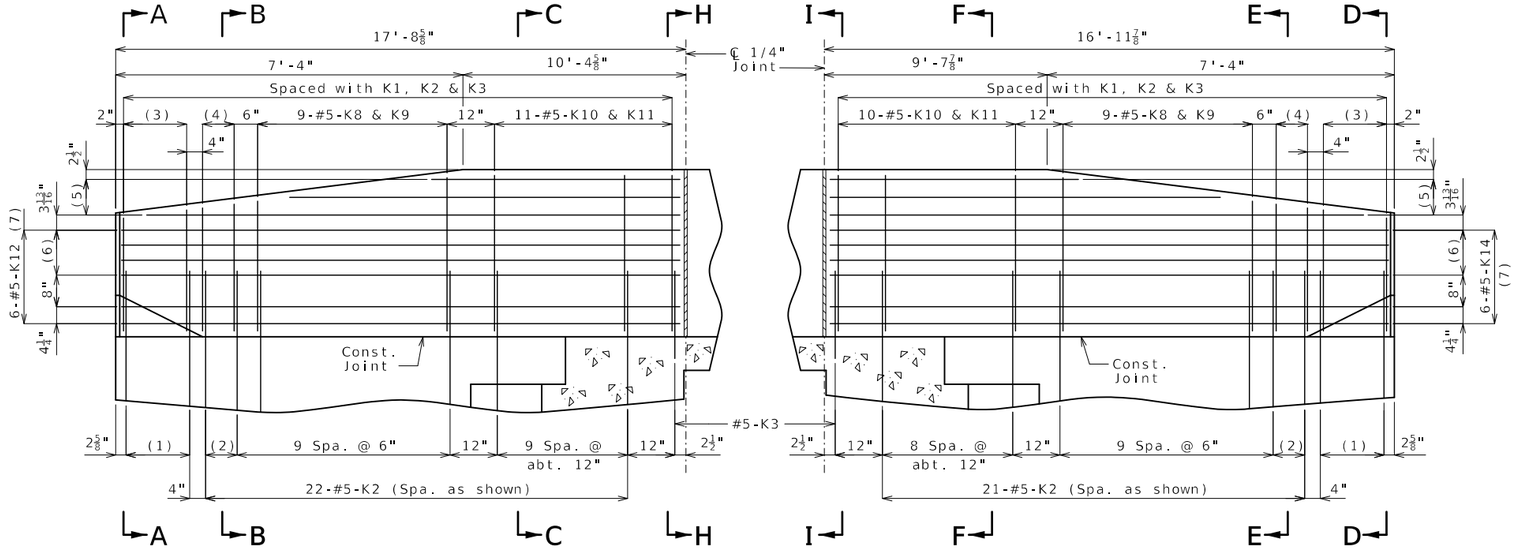
SECTION A-A



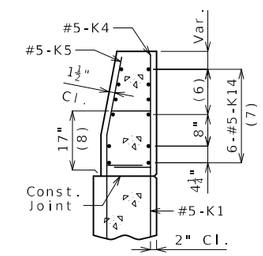
SECTION B-B



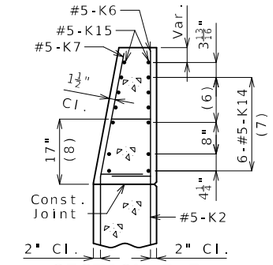
SECTION C-C



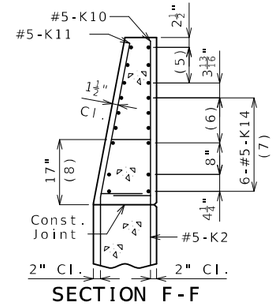
PART ELEVATION



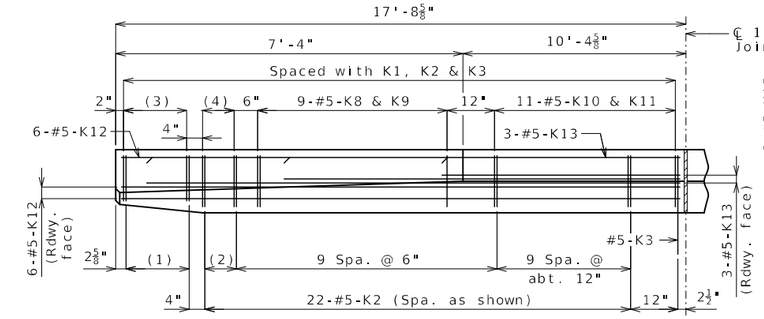
SECTION D-D



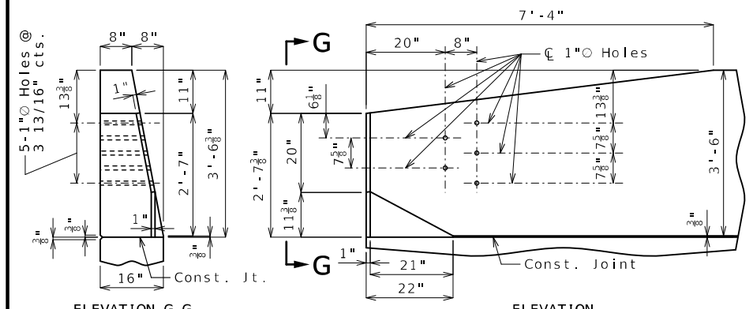
SECTION E-E



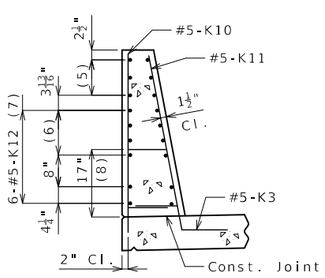
SECTION F-F



PART PLAN



ELEVATION G-G ELEVATION



SECTION H-H

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

(2) 2 spaces @ 4"

(3) 5-#5-K4 & K5

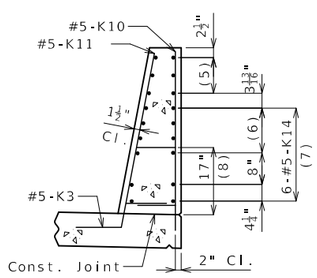
(4) 3-#5-K6 & K7

(5) 3-#5-K13 or K15 @ 4½" cts., each face

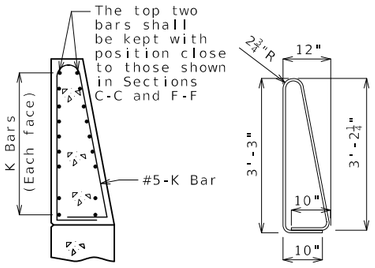
(6) 3 spaces @ 3 13/16"

(7) Spaced as shown, each face

(8) To top of bar



SECTION I-I

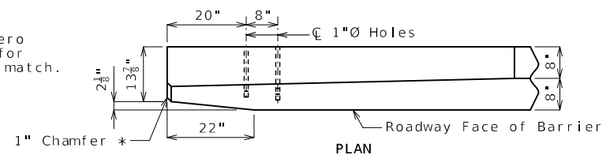


K10-K11 BAR PERMISSIBLE ALTERNATE SHAPE

(Other K bars not shown for clarity)

The K10-K11 bar combination may be furnished as one bar as shown, at the contractor's option.

All dimensions are out to out.



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

DETAILS OF GUARD RAIL ATTACHMENT

General Notes:

Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Type D Barrier.

Reinforcing Steel:
Minimum clearance to reinforcing steel shall be 1 1/2" except as shown for bars embedded into end bent.

RIGHT TYPE D BARRIER AT END BENTS

Detailed Dec 2024
Checked Dec 2024

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

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STATE OF MISSOURI JOSHUA D. JOLLIFF NUMBER PE-2006002824 PROFESSIONAL ENGINEER
01/17/2025 11:40:29 AM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED 1/17/2025
ROUTE CRD 127 | STATE MO
DISTRICT BR | SHEET NO. 23
COUNTY GREENE
JOB NO. J8S3156
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9317

DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

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SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

General Notes:

All conduits shall be rigid nonmetallic schedule 40 heavy wall polyvinyl chloride (PVC) with 3 1/2 inch minimum cover in barrier and 4 1/2 inch minimum cover in abutment wing. Each section of conduit shall bear the Underwriters Laboratories (UL) label.

Shift reinforcing steel in field where necessary to clear conduit and junction boxes.

Expansion fittings shall be placed as shown and set in accordance with the manufacturer's requirements and based on the air temperature at the time of setting given an estimated total expansion movement of 1 inch at filled joints using a maximum temperature range of 120°F and a maximum temperature of 110°F.

Drainage shall be provided at low points or other critical locations of all conduits and all junction boxes in accordance with Sec 707. All conduits shall be sloped to drain where possible.

All end bent junction boxes shall be PVC molded in accordance with Sec 1062 and designed for flush mounting. The conduit terminations shall be permanent or separable. The terminations and covers shall be of watertight construction and shall meet requirements for NEMA 4 or NEMA 4X enclosure.

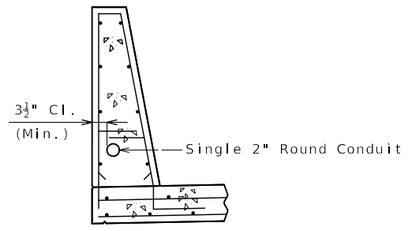
Junction box size shown on plan may require special order. Smaller junction box may be substituted if junction box meets conduit installation, clearance and project requirements.

Payment for furnishing and installing Conduit System, complete in place, will be considered completely covered by the contract lump sum price for Conduit System on Structure.

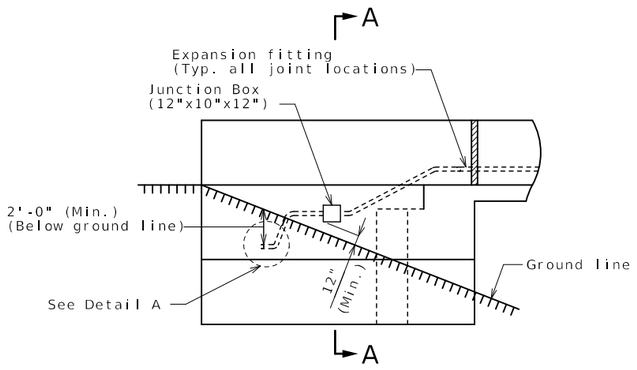
For details and reinforcement of Type D Barrier not shown, see Sheets No. 20, 21, 22 and 23.

Curved Top Decorative Fence not shown for clarity. See Sheet No. 25 for Fence details.

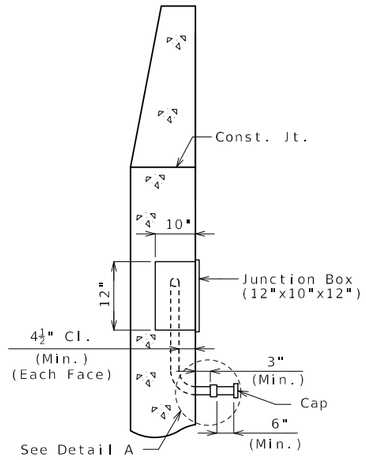
MoDOT Construction Personnel: Indicate in field and on bridge plans for future work the exact loaction of buried conduit at ends of bridge that are capped and not immediately used.



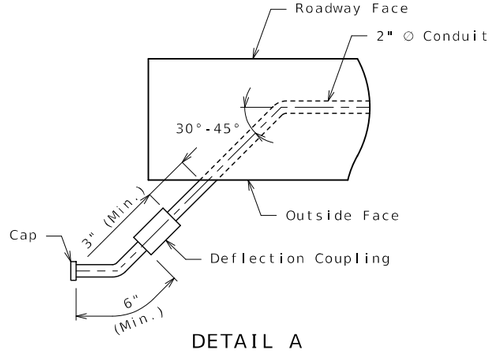
SECTION SHOWING SINGLE CONDUIT IN BARRIER



PART ELEVATION SHOWING
JUNCTION BOX IN WING



PART SECTION A-A



DETAIL A

CONDUIT DETAILS

Detailed Dec 2024
Checked Dec 2024

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

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STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

01/17/2025 11:40:35 AM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
1/17/2025

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
BR	24

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9317

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

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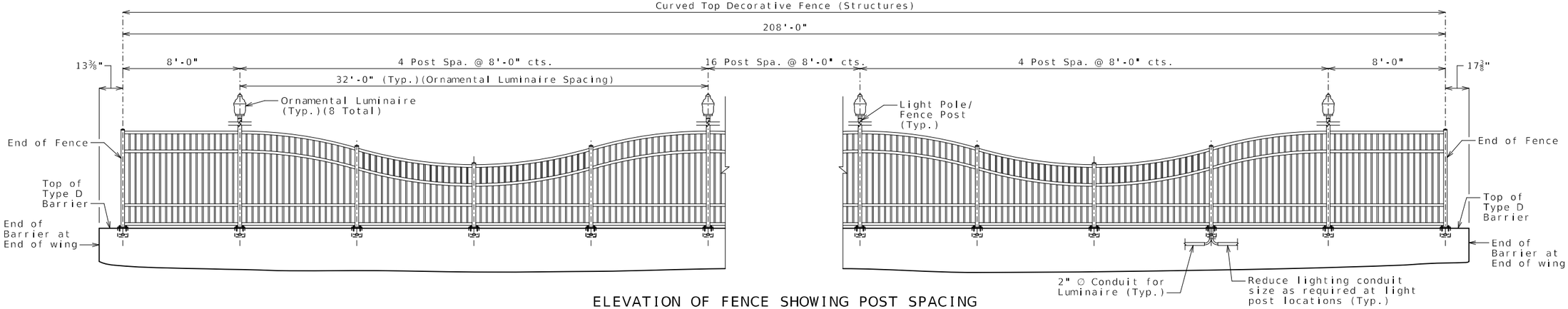
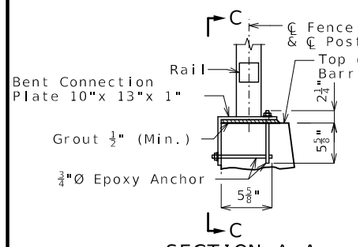
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

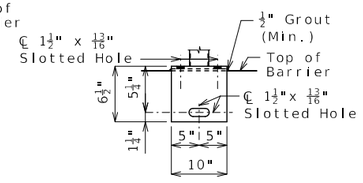


ELEVATION OF FENCE SHOWING POST SPACING

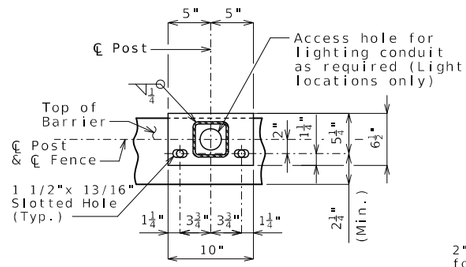
Longitudinal dimensions are horizontal.
(Looking East)



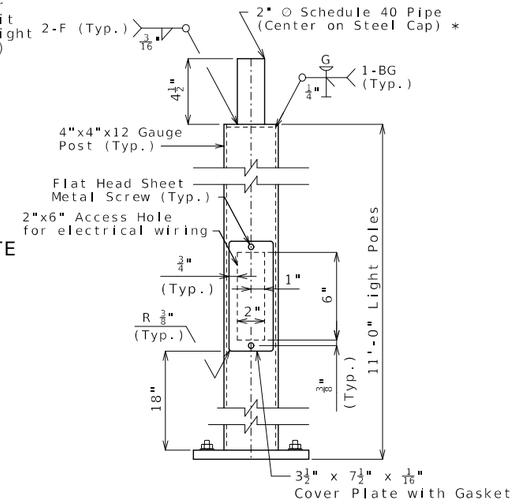
SECTION A-A



ELEVATION C-C



PART PLAN SHOWING CONNECTION PLATE



LIGHT POLE/FENCE POST DETAIL

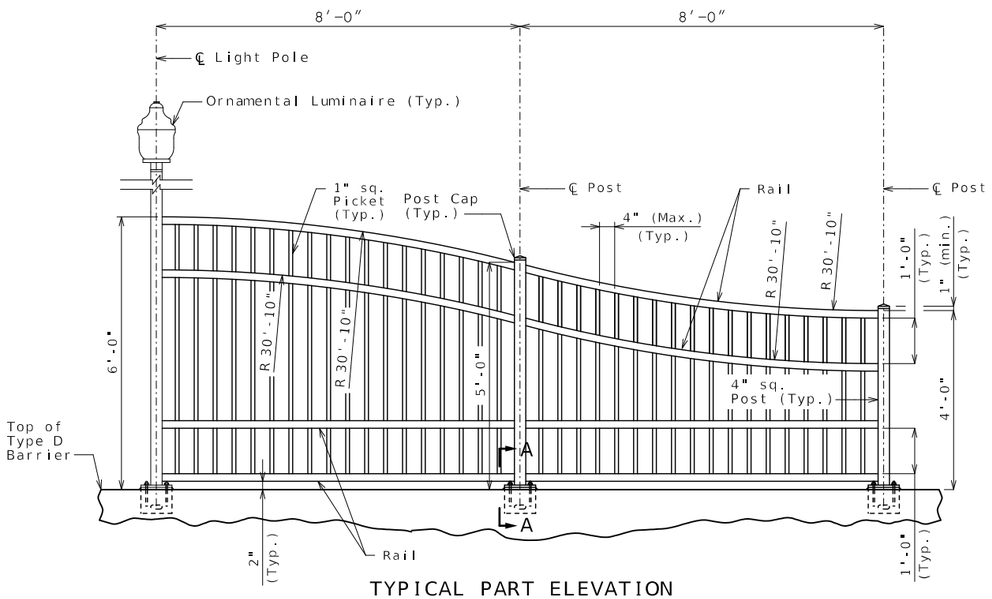
∗ Pipe fabricator shall verify pipe will accomodate light fixture.

Notes:

Light fixture not shown.

All other details per typical fence post detail.

Contractor to reduce lighting conduit size as required at light post locations.



TYPICAL PART ELEVATION

Adjacent panels not shown for clarity.

GENERAL NOTES

These details are a general representation of a Curved Top Decorative Fence. The actual fence components and component positions may be different than what is shown.

Fence shall have a gloss black finish (Federal Standard #17038). See special provisions.

Base plate shall be ASTM A709, Grade 50.

All base plates, U bolts, hex nuts and washers shall be galvanized in accordance with ASTM A123 and Sec 1081.

Measurement of fence will be made horizontally and to the nearest linear foot along centerline fence.

Payment for furnishing and erecting the fence complete in place will be considered completely covered by the contract unit price for Curved Top Decorative Fence (Structures).

All fence posts shall be vertical.

Mortar shall be placed under the post base plates in accordance with Sec 1066.

Curved top decorative fencing shall be in accordance with 2020-AASHTO LRFD Bridge Design Specifications, 9th Ed.

Shop drawings and structural calculations will not be required for the curved top decorative fences on the Bridge Pre-qualified Products List.

All materials used in fabrication and construction of the curved top decorative fencing shall be in accordance with the manufacturer's specifications, except as modified in the contract documents.

Curved top decorative fencing system shall be supplied by only one manufacturer. Decorative fencing system shall include all components except the anchor bolts and hardware. The assembly of the pickets to the rails and the rails to the posts shall be the same as the style mentioned for the manufacturer.

See Bridge Pre-qualified Products List (BPPL) for a list of approved manufacturers..

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

CURVED TOP DECORATIVE FENCE DETAILS

Detailed Dec 2024
Checked Dec 2024

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

L:\MoDOT\22004246-00_New\Deliverable\!!!!2025 0120 J8S3156 Bridge Final PS&E\A9317 - Melville over I-44_Bridge\Plan Sheet DGNs\B_A9317_025_J8S3156_Pedestrian_Fence_Details.dgn 10:15:55 AM 1/17/2025

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
01/17/2025 11:40:42 AM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED: 1/17/2025
ROUTE: CRD 127 | STATE: MO
DISTRICT: BR | SHEET NO.: 25
COUNTY: GREENE
JOB NO.: J8S3156
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9317

DESCRIPTION | DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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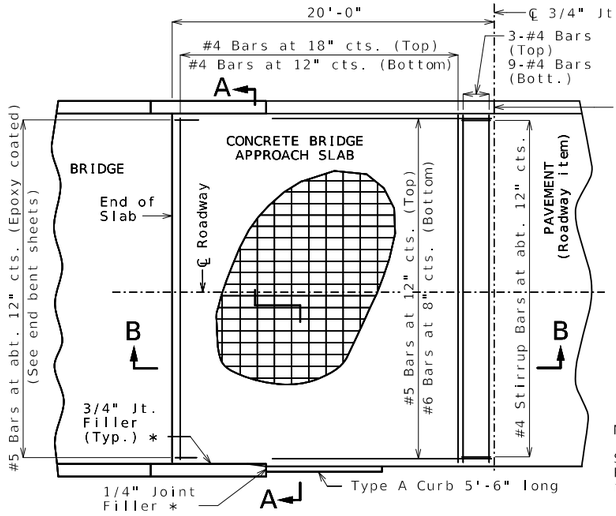
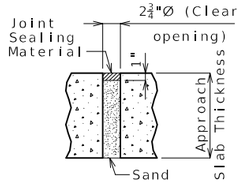
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631



PART PLAN OF SQUARED STRUCTURE
(Skewed structure similar)

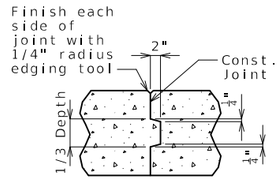
Note:

Sidewalk not shown in Part Plan of Squared Structure for clarity.

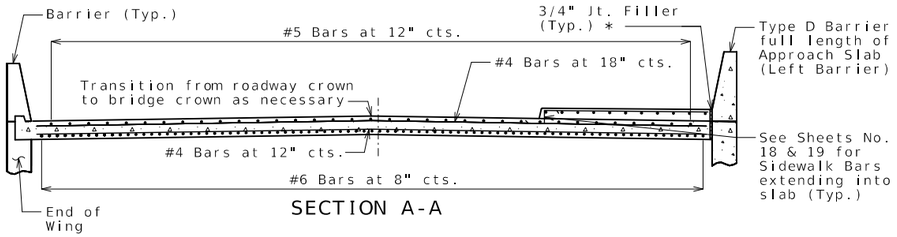


UNDERSEAL ACCESS HOLE DETAIL

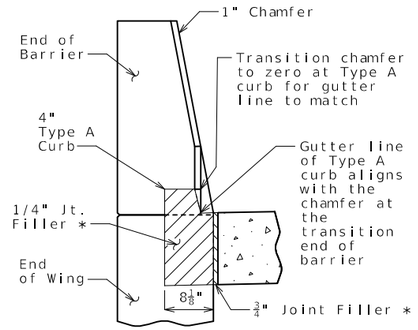
(If required)



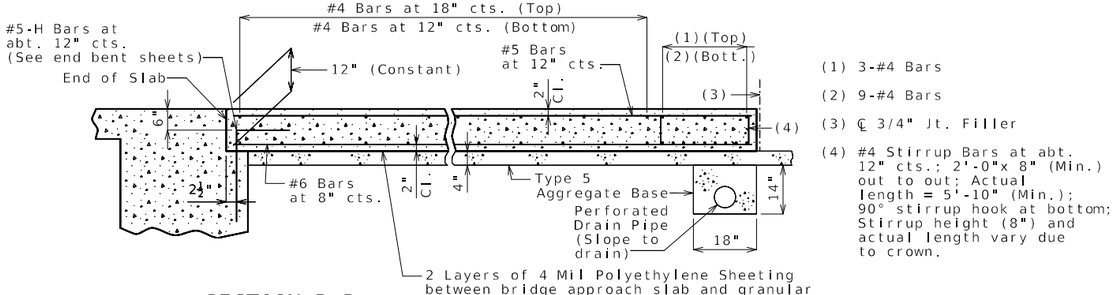
CONSTRUCTION JOINT DETAIL



SECTION A-A



SECTION BETWEEN CURB AND BARRIER



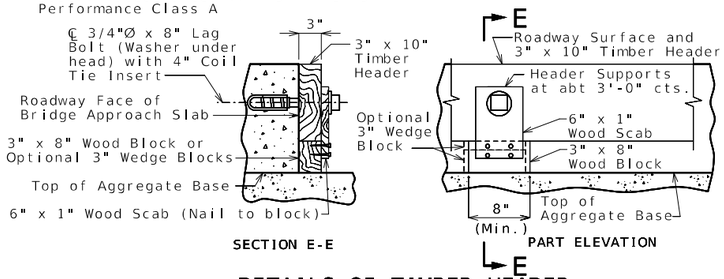
(1) 3-#4 Bars

(2) 9-#4 Bars

(3) ℄ 3/4" Jt. Filler

(4) #4 Stirrup Bars at abt. 12" cts.; 2'-0"x 8" (Min.) out to out; Actual length = 5'-10" (Min.); 90° stirrup hook at bottom; Stirrup height (8") and actual length vary due to crown.

SECTION B-B
(Integral end bent)



DETAILS OF TIMBER HEADER
Remove timber header when concrete pavement is placed.

General Notes:

Contractor shall construct the concrete slab in accordance with this sheet.

The contractor shall pour and satisfactorily finish the bridge slab before placing the bridge approach slab.

All concrete for the bridge approach slab shall be in accordance with Sec 503 (f'c = 4,000 psi).

The reinforcing steel in the bridge approach slab shall be epoxy coated Grade 60 with fy = 60,000 psi.

Longitudinal construction joints in bridge approach slab shall be aligned with longitudinal construction joints in bridge slab.

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

The reinforcing steel in the bridge approach slab shall be continuous. The transverse reinforcing steel may be made continuous by providing a minimum lap splice of 23 inches for #4 bars, or by mechanical bar splice.

All joint filler shall be in accordance with Sec 1057 for preformed fiber expansion joint filler except as noted.

Payment for furnishing all materials, labor and excavation necessary to construct the concrete bridge approach slab, including the timber header, underdrain, Type 5 aggregate base, joint filler, and all other appurtenances and incidental work as shown on this sheet, complete in place, will be considered completely covered by the contract unit price for Bridge Approach Slab (Minor) per square yard.

See Missouri Standard Plan 609.00 for details of Type A curb.

Drain pipe may be either 6" diameter corrugated metallic-coated pipe underdrain, 4" diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4" diameter corrugated polyethylene (PE) drain pipe.

* Seal joint between vertical face of approach slab and wing with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

BRIDGE APPROACH SLAB (MINOR)

Detailed Dec 2024
Checked Dec 2024

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

L:\MoDOT\22004246-00_New\Deliverable\!!!!2025 0120 J8S3156 Bridge Final PS&E\A9317 - Melville over I-44_Bridge\Plan Sheet DGNs\B_A9317_026_J8S3156_Apporach_Slab_Minor.dgn 10:15:59 AM 1/17/2025

DATE PREPARED: 1/17/2025

ROUTE: CRD 127 | STATE: MO

DISTRICT: BR | SHEET NO.: 26

COUNTY: GREENE

JOB NO.: J8S3156

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.: A9317

DATE	DESCRIPTION

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

CMT
CRAWFORD, MURPHY & TILLY, INC.
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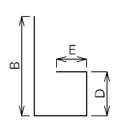
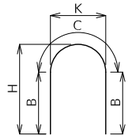
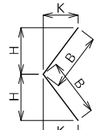


SHAPE 6
or 6S



SHAPE 7



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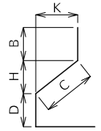

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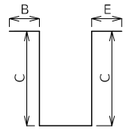
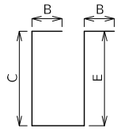


SHAPE 10
or 10S



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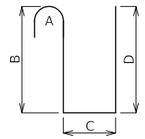

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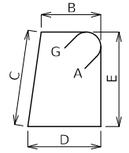

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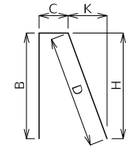

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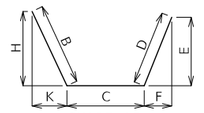

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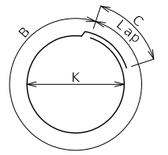

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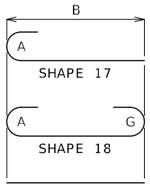
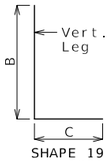


SHAPE 17
SHAPE 18
SHAPE 20



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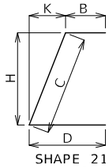

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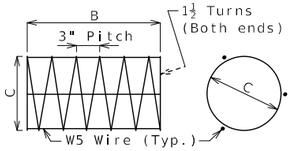
or 21S



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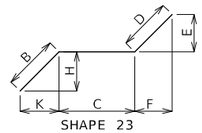

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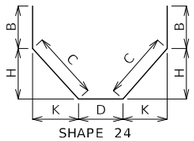
or 23S



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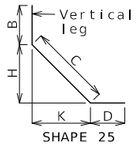
or 24S



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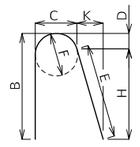

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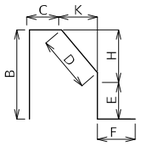

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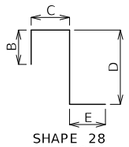

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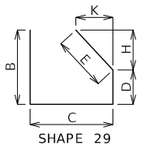

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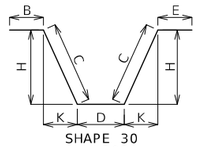

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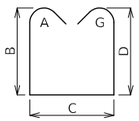

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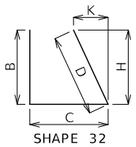

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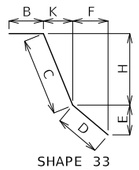

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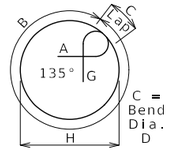

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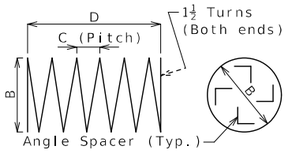

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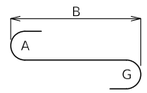
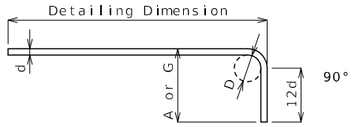


SHAPE 36

Finished Bend Diameters D and Hook Dimensions

Standard Pin Bend Shapes

Size	Case	D	A or G		J
			90°	180°	180°
#4	1	3"	8"	6"	4"
#5	1	3¾"	10"	7"	5"
#6	1	4½"	12"	8¼"	6"
#7	2	5¼"	14"	9¾"	7"
	3	7"	15"	11½"	8¾"
#8	2	6"	16"	11"	8"
	3	8"	17"	13¼"	10"
#9	1	9½"	19½"	15½"	11¾"
#10	1	10¾"	22"	17½"	13¼"
#11	1	12"	24½"	19½"	14⅞"
#14	1	18¼"	31¼"	27½"	21⅝"
#18	1	24"	41½"	36¾"	28½"

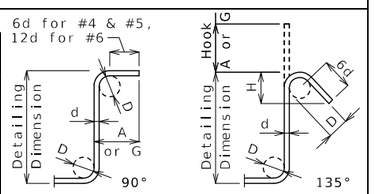


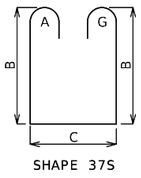
Stirrup Pin Bend Shapes (S)

Size	Case	D	A or G			H	J
			90°	135°	180°	135°	180°
#4	2	2"	4½"	4½"	5"	2⅝"	3"
	3	3"	5"	5¼"	6"	3"	4"
#5	2	2½"	5¾"	5¾"	5¾"	3⅝"	3¾"
	3	3¾"	6¼"	6½"	7"	3⅞"	5"
#6	1	4½"	12"	7¾"	8¼"	4⅝"	6"

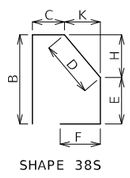
Applicable for all grades of steel.

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





SHAPE 37S



SHAPE 38S

BENDING DIAGRAMS

All dimensions are out to out.

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

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

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

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

Reinforcing Steel Totals (Pounds)

		Substructure		Superstructure					Entire Bridge	
				Slab			Slip			
	Size	Plain	Epoxy	Plain	Epoxy	Barrier	Form	Sidewalk	Plain	Epoxy
By Size	W5	0	0	0	0	0	0	0	0	0
	4	0	0	0	1,371	0	0	4,114	0	5,485
	5	0	0	0	4,328	12,339	401	0	0	17,068
	6	5,169	5,820	0	44,029	0	0	0	5,169	49,849
	7	0	103	0	0	0	0	0	0	103
	8	0	0	0	26,087	0	0	0	0	26,087
	9	0	0	0	0	0	0	0	0	0
	10	0	21,492	0	0	0	0	0	0	21,492
	11	0	0	0	0	0	0	0	0	0
	14	0	0	0	0	0	0	0	0	0
	18	0	0	0	0	0	0	0	0	0
By Type		5,169	27,415	0	75,815	12,339	401	4,114	5,169	120,084

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

BENDING DIAGRAMS AND REINFORCING STEEL TOTALS

Detailed Dec 2024
Checked Dec 2024

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

Sheet No. 27 of 39

L:\MoDOT\22004246-00_New\Deliverable\!!!!2025 0120 J8S3156 Bridge Final PS&E\A9317 - Melville over I-44_Bridge\Plan Sheet DGNs\B_A9317_027_J8S3156_Bill_of_Reinforcing1.dgn 10:16:05 AM 1/17/2025

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
ENGINEER

01/17/2025 11:41:15 AM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
1/17/2025

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
BR	27

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9317

DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

CMT

CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

Bill of Reinforcing Steel

No. Req.	Size/ Mark	Location	Codes C	SH	V	Dimensions B ft in.	C ft in.	D ft in.	E ft in.	F ft in.	H ft in.	K ft in.	Nom. Length ft in.	Actual Length ft in.	Weight lb
		SUBSTRUCTURE													
		INT. BENT 2													
20	7 D200	BEAM	E	20		2 6.00							2 6	2 6	103
10	10 H201	BEAM	E	20		50 9.00							50 9	50 9	2,184
10	10 H202	BEAM	E	18		50 9.00							53 8	53 8	2,310
4	6 H203	BEAM	E	20		7 0.00							7 0	7 0	43
12	6 H204	BEAM	E	20		50 9.00							50 9	50 9	915
16	6 H205	BEAM	E	10S			12.00	4 0.50					6 1	5 9	139
32	6 U201	BEAM	E	13S		2 11.00	4 3.00	2 11.00	4 3.00				15 8	15 2	729
48	6 U202	BEAM	E	13S		4 3.00	4 3.00	4 3.00	4 3.00				18 4	17 10	1,286
4	6 U203	BEAM	E	13S		4 3.00	4 7.00	4 3.00	4 7.00				19 0	18 6	112
8	6 U204	BEAM	E	10S			4 3.00	4 3.00					12 9	12 5	150
4	6 U205	BEAM	E	10S			4 7.00	4 3.00					13 5	13 1	79
13	6 U206	BEAM	E	10S			12.00	4 3.00					6 3	5 11	116
60	10 V201	COLUMN	E	17		19 3.00							20 9	20 9	5,358
60	10 V202	COLUMN	E	20		45 1.00							45 1	45 1	11,640
111	6 P201	COLUMN	E	16		9 5.00	4 3.00					3 0.00	13 8	13 6	2,251
279	6 P202	COLUMN		16		9 5.00	3 1.00					3 0.00	12 6	12 4	5,169
		SUPERSTRUCTURE													
		END BENT 1													
4	6 F101	DIAPHRAGM	E	21			3 7.25	6 8.00			3 2.00	20.75	10 3	9 11	60
4	6 F102	DIAPHRAGM	E	14			5 2.50	3 7.25			3 2.00	20.75	8 10	8 9	53
10	6 F103	WING BRACE	E	15		2 3.00	7 8.00	14.00	12.00	7.00	13.75	23.25	11 1	11 0	166
10	6 F104	WING BRACE	E	15		14.00	4 7.50	2 3.00	23.25	13.75	7.00	12.00	8 1	8 0	121
45	5 H101	DIAPHRAGM	E	19		2 0.00	15.00						3 3	3 1	145
4	8 H102	BEAM	E	20		54 0.00							54 0	54 0	577
4	8 H103	BEAM	E	20		54 0.00							54 0	54 0	577
4	6 H104	BEAM	E	20		54 0.00							54 0	54 0	325
4	6 H105	BEAM	E	20	2	42 11.50							43 0	43 0	
		INCR. = 20 IN.				44 8.25							44 8	44 8	264
4	6 H106	DIAPHRAGM	E	20		54 0.00							54 0	54 0	325
12	6 H107	DIAPHRAGM	E	20		10 0.00							10 0	10 0	181
4	6 H108	DIAPHRAGM	E	20		7 5.00							7 5	7 5	45
6	6 H109	DIAPHRAGM	E	20		3 9.00							3 9	3 9	34
2	6 H110	DIAPHRAGM	E	20		2 3.00							2 3	2 3	7
4	8 H111	DIAPHRAGM	E	20		54 0.00							54 0	54 0	577
5	5 H112	DIAPHRAGM	E	23		15.00	3 3.00	15.00	7.25	13.25	7.25	13.25	5 9	5 9	30
8	8 H151	WING WALL	E	20		15 6.00							15 6	15 6	332
22	6 H152	WING WALL	E	20		14 8.00							14 8	14 8	485
8	8 H153	WING WALL	E	20		15 6.00							15 6	15 6	332
20	6 H154	WING WALL	E	20		14 8.00							14 8	14 8	441
69	6 U101	DIAPHRAGM	E	19S		3 0.00	5 6.00						8 6	8 4	864
34	5 U102	DIAPHRAGM	E	10S			3 9.00	3 1.00					10 7	10 4	367
34	6 U103	DIAPHRAGM	E	19S		3 7.25	3 0.00						6 7	6 5	328
2	5 U104	BEAM	E	10S			5 7.00	3 7.25					14 9	14 7	31
12	5 U105	BEAM	E	10S			6 2.00	3 7.25					15 11	15 9	198
10	5 U106	BEAM	E	10S			6 3.00	3 7.25					16 1	15 11	167
4	4 U107	BEAM	E	10S			3 1.75	3 7.25					9 11	9 9	27
7	4 U108	BEAM	E	13S		3 7.25	2 8.00	3 7.25	2 8.00				13 4	13 0	61
27	4 U109	BEAM	E	13S		3 7.25	3 1.75	3 7.25	3 1.75				14 3	14 0	253
30	6 V101	DIAPHRAGM	E	20		3 1.00							3 1	3 1	139
2	5 V102	BEAM	E	20		5 11.00							5 11	5 11	13
18	5 V103	BEAM	E	20		6 3.00							6 3	6 3	118
2	6 V151	WING WALL	E	20		7 1.00							7 1	7 1	22
26	6 V152	WING WALL	E	20	2	7 1.50							7 2	7 2	
		INCR. = 0.25 IN.				7 5.25							7 5	7 5	285
2	6 V153	WING WALL	E	20		6 6.00							6 6	6 6	20
26	6 V154	WING WALL	E	20	2	6 6.75							6 7	6 7	
		INCR. = 0.33 IN.				6 11.25							6 11	6 11	264

Bill of Reinforcing Steel

No. Req.	Size/ Mark	Location	Codes C	SH	V	Dimensions B ft in.	C ft in.	D ft in.	E ft in.	F ft in.	H ft in.	K ft in.	Nom. Length ft in.	Actual Length ft in.	Weight lb
		END BENT 3													
4	6 F301	DIAPHRAGM	E	21			3 7.25	6 8.00			3 2.00	20.75	10 3	9 11	60
4	6 F302	DIAPHRAGM	E	14			5 2.50	3 7.25			3 2.00	20.75	8 10	8 9	53
10	6 F303	WING BRACE	E	15		2 3.00	7 8.00	14.00	12.00	7.00	13.75	23.25	11 1	11 0	166
10	6 F304	WING BRACE	E	15		14.00	4 7.50	2 3.00	23.25	13.75	7.00	12.00	8 1	8 0	121
45	5 H301	DIAPHRAGM	E	19		2 0.00	15.00						3 3	3 1	145
4	8 H302	BEAM	E	20		54 0.00							54 0	54 0	577
4	8 H303	BEAM	E	20		54 0.00							54 0	54 0	577
4	6 H304	BEAM	E	20		54 0.00							54 0	54 0	325
4	6 H305	BEAM	E	20		21 9.00							21 9	21 9	131
4	6 H306	DIAPHRAGM	E	20		54 0.00							54 0	54 0	325
12	6 H307	DIAPHRAGM	E	20		10 0.00							10 0	10 0	181
4	6 H308	DIAPHRAGM	E	20		7 5.00							7 5	7 5	45
6	6 H309	DIAPHRAGM	E	20		3 9.00							3 9	3 9	34
2	6 H310	DIAPHRAGM	E	20		2 3.00							2 3	2 3	7
4	8 H311	DIAPHRAGM	E	20		54 0.00							54 0	54 0	577
5	5 H312	DIAPHRAGM	E	23		15.00	3 3.00	15.00	7.25	13.25	7.25	13.25	5 9	5 9	30
8	8 H351	WING WALL	E	20		15 6.00							15 6	15 6	332
22	6 H352	WING WALL	E	20		14 8.00							14 8	14 8	485
8	8 H353	WING WALL	E	20		15 6.00							15 6	15 6	332
22	6 H354	WING WALL	E	20		14 8.00							14 8	14 8	485
69	6 U301	DIAPHRAGM	E	19S		3 0.00	5 6.00						8 6	8 4	864
34	5 U302	DIAPHRAGM	E	10S			3 9.00	3 1.00					10 7	10 4	367
34	6 U303	DIAPHRAGM	E	19S		3 7.25	3 0.00						6 7	6 5	328
24	5 U304	BEAM	E	10S			6 3.00	3 7.25					16 1	15 11	399
4	4 U305	BEAM	E	10S			2 11.50	3 7.25					9 6	9 4	25
22	4 U306	BEAM	E	13S		3 7.25	2 8.00	3 7.25	2 8.00				13 4	13 0	192
12	4 U307	BEAM	E	13S		3 7.25	2 11.50	3 7.25	2 11.50				13 11	13 7	109
30	6 V301	DIAPHRAGM	E	20		3 4.00							3 4	3 4	151
20	5 V302	BEAM	E	20		6 3.00							6 3	6 3	131
2	6 V351	WING WALL	E	20		7 4.00							7 4	7 4	23
26	6 V352	WING WALL	E	20	2	7 4.00							7 4	7 4	
		INCR. = 0.08 IN.				7 3.00							7 3	7 3	285
		INT. DIAPHRAGM													
8	6 H240	DIAPHRAGM	E	20		7 6.00							7 6	7 6	91
8	6 H241	DIAPHRAGM	E	20		10 0.00							10 0	10 0	121
24	4 H242	DIAPHRAGM	E	20		10 0.00							10 0	10 0	161
6	5 H243	DIAPHRAGM	E	23		15.00	3 3.00	15.00	7.25	13.25	7.25	13.25	5 9	5 9	36
4	5 H244	DIAPHRAGM	E	14			3 10.00	15.00			7.25	13.25	5 1	5 1	22
48	4 U240	DIAPHRAGM	E	28S			18.00	4 2.50	2 7.00				8 4	8 1	260
16	6 U241	DIAPHRAGM	E	28S			2 2.00	4 2.75	3 3.00				9 8	9 4	225
16	6 U242	DIAPHRAGM	E	28S			2 2.00	3 5.75	3 3.00				8 11	8 7	207
8	6 U243	DIAPHRAGM	E	28S			2 2.00	3 5.25	2 7.00				8 2	7 10	95
4	5 U244	DIAPHRAGM	E	6S		4 10.00	10.50						5 9	5 6	23
16	5 U245	DIAPHRAGM	E	6S		4 10.00	10.50	20.00					7 5	7 2	120
8	5 V240	DIAPHRAGM	E	20		4 2.00							4 2	4 2	35
		SLAB													
74	6 S1	SLAB	E	20		55 0.00							55 0	55 0	6,114
123	8 S2	SLAB	E	20		30 5.00							30 5	30 5	9,990
12	6 S3	SLAB	E	20		35 0.00							35 0	35 0	631
18	8 S4	SLAB	E	20		43 11.00							43 11	43 11	2,111
30	6 S5	SLAB	E	20		36 10.00							36 10	36 10	1,660
72	8 S6	SLAB	E	20		41 0.00							41 0	41 0	7,882
12	8 S7	SLAB	E	20		41 0.00							41 0	41 0	1,314
315	6 S8	SLAB	E	20		47 5.00							47 5	47 5	22,435
98	6 S9	SLAB	E	20	2	2 9.50							2 10	2 10	
		INCR. = 10.96 IN.				46 8.00							46 8	46 8	3,644
362	5 S10	SLAB	E	20		5 2.00							5 2	5 2	1,951
141	4 S11	SLAB	E	20		3 0.00							3 0	3 0	283

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

For bending diagrams and steel reinforcing totals, see Sheet No. 27.

All bars shall be Grade 60.

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

SH = Required shape, see bending diagrams.

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

Detailed Dec 2024
Checked Dec 2024

BILL OF REINFORCING STEEL 1

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

DATE PREPARED 1/17/2025

ROUTE CRD 127 | STATE MO

DISTRICT BR | SHEET NO. 28

COUNTY GREENE

JOB NO. J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9317

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

Bill of Reinforcing Steel

No. Req.	Size/ Mark	Location	Codes C	SH	V	Dimensions B ft in.	C ft in.	D ft in.	E ft in.	F ft in.	H ft in.	K ft in.	Nom. Length ft in.	Actual Length ft in.	Weight lb
		BARRIER													
376	5 R1	BARRIER	E	26		3 3.00	5.50	2.25	3 1.25	5.50	3 0.75	6.75	7 0	6 9	2,648
196	5 R2	BARRIER	E	19S		2 3.25	9.50						3 1	2 11	597
196	5 R3	BARRIER	E	27S			9.50	15.25	11.75	12.00	15.00	3.00	4 0	3 10	784
180	5 R4	BARRIER	E	19S		20.50	9.50						2 6	2 5	454
180	5 R5	BARRIER	E	27S			9.50	15.25	5.00	12.00	15.00	3.00	3 6	3 3	611
42	5 R6	BARRIER	E	20		11 8.00							11 8	11 8	512
42	5 R7	BARRIER	E	20		39 7.00							39 7	39 7	1,734
42	5 R8	BARRIER	E	20		39 3.00							39 3	39 3	1,720
11	5 R9	BARRIER	E	20		6 1.00							6 1	6 1	70
11	5 R10	BARRIER	E	20		6 10.00							6 10	6 10	79
10	5 K1	BARRIER	E	27S		3 8.00	9.25	5.25	3 2.75		5.25	1.00	8 1	7 11	83
43	5 K2	BARRIER	E	27S		3 8.00	9.25	14.50	2 5.75		14.25	2.75	8 2	7 11	356
2	5 K3	BARRIER	E	27S		22.50	9.25	14.50	7.75	12.00	14.25	2.75	5 6	5 2	11
10	5 K4	BARRIER	E	19S	2	2 4.25	10.00						3 2	3 1	
		INCR. = 0.5 IN.				2 6.25	10.00						3 4	3 3	34
10	5 K5	BARRIER	E	38S	2			18.50	9.50	8.25	18.00	4.00	3 0	2 11	
		INCR. = 0.5 IN.						20.50	9.50	8.25	20.00	4.50	3 2	3 1	32
6	5 K6	BARRIER	E	19S		2 6.75	10.00						3 5	3 3	21
6	5 K7	BARRIER	E	21S			2 6.75	10.00			2 6.00	6.25	3 5	3 3	21
18	5 K8	BARRIER	E	19S	2	2 8.50	10.00						3 7	3 5	
		INCR. = 0.75 IN.				3 2.50	10.00						4 1	3 11	69
18	5 K9	BARRIER	E	21S	2		2 8.50	10.00			2 7.75	6.75	3 7	3 5	
		INCR. = 0.75 IN.					2 2.50	10.00			3 1.75	7.75	3 1	2 11	60
21	5 K10	BARRIER	E	19S		3 3.00	10.00						4 1	4 0	88
21	5 K11	BARRIER	E	21S			3 3.00	10.00			3 2.25	7.75	4 1	3 11	86
12	5 K12	BARRIER	E	20		17 5.00							17 5	17 5	218
6	5 K13	BARRIER	E	20	2	16 8.00							16 8	16 8	
		INCR. = 36 IN.				10 8.00							10 8	10 8	86
12	5 K14	BARRIER	E	20		16 8.00							16 8	16 8	209
6	5 K15	BARRIER	E	20	2	15 11.00							15 11	15 11	
		INCR. = 36 IN.				9 11.00							9 11	9 11	81
53	5 K22	BARRIER	E	27S		4 2.75	9.25	14.50	3 0.50		14.25	2.75	9 3	9 1	503
2	5 K23	BARRIER	E	27S		2 5.25	9.25	14.50	14.50	12.00	14.25	2.75	6 8	6 4	14
55	5 K24	BARRIER	E	19S		3 9.75	10.00						4 8	4 6	259
55	5 K25	BARRIER	E	29S			10.00	6.75	3 3.00		3 2.25	7.25	4 8	4 6	259
18	5 K26	BARRIER	E	20		17 5.00							17 5	17 5	327
18	5 K27	BARRIER	E	20		16 8.00							16 8	16 8	313
		SLIP-FORM													
32	5 C1	SLIP-FORM	E	20		12 0.00							12 0	12 0	401
		SIDEWALK													
22	4 S12	SIDEWALK	E	20		19 8.00							19 8	19 8	290
44	4 S13	SIDEWALK	E	20		41 0.00							41 0	41 0	1,206
22	4 S14	SIDEWALK	E	20		11 8.00							11 8	11 8	172
230	4 S15	SIDEWALK	E	20		14 6.00							14 6	14 6	2,228
230	4 S16	SIDEWALK	E	28S			6.00	7.50	6.00				1 8	1 5	218

Bill of Reinforcing Steel

No. Req.	Size/ Mark	Location	Codes C	SH	V	Dimensions B ft in.	C ft in.	D ft in.	E ft in.	F ft in.	H ft in.	K ft in.	Nom. Length ft in.	Actual Length ft in.	Weight lb

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

For bending diagrams and steel reinforcing totals, see Sheet No. 27.

All bars shall be Grade 60.

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

SH = Required shape, see bending diagrams.

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

BILL OF REINFORCING STEEL 2

Detailed Dec 2024
Checked Dec 2024

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

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
01/17/2025 11:41:27 AM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
1/17/2025

ROUTE	STATE
CRD 127	MO

DISTRICT	SHEET NO.
BR	29

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9317

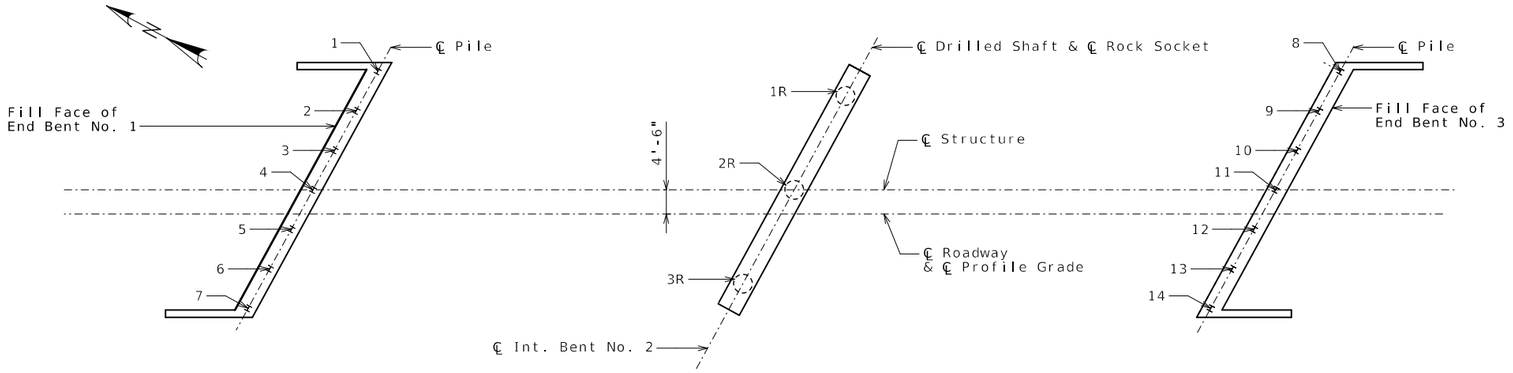
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

CMT

CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631



PART PLAN SHOWING NUMBERING FOR RECORDING AS-BUILT PILE AND DRILLED SHAFT DATA

As-Built Pile Data

Pile No.	Length in Place (ft)	Computed Nominal Axial Compressive Resistance (kips)	Remarks
			End Bent No. 1
1			
2			
3			
4			
5			
6			
7			

As-Built Drilled Shaft Data

Shaft No.	Top of Sound Rock (Elev.)	Tip of Casing (Elev.)	Bottom of Rock Socket (Elev.)	Remarks
				Intermediate Bent No. 2
1R				
2R				
3R				

As-Built Pile Data

Pile No.	Length in Place (ft)	Computed Nominal Axial Compressive Resistance (kips)	Remarks
			End Bent No. 3
8			
9			
10			
11			
12			
13			
14			

Note:
Indicate in remarks column:
A. Pile type and grade
B. Batter
C. Driven to practical refusal

This sheet to be completed by MoDOT construction personnel.

AS-BUILT PILE AND DRILLED SHAFT DATA

Detailed Dec 2024
Checked Dec 2024

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

L:\MoDOT\22004246-00_New\Deliverable\!!!!2025 0120 J8S3156 Bridge Final PS&E\A9317 - Melville over I-44_Bridge\Plan Sheet DGNs\B_A9317_030_J8S3156_As-Built_Pile_Data.dgn 10:16:21 AM 1/17/2025

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
01/17/2025 11:41:33 AM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
1/17/2025

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
BR	30

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9317

DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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CMT
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1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

Missouri Department of Transportation
Construction and Materials

BORING NO. B-101
Page 1 of 1

Job No.: 20221081.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** RK
Station: **Northing:** 516999.5688 **Date of Work:** 09/26/22-09/26/22
Offset: **Easting:** 1398304.61 **Depth to Water:**
Elevation: 1220.8 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550,Auger Cuttings, NQ
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 96% **Drilling Method:** FA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-0.5' Portland cement concrete (6")	1220						
		0.5-0.7' Crushed limestone (1.66")							
		0.7-25.0' (CH) Brown, fat CLAY							
5			1215						
10			1210						
15			1205						
20			1200						
25		Refusal at 25.0 feet. Bottom of borehole at 25.0 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: **Coordinate Zone:** **Coordinate Proj. Factor:**
Coordinate Datum: **Coordinate Units:** U.S. Survey Feet

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LETTER BOREHOLE - MODOT 20150728.GDT - 11/10/23 17:58 - \\TSI\PROJECTS\STL\GEOTECH\2022 PROJECTS\20221081.00 REPLACEMENT OF MELVILLE RD A0441) BRIDGE OVER I-44 (J8S3156)\WORKING FILES\MODOT GINT\MELVILLE MODOT.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. B-102
Page 1 of 1

Job No.: 20221081.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** RK
Station: **Northing:** 517001.1428 **Date of Work:** 09/26/22-09/26/22
Offset: **Easting:** 1398240.9308 **Depth to Water:**
Elevation: 1221.3 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550,Split-Spoon Sampler, NQ
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 96% **Drilling Method:** FA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-0.8' Portland cement concrete (9.6")							
		0.8-1.0' Crushed limestone (2.4")	1220		44	4-6-6 (18)		PP = 3.50 tsf	MC = 35.9%
		1.0-3.8' (CH) Brown, fat CLAY, trace sand and gravel							
5		3.8-8.0' Tan, highly weathered LIMESTONE			80	20-44-50/0.3'			MC = 13.5%
			1215		0	50/0.2'			
10		8.0-14.0' LIMESTONE, gray, soft to hard, moderately to completely weathered, finely to coarsely crystalline, thin bedded 8.5' - pitted below 8.5 ft.	1210		86 (0)				
					80 (0)				
15		14.0-15.0' - possible clay washout from 14.0 to 15.0 ft.	1205						
		15.0-18.0' LIMESTONE, gray, soft to hard, moderately to completely weathered, finely to coarsely crystalline, thin bedded			60 (0)				
		18.0-20.0' - possible clay washout from 18.0 to 20.0 ft.							
20		20.0-30.0' LIMESTONE, gray, hard, moderately weathered, finely to coarsely crystalline, thin bedded 20.0' - pitted from 20.0 to 25.0 ft.	1200		100 (0)				
25		25.0' - slightly to moderately weathered below 25.0 ft.	1195		100 (85)		Qu Test Results UCS = 1410 ksf		
30		Refusal at 7.0 feet. Bottom of borehole at 30.0 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: **Coordinate Zone:** **Coordinate Proj. Factor:**
Coordinate Datum: **Coordinate Units:** U.S. Survey Feet

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BORING DATA

Note: For locations of borings, see Sheet No. 1.

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
REGISTERED ENGINEER

01/17/2025 11:41:42 AM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
1/17/2025

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
BR	31

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9317

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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SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

Detailed Dec 2024
Checked Dec 2024

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

L:\MoDOT\22004246-00_New\Deliverable\!!!!2025 0120 J8S3156 Bridge Final PS&E\A9317 - Melville over I-44_Bridge\Plan Sheet DGNs\B_A9317_031_J8S3156_Boring_Log1.dgn 10:16:25 AM 1/17/2025

Missouri Department of Transportation
Construction and Materials

BORING NO. B-103
Page 1 of 2

Job No.: 20221081.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** RK
Station: **Northing:** 517058.3781 **Date of Work:** 09/30/22-09/30/22
Offset: **Easting:** 1398279.9004 **Depth to Water:**
Elevation: 1236.3 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550,Split-Spoon Sampler, NQ
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 96% **Drilling Method:** FA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-3.5' (CH) Reddish brown, fat CLAY, trace roots, sand, and gravel	1235		56	4-9-23 (48)		PP >4.50 tsf	MC = 10.4%
5		3.5-6.0' (GP) Gravel, trace red, fat CLAY			28	7-10-11 (32)			MC = 11.3%
		6.0-13.5' (CH) Reddish brown, fat CLAY, trace sand and gravel	1230		83	2-3-4 (11)		PP = 3.00 tsf	MC = 48.5%
10			1225		100	1-3-4 (11)		PP = 2.00 tsf	MC = 52.3%
15		13.5-18.5' (CH) Reddish brown, fat CLAY, trace sand	1220		100	2-2-3 (8)		PP = 2.50 tsf	MC = 54.5%
20		18.5-23.8' (CH) Reddish brown, fat CLAY, trace sand and gravel	1215		100	1-2-2 (6)		PP = 1.50 tsf	MC = 57.2%
25		23.8-35.0' LIMESTONE, gray, hard, moderately weathered, coarsely crystalline, thinly bedded	1210		67	50/0.3'		PP = 1.50 tsf	MC = 40.5%
					97 (86)		Qu Test Results UCS = 1100 ksf		
30			1205		92 (85)		Qu Test Results UCS = 1090 ksf		
35		31.5' - slightly to highly weathered below 31.5 ft.			100 (100)		Qu Test Results UCS = 1170 ksf		

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: **Coordinate Zone:** **Coordinate Proj. Factor:**
Coordinate Datum: **Coordinate Units:** U.S. Survey Feet

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LETTER BOREHOLE - MODOT 20150728.GDT - 11/10/23 17:58 - \\TSI\PROJECTS\STL\GEOTECH\2022 PROJECTS\20221081.00 REPLACEMENT OF MELVILLE RD A0441) BRIDGE OVER I-44 (J8S3156)\WORKING FILES\MODOT GINT\MELVILLE MODOT.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. B-103
Page 2 of 2

Job No.: 20221081.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** RK
Station: **Northing:** 517058.3781 **Date of Work:** 09/30/22-09/30/22
Offset: **Easting:** 1398279.9004 **Depth to Water:**
Elevation: 1236.3 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550,Split-Spoon Sampler, NQ
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 96% **Drilling Method:** FA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
35		35.0-41.5' LIMESTONE, gray, hard, slightly weathered, coarsely crystalline, thinly bedded	1200		100 (100)		Qu Test Results UCS = 1430 ksf		
40		Refusal at 23.5 feet. Bottom of borehole at 41.5 feet.	1195						

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: **Coordinate Zone:** **Coordinate Proj. Factor:**
Coordinate Datum: **Coordinate Units:** U.S. Survey Feet

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LETTER BOREHOLE - MODOT 20150728.GDT - 11/10/23 17:58 - \\TSI\PROJECTS\STL\GEOTECH\2022 PROJECTS\20221081.00 REPLACEMENT OF MELVILLE RD A0441) BRIDGE OVER I-44 (J8S3156)\WORKING FILES\MODOT GINT\MELVILLE MODOT.GPJ

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

01/17/2025 11:41:48 AM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
1/17/2025

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
BR	32

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9317

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION

DATE

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

CMT

CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

BORING DATA

Note: For locations of borings, see Sheet No. 1.

Detailed Dec 2024
Checked Dec 2024

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

TSI geotechnical, inc.

Missouri Department of Transportation
Construction and Materials

BORING NO. B-201
Page 1 of 2

Job No.: 20221081.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** RK
Station: **Northing:** 516949.059 **Date of Work:** 09/28/22-09/29/22
Offset: **Easting:** 1398331.6459 **Depth to Water:**
Elevation: 1219.8 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550,Split-Spoon Sampler, NQ
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 96% **Drilling Method:** FA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-19.8' (CH) Reddish brown, fat CLAY, trace sand, gravel, and chert 2.0' - 1.5" piece of limestone on top of split spoon.			17	3-5-17 (33)		PP = 1.50 tsf	MC = 16.5%
5			1215		89	7-3-5 (12)		PP = 1.50 tsf	MC = 53.9%
					78	7-2-3 (8)		PP = 1.00 tsf	MC = 55.7%
10			1210		39	2-2-3 (8)		PP = 1.50 tsf	MC = 51.9%
15			1205		50	1-3-4 (11)		PP = 1.00 tsf	MC = 33.0%
20		18.5' - trace sand below 18.5 ft. 19.8-22.5' LIMESTONE, highly weathered	1200		28	1-1-51 (78)		PP = 1.00 tsf	MC = 42.9%
25		22.5-35.0' LIMESTONE, gray, hard, moderately weathered, coarsely crystalline, thin bedded, vuggy	1195		90 (90)		Qu Test Results UCS = 1410 ksf		
					97 (87)		Qu Test Results UCS = 1220 ksf		
30			1190						
					100 (80)		Qu Test Results UCS = 1280 ksf		
35			1185						

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: **Coordinate Zone:** **Coordinate Proj. Factor:**
Coordinate Datum: **Coordinate Units:** U.S. Survey Feet

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LETTER BOREHOLE - MODOT 20150728.GDT - 11/10/23 17:58 - \\TSI\PROJECTS\TIL\GEOTECH\2022 PROJECTS\20221081.00 REPLACEMENT OF MELVILLE RD A0441) BRIDGE OVER I-44 (J8S3156)\WORKING FILES\MODOT GINT\MELVILLE MODOT.GPJ

TSI geotechnical, inc.

Missouri Department of Transportation
Construction and Materials

BORING NO. B-201
Page 2 of 2

Job No.: 20221081.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** RK
Station: **Northing:** 516949.059 **Date of Work:** 09/26/22-09/29/22
Offset: **Easting:** 1398331.6459 **Depth to Water:**
Elevation: 1219.8 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550,Split-Spoon Sampler, NQ
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 96% **Drilling Method:** FA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
35		35.0-48.0' LIMESTONE, gray, hard, slightly weathered, coarsely crystaline, thin bedded, vuggy			100 (95)		Qu Test Results UCS = 1530 ksf		
40			1180		93 (93)		Qu Test Results UCS = 1170 ksf		
45			1175		100 (89)		Qu Test Results UCS = 1270 ksf		
		Refusal at 22.5 feet. Bottom of borehole at 48.0 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: **Coordinate Zone:** **Coordinate Proj. Factor:**
Coordinate Datum: **Coordinate Units:** U.S. Survey Feet

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LETTER BOREHOLE - MODOT 20150728.GDT - 11/10/23 17:58 - \\TSI\PROJECTS\TIL\GEOTECH\2022 PROJECTS\20221081.00 REPLACEMENT OF MELVILLE RD A0441) BRIDGE OVER I-44 (J8S3156)\WORKING FILES\MODOT GINT\MELVILLE MODOT.GPJ

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
REGISTERED ENGINEER

01/17/2025 11:41:55 AM
Joshua D. Jolliff
MO PE-2006002824

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED 1/17/2025
ROUTE CRD 127 STATE MO
DISTRICT BR SHEET NO. 33
COUNTY GREENE
JOB NO. J8S3156
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9317

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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SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

BORING DATA

Note: For locations of borings, see Sheet No. 1.

Detailed Dec 2024
Checked Dec 2024

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

L:\MoDOT\22004246-00_New\Deliverable\!!!!2025 0120 J8S3156 Bridge Final PS&E\A9317 - Melville over I-44_Bridge\Plan Sheet DGNs\B_A9317_033_J8S3156_Boring_Log3.dgn 10:17:21 AM 1/17/2025

Missouri Department of Transportation
Construction and Materials

BORING NO. B-202
Page 1 of 1

Job No.: 20221081.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** RK
Station: **Northing:** 516947.7259 **Date of Work:** 09/28/22-09/28/22
Offset: **Easting:** 1398277.5102 **Depth to Water:**
Elevation: 1221.5 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550,Auger Cuttings, NQ
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 96% **Drilling Method:** FA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-3.9' (CH) Reddish brown, fat CLAY, trace gravel	1220						
		3.9-4.5' LIMESTONE, highly weathered Refusal at 4.5 feet. Bottom of borehole at 4.5 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: **Coordinate Zone:** **Coordinate Proj. Factor:**
Coordinate Datum: **Coordinate Units:** U.S. Survey Feet

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Missouri Department of Transportation
Construction and Materials

BORING NO. B-301
Page 1 of 1

Job No.: 20221081.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** RK
Station: **Northing:** 516901.6852 **Date of Work:** 09/27/22-09/27/22
Offset: **Easting:** 1398356.737 **Depth to Water:**
Elevation: 1220.2 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550,Split-Spoon Sampler, Shelby Tube, NQ
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 96% **Drilling Method:** FA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-0.8' Portland cement concrete (9.6")	1220						
		0.8-1.0' Crushed limestone (2.4")			33	6-5-6 (17)		PP = 3.00 tsf	MC = 20.1%
		1.0-8.9' (CH) Reddish brown, fat CLAY, trace sand and gravel			31			PP = 2.00 tsf	MC = 16.4%
5			1215		78	2-2-4 (9)		PP = 1.00 tsf	MC = 66.1%
10		8.9-11.3' LIMESTONE, tan, highly weathered and Reddish brow, fat CLAY	1210		56	32-14-14 (42)		PP = 1.00 tsf	MC = 61.4%
					100	50/0.3"		PP = 0.50 tsf	MC = 36.6%
		12.5' See Boring B-301A for detailed subsurface information below 11.3 feet. Refusal at 11.3 feet. Bottom of borehole at 11.3 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: **Coordinate Zone:** **Coordinate Proj. Factor:**
Coordinate Datum: **Coordinate Units:** U.S. Survey Feet

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LETTER BOREHOLE -MODOT 20150728.GDT - 11/10/23 17:58 - \\TSI\PROJECTS\STL\GEOTECH\2022 PROJECTS\20221081.00 REPLACEMENT OF MELVILLE RD A0441) BRIDGE OVER I-44 (J8S3156)\WORKING FILES\MODOT GINT\MELVILLE MODOT.GPJ

BORING DATA

Note: For locations of borings, see Sheet No. 1.

Detailed Dec 2024
Checked Dec 2024

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

DATE PREPARED 1/17/2025
ROUTE CRD 127 | STATE MO
DISTRICT BR | SHEET NO. 34
COUNTY GREENE
JOB NO. J8S3156
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9317

DESCRIPTION | DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

CMT
CRAWFORD, MURPHY & TILLY, INC.
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ENGINEERING CORPORATION - 000631

Missouri Department of Transportation
Construction and Materials

BORING NO. B-301A
Page 1 of 1

Job No.: 20221081.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** RK
Station: **Northing:** 516901.6852 **Date of Work:** 09/27/22-09/27/28
Offset: **Easting:** 1398359.7372 **Depth to Water:**
Elevation: 1220.2 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550,Auger Cuttings, NQ
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 96% **Drilling Method:** FA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-0.8' Portland cement concrete (9.6")	1220						
		0.8-1.0' Crushed limestone (2.4")							
		1.0-4.0' (CH) Reddish brown, fat CLAY, trace sand and gravel							
5		4.0-4.5' Tan, highly weathered LIMESTONE	1215						
		4.5-19.5' LIMESTONE, gray, hard, moderatley weathered, coarsely crystalline, thin bedded			100 (61)		Qu Test Results UCS = 1570 ksf		
10		9.5' - slightly to moderately weathered below 9.5 ft.	1210						
		11.7' - chert inclusion.			98 (90)		Qu Test Results UCS = 1260 ksf		
		12.9' - chert inclusion.							
15			1205		100 (70)		Qu Test Results UCS = 1470 ksf		
		18.0' - highly weathered							
		Refusal at 4.5 feet. Bottom of borehole at 19.5 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: **Coordinate Zone:** **Coordinate Proj. Factor:**
Coordinate Datum: **Coordinate Units:** U.S. Survey Feet

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LETTER BOREHOLE - MODOT 20150728.GDT - 11/10/23 17:58 - \\TSI\PROJECTS\STL\GEOTECH\2022 PROJECTS\20221081.00 REPLACEMENT OF MELVILLE RD A0441) BRIDGE OVER I-44 (J8S3156)\WORKING FILES\MODOT GINT\MELVILLE MODOT.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. B-302
Page 1 of 1

Job No.: 20221081.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** RK
Station: **Northing:** 516901.8891 **Date of Work:** 09/27/22-09/27/22
Offset: **Easting:** 1398299.7448 **Depth to Water:**
Elevation: 1220.8 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550,Auger Cuttings, NQ
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 96% **Drilling Method:** FA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-0.8' Portland cement concrete (9.6")	1220						
		0.1' - rough drilling							
		0.8-1.0' Crushed limestone (2.4")							
		1.0-4.0' (CH) Red. fat CLAY, trace and and gravel							
5		4.0-5.5' LIMESTONE, highly weathered							
		Refusal at 5.5 feet. Bottom of borehole at 5.5 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: **Coordinate Zone:** **Coordinate Proj. Factor:**
Coordinate Datum: **Coordinate Units:** U.S. Survey Feet

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STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

01/17/2025 11:42:08 AM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
1/17/2025

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
BR	35

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9317

DATE	DESCRIPTION

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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
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1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

BORING DATA

Note: For locations of borings, see Sheet No. 1.

Detailed Dec 2024
Checked Dec 2024

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

L:\MoDOT\22004246-00_New\Deliverable\!!!!2025 0120 J8S3156 Bridge Final PS&E\A9317 - Melville over I-44_Bridge\Plan Sheet DGNs\B_A9317_035_J8S3156_Boring_Log5.dgn 10:18:14 AM 1/17/2025

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Missouri Department of Transportation
Construction and Materials

BORING NO. B-303
Page 1 of 1

Job No.: 20221081.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** RK
Station: **Northing:** 516823.3373 **Date of Work:** 09/22/22-09/22/22
Offset: **Easting:** 1398334.7992 **Depth to Water:**
Elevation: 1241.7 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550,Split-Spoon Sampler, NQ
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 96% **Drilling Method:** FA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-29.7' (CH) Reddish brown, fat CLAY	1240		44	4-12-27 (59)		PP = 4.50 tsf	MC = 12.2%
					17	6-11-4 (23)		PP = 4.50 tsf	MC = 6.1%
5			1235		72	2-2-3 (8)		PP = 1.50 tsf	MC = 55.6%
		6.0' - trace and and gravel.			61	2-2-3 (8)		PP = 2.50 tsf	MC = 55.1%
10			1230		33	1-2-3 (8)		PP = 1.00 tsf	LL = 123 PL = 31 MC = 38.7%
					89	0-1-2 (5)		PP = 1.00 tsf	MC = 59.0%
15			1225						
					6	1-1-1 (3)		PP = 1.50 tsf	MC = 38.8%
20			1220						
					22	0-0-1 (2)		PP = 0.50 tsf	MC = 64.7%
25			1215						
		29.0-29.7' LIMESTONE, heavily weathered			100	1-50/0.0'		PP = 1.00 tsf	MC = 50.9%
		Refusal at 29.7 feet. Bottom of borehole at 29.7 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: **Coordinate Zone:** **Coordinate Proj. Factor:**
Coordinate Datum: **Coordinate Units:** U.S. Survey Feet

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Missouri Department of Transportation
Construction and Materials

BORING NO. B-401
Page 1 of 1

Job No.: 20221081.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** AM
Station: **Northing:** 517054.8656 **Date of Work:** 09/30/22-09/30/22
Offset: **Easting:** 1398187.8349 **Depth to Water:**
Elevation: 1229.1 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550,Split-Spoon Sampler, Shelby Tube, NQ
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 96% **Drilling Method:** FA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-7.5' (CH) Reddish brown, fat CLAY, trace sand, gravel, and organics			50	4-5-7 (18)		PP >4.50 tsf	MC = 35.7%
			1225		67	2-4-4 (12)		PP = 3.00 tsf	MC = 57.6%
5					86	2-50/0.1'		PP = 1.50 tsf	MC = 40.1%
		6.5-7.5' LIMESTONE, highly weathered			0	50/0.2'			
		Refusal at 7.5 feet. Bottom of borehole at 7.5 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: **Coordinate Zone:** **Coordinate Proj. Factor:**
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BORING DATA

Note: For locations of borings, see Sheet No. 1.

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

Detailed Dec 2024
Checked Dec 2024

DATE PREPARED 1/17/2025
ROUTE CRD 127 | STATE MO
DISTRICT BR | SHEET NO. 36
COUNTY GREENE
JOB NO. J8S3156
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9317

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
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JEFFERSON CITY, MO 65102
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Missouri Department of Transportation
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BORING NO. B-402
Page 1 of 1

Job No.: 20221081.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** AM
Station: **Northing:** 517059.7078 **Date of Work:** 09/22/22-09/22/22
Offset: **Easting:** 1398315.9758 **Depth to Water:**
Elevation: 1235.6 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550,Split-Spoon Sampler, NQ
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 96% **Drilling Method:** FA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0			1235						
		0.0-8.0' (CH) Reddish brown, fat CLAY, trace sand		X	72	6-9-13 (33)		PP = 4.00 tsf	MC = 33.5%
5				X	44	2-7-3 (15)		PP = 4.00 tsf	MC = 30.4%
			1230						
				X	100			PP = 1.50 tsf	MC = 42.1%
		8.0-13.5' LIMESTONE, highly weathered and Reddish brown, fat CLAY (CH)							
				X	67	4-50		PP = 1.50 tsf	MC = 41.5%
10			1225						
				X	40	1-50/0.3'		PP = 2.00 tsf	MC = 28.0%
		13.5-18.5' LIMESTONE, highly weathered, trace Reddish brown, fat CLAY (CH)							
				X	56	7-39-26 (98)			MC = 26.2%
15			1220						
				X	56	20-43-25 (102)			MC = 7.8%
		Refusal at 18.5 feet. Bottom of borehole at 18.5 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: **Coordinate Zone:** **Coordinate Proj. Factor:**
Coordinate Datum: **Coordinate Units:** U.S. Survey Feet

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Missouri Department of Transportation
Construction and Materials

BORING NO. B-501
Page 1 of 2

Job No.: 20221081.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** AM
Station: **Northing:** 516831.9202 **Date of Work:** 09/20/22-09/20/22
Offset: **Easting:** 1398296.9445 **Depth to Water:**
Elevation: 1241.0 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550,Split-Spoon Sampler, Shelby Tube, NQ
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 96% **Drilling Method:** FA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0			1240						
		0.0-3.5' CHERT, white and Reddish brown gravel, trace clay		X	33	15-30-39 (104)			MC = 9.9%
		3.5-31.5' Reddish brown, fat CLAY with gravel, trace organics		X	56	35-50		PP >4.50 tsf	MC = 20.6%
5			1235						
				X	72	6-13-7 (30)		PP = 3.00 tsf	MC = 54.5%
				■	83			PP = 2.50 tsf	MC = 51.8%
10			1230						
				X	100	3-3-4 (11)		PP = 2.50 tsf	MC = 45.1%
				X	44	3-4-50 (81)		PP = 1.50 tsf	MC = 53.6%
15			1225						
				X	56	3-9-14 (35)		PP = 1.50 tsf	MC = 35.8%
				X	61	6-4-3 (11)		PP = 2.00 tsf	MC = 58.6%
20			1220						
				X	100	2-2-12 (21)		PP = 3.50 tsf	MC = 57.4%
				X	100	2-2-3 (8)		PP = 1.00 tsf	MC = 64.7%
25			1215						
				X	100	6-2-2 (6)		PP = 1.00 tsf	
				X	32	4-50/0.3'		PP = 1.50 tsf	MC = 13.7%
30		29.0-31.5' LIMESTONE, heavily weathered	1210						
		31.5-41.5' LIMESTONE, gray, hard, moderately-weathered, finely crystalline, thin bedded		■	75 (60)				
35		34.0' - 6" drop observed.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: **Coordinate Zone:** **Coordinate Proj. Factor:**
Coordinate Datum: **Coordinate Units:** U.S. Survey Feet

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BORING DATA

Note: For locations of borings, see Sheet No. 1.

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

Detailed Dec 2024
Checked Dec 2024

DATE PREPARED 1/17/2025
ROUTE CRD 127 STATE MO
DISTRICT BR SHEET NO. 37
COUNTY GREENE
JOB NO. J8S3156
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9317

DESCRIPTION
DATE

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BORING NO. B-501
Page 2 of 2

Job No.: 20221081.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** AM
Station: **Northing:** 516831.9202 **Date of Work:** 09/20/22-09/20/22
Offset: **Easting:** 1398296.9445 **Depth to Water:**
Elevation: 1241.0 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550,Split-Spoon Sampler, Shelby Tube, NQ
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 96% **Drilling Method:** FA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
35		31.5-41.5' LIMESTONE, gray, hard, moderately weathered, finely crystalline, thin bedded *(continued)*	1205						
					100 (93)		Qu Test Results UCS = 1270 ksf		
40			1200		100 (100)		Qu Test Results UCS = 1350 ksf		
		Refusal at 31.5 feet. Bottom of borehole at 41.5 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: **Coordinate Zone:** **Coordinate Proj. Factor:**
Coordinate Datum: **Coordinate Units:** U.S. Survey Feet

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Missouri Department of Transportation
Construction and Materials

BORING NO. B-502
Page 1 of 2

Job No.: 20221081.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** AM
Station: **Northing:** 516830.2314 **Date of Work:** 09/19/22-09/19/22
Offset: **Easting:** 1398407.8135 **Depth to Water:**
Elevation: 1241.6 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550,No Recovery, Split-Spoon Sampler, Shelby Tube, NQ
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 96% **Drilling Method:** FA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-3.5' (GC) White and brown clayey GRAVEL (GC)	1240		58	18-38-50 (132)			MC = 16.5%
5		3.5-6.0' (SM) Red, clayey SAND, trace gravel and organics			33	3-17-20 (56)		PP = 3.00 tsf	MC = 29.5%
		6.0-27.4' (CH) Reddish brown, fat CLAY, trace sand	1235		100			PP = 3.00 tsf	MC = 25.9%
10		10.0' - large chert fragment in shoe.			11	2-5-11 (24)			MC = 46.6%
			1230		44	2-3-6 (14)		PP = 2.50 tsf	MC = 56.5%
15					100	2-2-3 (8)		PP = 2.50 tsf	MC = 57.7%
			1225		100	2-3-7 (15)		PP = 1.50 tsf	MC = 60.4%
20					11	3-4-4 (12)		PP = 1.50 tsf	MC = 50.0%
			1220		100	5-3-1 (6)		PP = 1.00 tsf	LL = 144 PL = 33 MC = 38.6%
25					56	1-1-2 (5)		PP = 1.00 tsf	MC = 38.4%
		27.4-27.5' (CH) Sandy fat CLAY, with chert	1215		44	6-18-32 (75)		PP = 1.00 tsf	MC = 67.1%
30		27.5' - highly weathered chert. 28.0-38.5' LIMESTONE, gray, hard, slightly weathered, finely crystalline, thin bedded 30.0' -vuggy for 1/10 ft.							
			1210		100 (71)	(0)	Qu Test Results UCS = 1250 ksf		
35									

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: **Coordinate Zone:** **Coordinate Proj. Factor:**
Coordinate Datum: **Coordinate Units:** U.S. Survey Feet

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STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
01/17/2025 11:42:23 AM
Joshua D. Jolliff
MO PE-2006002824

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DATE PREPARED 1/17/2025
ROUTE CRD 127 STATE MO
DISTRICT BR SHEET NO. 38
COUNTY GREENE
JOB NO. J8S3156
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9317

DESCRIPTION
DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
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BORING DATA

Note: For locations of borings, see Sheet No. 1.

Detailed Dec 2024
Checked Dec 2024

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

L:\MoDOT\22004246-00_New\Deliverable\!!!!2025 0120 J8S3156 Bridge Final PS&E\A9317 - Melville over I-44_Bridge\Plan Sheet DGNs\B_A9317_038_J8S3156_Boring_Log8.dgn 10:19:35 AM 1/17/2025

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Construction and Materials

BORING NO. B-502
Page 2 of 2

Job No.: 20221081.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** AM
Station: **Northing:** 516830.2314 **Date of Work:** 09/19/22-09/19/22
Offset: **Easting:** 1398407.8135 **Depth to Water:**
Elevation: 1241.6 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550,No Recovery, Split-Spoon Sampler, Shelby Tube, NQ
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 96% **Drilling Method:** FA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
35		28.0-38.5' LIMESTONE, gray, hard, slightly weathered, finely crystalline, thin bedded *(continued)*	1205		97 (97)		Qu Test Results UCS = 1180 ksf		
		Refusal at 28.5 feet. Bottom of borehole at 38.5 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: **Coordinate Zone:** **Coordinate Proj. Factor:**
Coordinate Datum: **Coordinate Units:** U.S. Survey Feet

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LETTER BOREHOLE - MODOT 20150728.GDT - 1/10/23 17:58 - \\TSI\PROJECTS\STLI\GEOTECH\2022 PROJECTS\20221081.00 REPLACEMENT OF MELVILLE RD A0441) BRIDGE OVER I-44 (J8S3156)\WORKING FILES\MODOT GINT\MELVILLE MODOT.GPJ

BORING DATA

Note: For locations of borings, see Sheet No. 1.

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

Detailed Dec 2024
Checked Dec 2024

L:\MoDOT\22004246-00_New\Deliverable\!!!!2025 0120 J8S3156 Bridge Final PS&E\A9317 - Melville over I-44_Bridge\Plan Sheet DGNs\B_A9317_039_J8S3156_Boring_Log9.dgn 10:20:01 AM 1/17/2025

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

01/17/2025 11:42:28 AM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
1/17/2025

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
BR	39

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9317

DESCRIPTION	DATE

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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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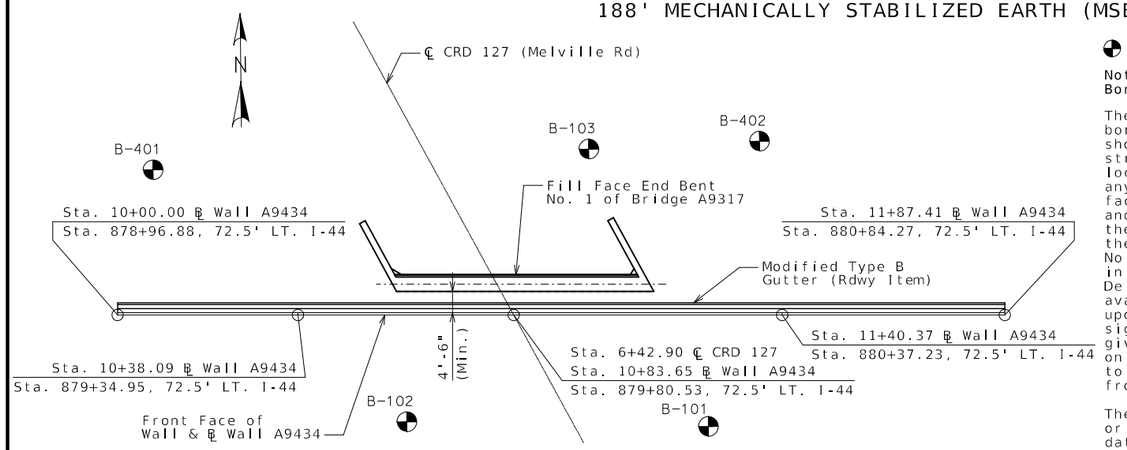
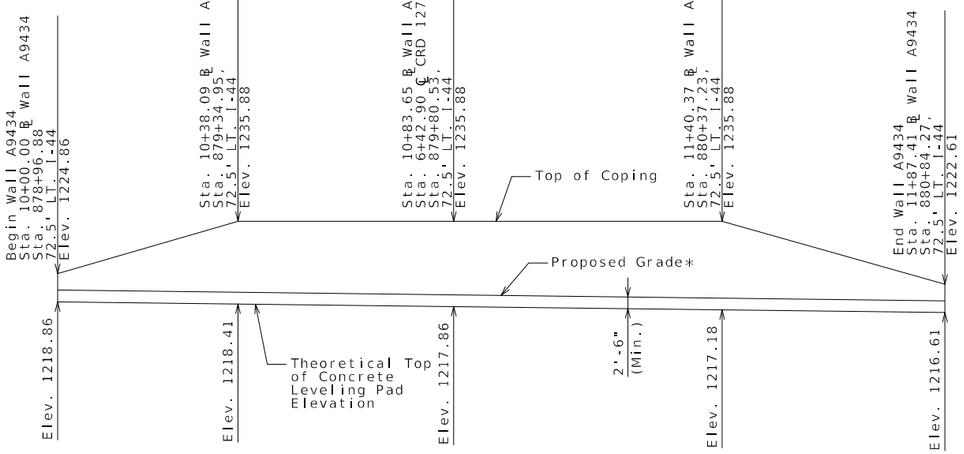
188' MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL SYSTEM



PLAN

Concrete Leveling pad and coping not shown for clarity. (1)
℄ wall stationing at front face of wall



DEVELOPED ELEVATION

Concrete Leveling pad not shown for clarity. (1)
* Proposed grade shown accommodates future full buildout of I-44.

(1) Wall contractor shall show the following items on the design drawings and/or on the fabricator shop drawings.

- Leveling pad horizontal.
- Leveling pad length and step elevations shall be based on wall manufacturer's recommendation.Top of leveling pad elevations shall not be higher than theoretical top of leveling pad elevations shown on these plans.

Estimated Quantities

Item		Total
Aesthetic Concrete Stain	lump sum	1
Concrete and Masonry Protection System	lump sum	1
Sacrificial Graffiti Protection System	lump sum	1
Mechanically Stabilized Earth Wall Systems	sq. foot	2878

MSE Wall Systems Data Table

Proprietary Wall Systems		Combination Wall Systems			
Manufacturer	System	Facing Unit Manufacturer	Facing Unit	Geogrid Manufacturer	Geogrid

MSE Wall Systems Data Table is to be completed by MoDOT construction personnel to record the manufacturer of the proprietary wall system or the manufacturers of the combination wall system that was used for constructing the MSE wall.

Designed Nov 2024
Detailed Nov 2024
Checked Nov 2024

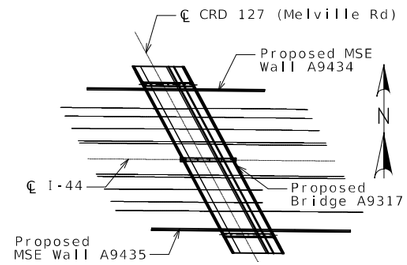
Note: This drawing is not to scale. Follow dimensions.

Indicates location of borings.

Notice and Disclaimer Regarding Boring Log Data

The locations of all subsurface borings for this structure are shown on the plan sheet for this structure. The boring data for all locations indicated, as well as any other boring logs or other factual records of subsurface data and investigations performed by the department for the design of the project, are shown on Sheets No. 4 thru 6 and may be included in the Electronic Bridge Deliverables. They will also be available from the Project Contact upon written request. No greater significance or weight should be given to the boring data depicted on the plan sheets than is given to the subsurface data available from the district or elsewhere.

The Commission does not represent or warrant that any such boring data accurately depicts the conditions to be encountered in constructing this project. A contractor assumes all risks it may encounter in basing its bid prices, time or schedule of performance on the boring data depicted here or those available from the district, or on any other documentation not expressly warranted, which the contractor may obtain from the Commission.



LOCATION SKETCH

General Notes:

SEC./SUR. 4 TWP. 29N RGE. 22W

Design Specifications:

2002 AASHTO LFD (17th Ed.) Standard Specifications (Section 5 ASD Design)
Seismic Performance Category = A
Acceleration Coefficient = 0.09

Design Loading:

Φ_b = 20° and Unit weight, γ_b = 120 pcf for retained backfill material to be retained by the mechanically stabilized earth wall system.

Φ_f = 34° for improved foundation ground where wall is to bear. Unimproved foundation data is not applicable. Foundation Improvement is required full length of the wall.

For improved foundation ground, the allowable bearing pressure is 5.5 ksf.

The maximum applied bearing pressure for the controlling design case at the foundation level shall be shown on the shop drawings and shall be less than the allowable bearing pressure for foundation ground provided herein. For seismic design the maximum applied bearing pressure shall be less than two times the allowable bearing pressure.

Allowable bearing pressure and limits of improved foundation ground shall not be adjusted from that as shown on the plans.

Contractor shall include design Φ_f (actual $\Phi_f \geq 34°$) and the total unit weight, γ_f, for the select granular backfill (reinforced backfill and wedge area backfill) for structural systems on shop drawings. Contractor shall identify source of select granular backfill material, submit proctor in accordance with AASHTO T 99 (ASTM D698) and gradation with the shop drawings. When backfill material is too coarse to develop a proctor curve the contractor shall determine the maximum dry density (relative density) in accordance with ASTM D4253 and ASTM D4254 and assume percent passing the 200 sieve for optimum water content.

Total unit weight, γ_f = (95% compaction) x (maximum dry density) x (1 + optimum water content)

Design Φ_f = 34°for the select granular backfill (reinforced backfill) only for structural systems.

Factor of safety shall be 2.0 for overturning and 1.5 for sliding.

For seismic design the factor of safety shall be 1.5 for overturning and 1.1 for sliding.

Use default values for the pullout friction factor, F^*, in accordance with AASHTO figure 5.8.5.2A and default value for scale effect correction factor, α, in accordance with AASHTO table 5.8.5.2A. For approved steel strips not shown in AASHTO figure 5.8.5.2A, use $F^* \leq 2.0$ at zero depth and $F^* \leq \text{Tan}\ \Phi_f$ at 20 feet depth and Φ_f design = 34°. F^* and α values shall be shown on the shop drawings.

Design Unit Stresses:

All concrete for leveling pad and coping shall be Class B or B-1 with f'c = 4000 psi.

The minimum compressive strength of concrete for precast modular panel shall be 4,000 psi in accordance with Sec 1052.

Miscellaneous:

The MSE wall system shall be built vertical.

The MSE wall system shall be built in accordance with Sec 720.

The MSE wall system shall be a precast modular panel wall system.

Precast modular panel and coping (or capstone) reinforcement shall be epoxy coated.

A filter cloth meeting the requirements for a Separation Geotextile material shall be placed between the select granular backfill for structural systems and the backfill being retained by the mechanically stabilized earth wall system.

Coping shall be required on this structure. When CIP coping sections extend beyond the limits of a single panel, bond breaker (roofing felt or other approved alternate) between wall panel and coping is required. Coping joints shall use 3/4-inch chamfers and shall be sealed with 3/4-inch joint filler. Coping reinforcement shall terminate 1 1/2-inch minimum from face of coping joint.

The contractor shall be solely responsible to coordinate construction of the wall with bridge and roadway construction and ensure that the bridge and roadway construction, resulting or existing obstructions, shall not impact the construction or performance of the wall. Soil reinforcement shall be designed and placed to avoid damage by pile driving, guardrail post installation, utility and sign foundations. (See Roadway and Bridge plans.)

Control Point #514
N: 517039.25
E: 1397801.35
Elev. 1222.12
Sta. 875+18.07
83.90' Lt. (I-44)
5/8" I.B. W/ Aluminum Cap

Control Point #515
N: 516847.15
E: 1399681.98
Elev. 1219.86
Sta. 894+00.43
90.54' Rt. (I-44)
5/8" I.B. W/ Aluminum Cap

RETAINING WALL ALONG WB I-44 NEAR END BENT NO. 1 OF BRIDGE A9317

CRD 127 OVER I-44
ABOUT 1.2 MILES WEST OF ROUTE 13
BEGINNING STATION 878+96.88 ℄ I-44

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
12/29/2024 1:35:11 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED 12/27/2024
ROUTE CRD 127 | STATE MO
DISTRICT BR | SHEET NO. 1
COUNTY GREENE
JOB NO. J8S3156
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9434

REV.	DESCRIPTION	DATE

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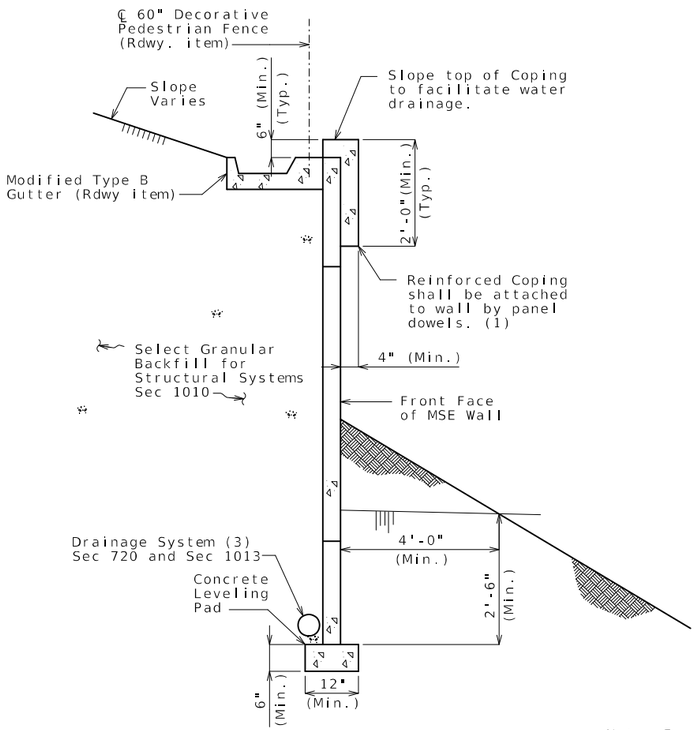
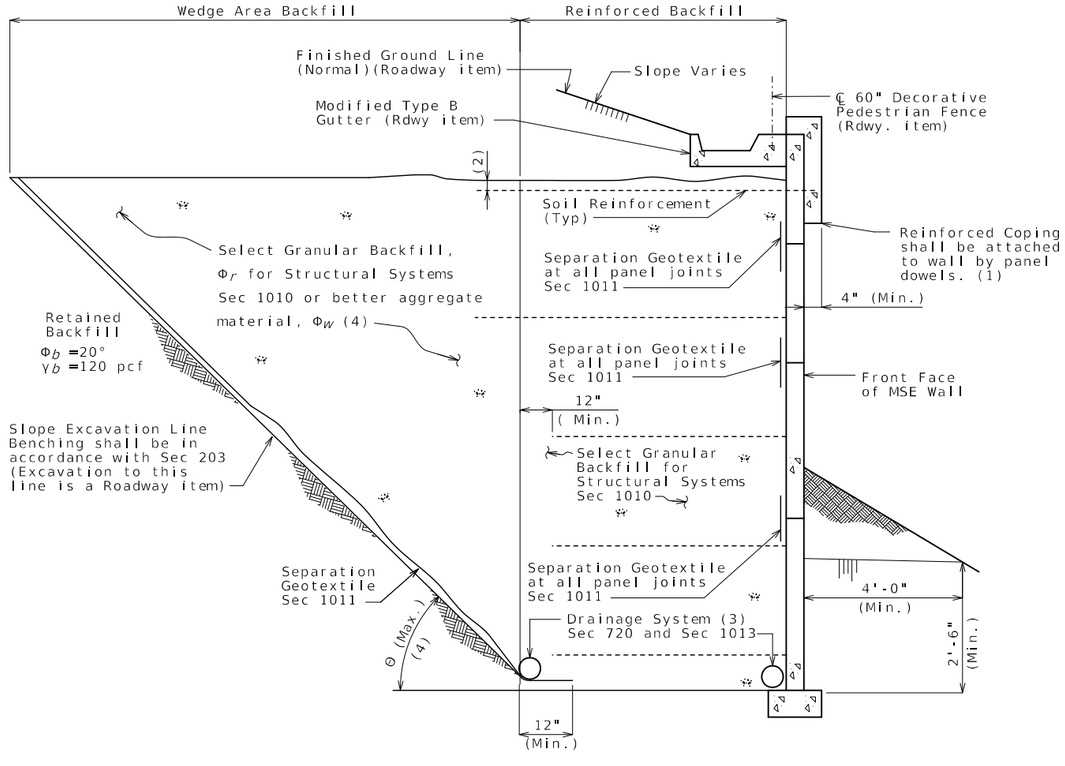


TYPICAL SECTION THRU PRECAST MODULAR PANEL WALL

Note: For additional information, see "TYPICAL SECTION THRU PRECAST MODULAR PANEL WALL UNDER BRIDGE SHOWING GROUND IMPROVEMENTS".



TYPICAL SECTION THRU PRECAST MODULAR PANEL WALL SHOWING FILTER CLOTH

General Notes Cont.:

Minimum 18" wide Geotextile strips shall be centered at vertical and horizontal joints of panel. Geotextile material shall be adhered to back face of panel using an adhesive compound supplied by the manufacturer. All edges of each fabric strip shall provide a positive seal. A minimum 18" overlap shall be provided between spliced filter fabric.

Aluminized soil reinforcement shall have edges coated with coating material per manufacturer.

Soil reinforcement shall be spaced to avoid roadway drop inlet behind wall.

All steel soil reinforcements shall be separated from other metallic elements by at least 3 inches.

The splay angle should be less than 15° and tensile capacity of splayed reinforcement shall be reduced by the cosine of the splay angle. Soil reinforcement shall clear the obstruction by at least 3 inches.

No reinforcement shall be left unconnected to the wall face or arbitrarily cut/bent in the field to avoid the obstruction.

Where interference between the vertical obstruction and the soil reinforcement is unavoidable, the design of the wall near the obstruction may be modified using one of the alternatives in FHWA-NHI-10-24, Section 5.4.2. Show detail layout on the drawings. For wall designs with horizontal obstructions in reinforced soil mass, see FHWA-NHI-10-024, Section 5.4.3.

Excavation:
Excavation quantities and pay items are given on the roadway plans. Excavation quantities are based on a soil reinforcement length of 0.8H. The soil reinforcement length may vary based upon the wall design selected by the contractor. Plan excavation quantities will be paid regardless of any actual quantities removed based on the soil reinforcement length and design selected.

(1) Inverted U-shape reinforced capstone may be used in lieu of coping. Panel dowels for level-up concrete shall be required and provided by manufacturer. The dowels shall be field trimmed to clear the capstone by a minimum of 1 1/2 inches and a maximum of 2 1/2 inches.

(2) Topmost layer of reinforcement shall be fully covered with select granular backfill for structural systems, as approved by the wall manufacturer, before placement of the Separation Geotextile.

(3) Minimum 6" diameter perforated PVC or PE pipe.

Manufacturer shall show drain details on design plans to be submitted as shown on MoDOT MSE wall plans and/or roadway plans.

Contractor shall modify the drain details as shown if it will improve flow as may be the case for stepped leveling pad, and for an uneven ground line (approval of the engineer required).

Material Properties Used in Design				
Reinf. Fill/Select Granular Backfill		Active Force Computations		Foundation
Φ°	γ (pcf)	Φ°	γ (pcf)	Φ°

Note: MSE Wall designer shall include table on shop drawings and provide values used in the design computations. Effects of cohesion shall be ignored unless approved by the engineer.

Show range of acceptable theta (Θ) angle on shop drawings which must be consistent with design computations and proposed construction of wall. Show active force computation properties on shop drawings and in design computations. Coordination between wall designer (manufacturer) and contractor is required before shop drawing submittal.

(4) Select granular backfill shall extend a minimum of 12" beyond the end of all soil reinforcement. Where the angle, Θ, between the retained backfill excavation/fill line and the horizontal is less than 90°, the wedge area backfill between Θ and 90° shall be filled with select granular backfill for structural systems meeting the requirements of Section 1010.

- For $(45° + \Phi_b/3) < \Theta \leq 90°$, properties for retained backfill shall be used for active force computations.

- For $\Theta \leq (45° + \Phi_b/3)$, contractor shall have the option to use select granular backfill, Φ_f, or better aggregate material, Φ_W for active force computations in the wedge area backfill. For active force computations, the angle of internal friction for wedge area backfill material, Φ_f or Φ_W, shall be limited to 34° unless determined otherwise in accordance with Section 1010. If Φ_f or $\Phi_W > 34°$ is desired for wedge area backfill then test report shall be submitted with shop drawings. Φ_f or Φ_W shall not be greater than 40° for computations. Final configuration of this option shall be sent to Geotechnical Section for a new overall global stability analysis. Design Φ_W shall be shown on the shop drawings if used.

The slope excavation line shall be benched and separation geotextile shall be placed between the retained backfill and either select granular backfill or better aggregate material, and between the select granular backfill and better aggregate material.

DETAILS FOR MSE WALL

Detailed Nov 2024
Checked Nov 2024

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

DATE PREPARED 12/27/2024
ROUTE CRD 127 | STATE MO
DISTRICT BR | SHEET NO. 2
COUNTY GREENE
JOB NO. J8S3156
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9434

DESCRIPTION | DATE | REV.

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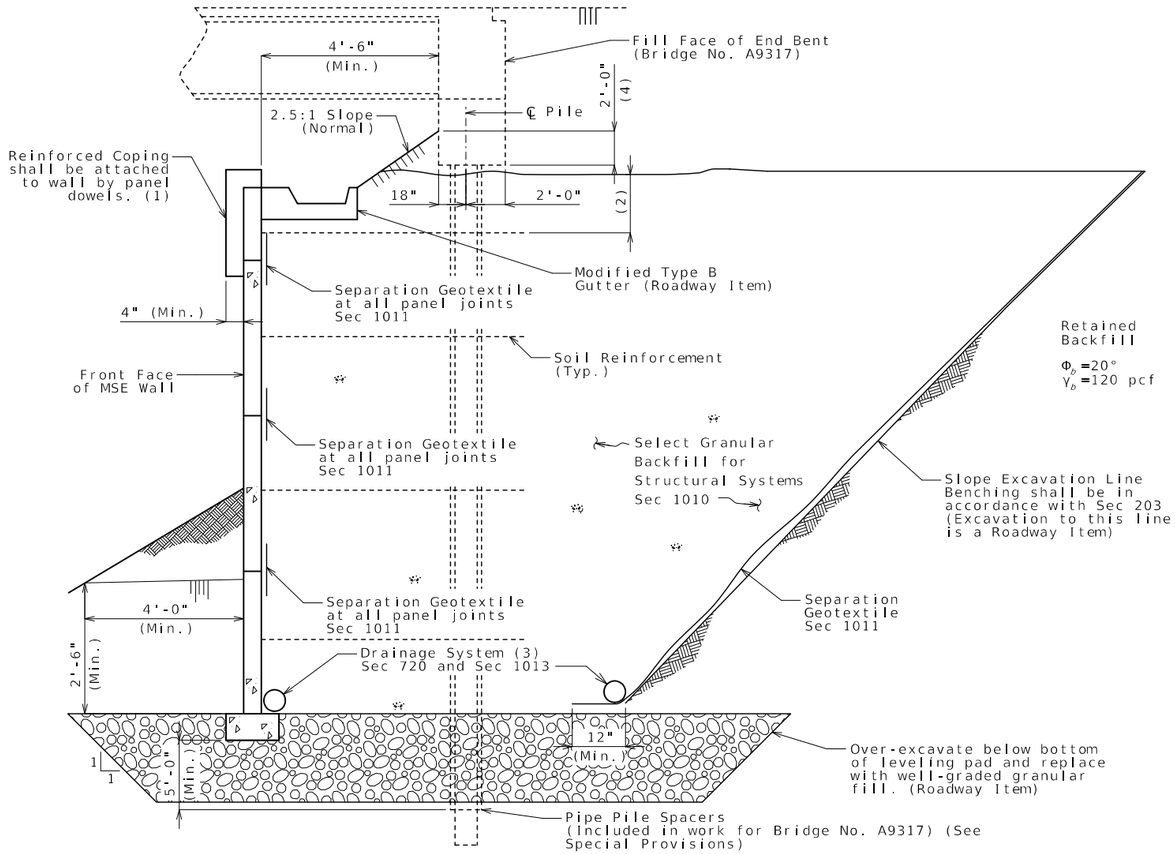


TYPICAL SECTION THRU PRECAST MODULAR PANEL WALL
UNDER BRIDGE SHOWING GROUND IMPROVEMENTS

Note: For additional information, see "TYPICAL SECTION THRU PRECAST MODULAR PANEL WALL SHOWING FILTER CLOTH".

(1) Inverted U-shape reinforced capstone may be used in lieu of coping. Panel dowels for level-up concrete shall be required and provided by manufacturer. The dowels shall be field trimmed to clear the capstone by a minimum of 1 1/2 inches and a maximum of 2 1/2 inches.

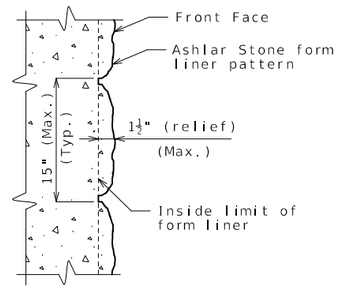
(2) Topmost layer of reinforcement shall be fully covered with select granular backfill for structural systems, as approved by the wall manufacturer, before placement of the Separation Geotextile.

(3) Minimum 6" diameter perforated PVC or PE pipe.

Manufacturer shall show drain details on design plans to be submitted as shown on MoDOT MSE wall plans and/or roadway plans.

Contractor shall modify the drain details as shown if it will improve flow as may be the case for stepped leveling pad, and for an uneven ground line (approval of the engineer required).

(4) See bridge plans.



FORM LINER DETAIL
(PRECAST MODULAR PANEL WALL)

Notes:

The cost of form liners for MSE wall systems, complete in place, will be considered completely covered by the contract unit price for Mechanically Stabilized Earth Wall System.

Form liner shall be constructed in accordance with Special Provisions.

The following is a list of form liner manufacturers and types which may be used. Depth of relief for all form liner pattern's shall vary up to 1 1/2". The height of any single 'stone' shall be 15" maximum.

- Scott System, Inc.: Form liner pattern #167 "Ashlar Stone"
- Fitzgerald Formliners: Form liner pattern #16986 "Ashlar Stone"
- Greenstreak: Form liner pattern #330 "Ashlar Stone"
- Spec Formliners: Form liner pattern #1515 "Ashlar Stone"
- Customrock: Form liner pattern #12020 "Tollway Ashlar"
- An approved equal

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
12/29/2024 1:35:31 PM
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MO PE-2006002824

DATE PREPARED
12/27/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
BR	3

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9434

DESCRIPTION | DATE

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DETAILS FOR MSE WALL

Detailed Nov 2024
Checked Nov 2024

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

Missouri Department of Transportation
Construction and Materials

BORING NO. B-101
Page 1 of 1

Job No.: 20221081.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** RK
Station: **Northing:** 516999.5688 **Date of Work:** 09/26/22-09/26/22
Offset: **Easting:** 1398304.61 **Depth to Water:**
Elevation: 1220.8 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550 Auger Cuttings, NQ
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 96% **Drilling Method:** FA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-0.5' Portland cement concrete (6") 0.5-0.7' Crushed limestone (1.66") 0.7-25.0' (CH) Brown, fat CLAY	1220						
5			1215						
10			1210						
15			1205						
20			1200						
25		Refusal at 25.0 feet. Bottom of borehole at 25.0 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: **Coordinate Zone:** **Coordinate Proj. Factor:**
Coordinate Datum: **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

Missouri Department of Transportation
Construction and Materials

BORING NO. B-102
Page 1 of 1

Job No.: 20221081.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** RK
Station: **Northing:** 517001.1428 **Date of Work:** 09/26/22-09/26/22
Offset: **Easting:** 1398240.9308 **Depth to Water:**
Elevation: 1221.3 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550,Split-Spoon Sampler, NQ
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 96% **Drilling Method:** FA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-0.8' Portland cement concrete (9.6") 0.8-1.0' Crushed limestone (2.4")	1220						
		1.0-3.8' (CH) Brown, fat CLAY, trace sand and gravel			44	4-6-8 (18)		PP = 3.50 tsf	MC = 35.9%
5		3.8-8.0' Tan, highly weathered LIMESTONE	1215		80	20-44-50/0.3'			MC = 13.5%
					0	50/0.2'			
10		8.0-14.0' LIMESTONE, gray, soft to hard moderately to completely weathered, finely to coarsely crystalline, thin bedded 8.5' - pitted below 8.5 ft.	1210		86 (0)				
15		14.0-15.0' - possible clay washout from 14.0 to 15.0 ft. 15.0-18.0' LIMESTONE, gray, soft to hard moderately to completely weathered, finely to coarsely crystalline, thin bedded 18.0-20.0' - possible clay washout from 18.0 to 20.0 ft.	1205		80 (0) 60 (0)				
20		20.0-30.0' LIMESTONE, gray, hard, moderately weathered, finely to coarsely crystalline, thin bedded 20.0' - pitted from 20.0 to 25.0 ft.	1200		100 (0)				
25		25.0' - slightly to moderately weathered below 25.0 ft.	1195		100 (85)		Cu Test Results UCS = 1410 ksf		
30		Refusal at 7.0 feet.. Bottom of borehole at 30.0 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: **Coordinate Zone:** **Coordinate Proj. Factor:**
Coordinate Datum: **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

For locations of borings, see Sheet No. 1.

BORING DATA

Detailed Nov 2024
Checked Nov 2024

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

DATE PREPARED 12/27/2024
ROUTE CRD 127 | STATE MO
DISTRICT BR | SHEET NO. 4
COUNTY GREENE
JOB NO. J8S3156
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9434

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Construction and Materials

BORING NO. B-103
Page 1 of 2

Job No.: 20221081.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** RK
Station: **Northing:** 517058.3781 **Date of Work:** 09/30/22-09/30/22
Offset: **Easting:** 1398279.9004 **Depth to Water:**
Elevation: 1236.3 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550,Split-Spoon Sampler, NQ
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 96% **Drilling Method:** FA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-3.5' (CH) Reddish brown, fat CLAY, trace roots, sand, and gravel	1235		56	4-9-23 (48)		PP >4.50 tsf	MC = 10.4%
5		3.5-6.0' (GP) Gravel, trace red, fat CLAY			28	7-10-11 (32)			MC = 11.3%
		6.0-13.5' (CH) Reddish brown, fat CLAY, trace sand and gravel	1230		83	2-3-4 (11)		PP = 3.00 tsf	MC = 46.5%
10					100	1-3-4 (11)		PP = 2.00 tsf	MC = 52.3%
			1225						
15		13.5-18.5' (CH) Reddish brown, fat CLAY, trace sand			100	2-2-3 (8)		PP = 2.50 tsf	MC = 54.5%
			1220						
20		18.5-23.8' (CH) Reddish brown, fat CLAY, trace sand and gravel			100	1-2-2 (6)		PP = 1.50 tsf	MC = 57.2%
			1215						
25		23.8-35.0' LIMESTONE, gray, hard, moderately-weathered, coarsely crystalline, thinly bedded			67	50/0.3		PP = 1.50 tsf	MC = 40.5%
					97 (86)		Qu Test Results UCS = 1100 ksf		
			1210						
30					92 (85)		Qu Test Results UCS = 1090 ksf		
		31.5' - slightly to highly weathered below 31.5 ft.	1205						
35					100 (100)		Qu Test Results UCS = 1170 ksf		

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: **Coordinate Zone:** **Coordinate Proj. Factor:**
Coordinate Datum: **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 11/10/23 17:58 - \\TSI\PROJECTS\STL\GEOTECH\2022 PROJECTS\20221081.00 REPLACEMENT OF MELVILLE RD A0441) BRIDGE OVER I-44 (J8S3156)\WORKING FILES\MODOT GINT\MELVILLE MODOT.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. B-103
Page 2 of 2

Job No.: 20221081.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** RK
Station: **Northing:** 517058.3781 **Date of Work:** 09/30/22-09/30/22
Offset: **Easting:** 1398279.9004 **Depth to Water:**
Elevation: 1236.3 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550,Split-Spoon Sampler, NQ
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 96% **Drilling Method:** FA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
35		35.0-41.5' LIMESTONE, gray, hard, slightly weathered, coarsely crystalline, thinly beddec	1200						
40					100 (100)		Qu Test Results UCS = 1430 ksf		
		Refusal at 23.5 feet. Bottom of borehole at 41.5 feet.	1195						

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: **Coordinate Zone:** **Coordinate Proj. Factor:**
Coordinate Datum: **Coordinate Units:** U.S. Survey Feet

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For locations of borings, see Sheet No. 1.

BORING DATA

Detailed Nov 2024
Checked Nov 2024

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

DATE PREPARED 12/27/2024
ROUTE CRD 127 | STATE MO
DISTRICT BR | SHEET NO. 5
COUNTY GREENE
JOB NO. J8S3156
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9434

REV.	DESCRIPTION	DATE

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Missouri Department of Transportation
Construction and Materials

BORING NO. B-401
Page 1 of 1

Job No.: 20221081.00	**County:** Greene	**Route:** I-44
Design:	**Skew:**	**Location:** Springfield, Missouri
Bent:	**Logged By:** JM	**Operator:** AM
Station:	**Northing:** 517054.8656	**Date of Work:** 09/30/22-09/30/22
Offset:	**Easting:** 1398187.8349	**Depth to Water:**
Elevation: 1229.1	**Requested Northing:**	**Depth Hole Open:**
Requested Station:	**Requested Easting:**	**Time Change:**
Requested Offset:	**Equipment:** CME 550,Split-Spoon Sampler, Shelby Tube, NQ	
Requested Elevation:	**Location Note:**	
Drill No.:	**Hammer Efficiency:** 96%	**Drilling Method:** FA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-7.5' (CH) Reddish brown, fat CLAY, trace sand, gravel, and organics							
				X	50	4-5-7 (18)		PP >4.50 tsf	MC = 35.7%
5			1225	X	67	2-4-4 (12)		PP = 3.00 tsf	MC = 57.6%
		6.5-7.5' LIMESTONE, highly weathered		X	86	2-50/0.1'		PP = 1.50 tsf	MC = 40.1%
		Refusal at 7.5 feet. Bottom of borehole at 7.5 feet.			0	50/0.2'			

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: **Coordinate Zone:** **Coordinate Proj. Factor:**
Coordinate Datum: **Coordinate Units:** U.S. Survey Feet

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Missouri Department of Transportation
Construction and Materials

BORING NO. B-402
Page 1 of 1

Job No.: 20221081.00	**County:** Greene	**Route:** I-44
Design:	**Skew:**	**Location:** Springfield, Missouri
Bent:	**Logged By:** JM	**Operator:** AM
Station:	**Northing:** 517059.7078	**Date of Work:** 09/22/22-09/22/22
Offset:	**Easting:** 1398315.9758	**Depth to Water:**
Elevation: 1235.6	**Requested Northing:**	**Depth Hole Open:**
Requested Station:	**Requested Easting:**	**Time Change:**
Requested Offset:	**Equipment:** CME 550,Split-Spoon Sampler, NQ	
Requested Elevation:	**Location Note:**	
Drill No.:	**Hammer Efficiency:** 96%	**Drilling Method:** FA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-8.0' (CH) Reddish brown, fat CLAY, trace sand	1235						
				X	72	6-9-13 (33)		PP = 4.00 tsf	MC = 33.5%
5				X	44	2-7-3 (15)		PP = 4.00 tsf	MC = 30.4%
			1230	X	100			PP = 1.50 tsf	MC = 42.1%
		8.0-13.5' LIMESTONE, highly weathered and Reddish brown, fat CLAY (CH)		X	67	4-50		PP = 1.50 tsf	MC = 41.5%
10			1225	X	40	1-50/0.3'		PP = 2.00 tsf	MC = 28.0%
		13.5-18.5' LIMESTONE, highly weathered, trace Reddish brown, fat CLAY (CH)		X	56	7-39-26 (98)			MC = 26.2%
15			1220	X	56	20-43-25 (102)			MC = 7.8%
		Refusal at 18.5 feet. Bottom of borehole at 18.5 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: **Coordinate Zone:** **Coordinate Proj. Factor:**
Coordinate Datum: **Coordinate Units:** U.S. Survey Feet

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For locations of borings, see Sheet No. 1.

BORING DATA

Detailed Nov 2024
Checked Nov 2024

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

L:\MoDOT\22004246-00_New\Deliverable\!!!2024 1227 J8S3156 FinalPS&E\Bridge Deliverables\A9434 - Melville over I-44_Wall1\Plan Sheet DGNs\B_A9434_006_J8S3156_BORING_DATA3.dgn 3:16:55 PM 12/27/2024

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

12/29/2024 1:35:49 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED	12/27/2024
ROUTE	CRD 127
STATE	MO
DISTRICT	BR
SHEET NO.	6
COUNTY	GREENE
JOB NO.	J8S3156
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	A9434

DESCRIPTION	DATE

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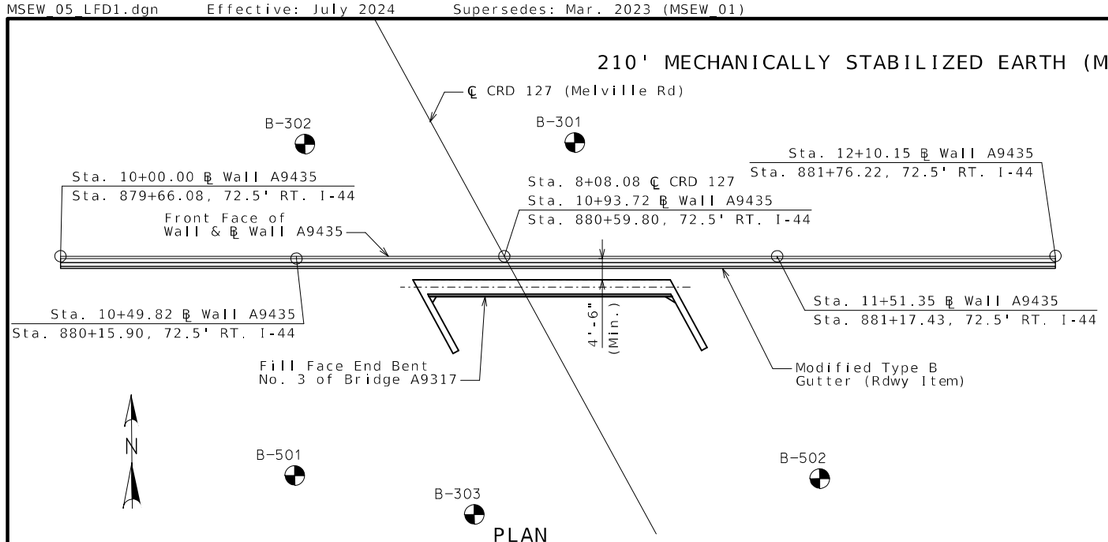
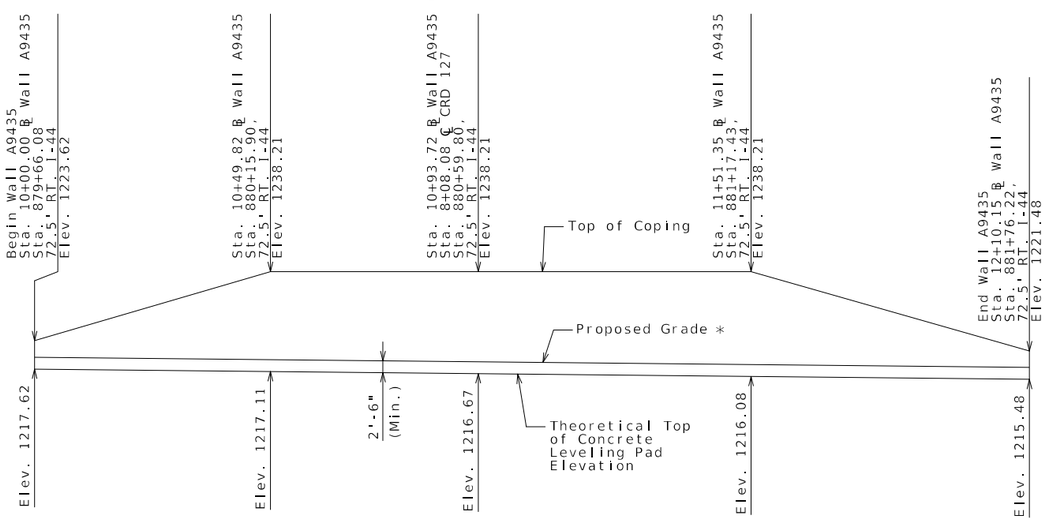
REV.

210' MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL SYSTEM



PLAN

Concrete Leveling pad and coping not shown for clarity. (1)
℄ wall stationing at front face of wall



DEVELOPED ELEVATION

Concrete Leveling pad not shown for clarity. (1)
* Proposed grade shown accommodates future full buildout of I-44.

(1) Wall contractor shall show the following items on the design drawings and/or on the fabricator shop drawings.

- Leveling pad horizontal.
- Leveling pad length and step elevations shall be based on wall manufacturer's recommendation. Top of leveling pad elevations shall not be higher than theoretical top of leveling pad elevations shown on these plans.

Estimated Quantities

Item		Total
Aesthetic Concrete Stain	lump sum	1
Concrete and Masonry Protection System	lump sum	1
Sacrificial Graffiti Protection System	lump sum	1
Mechanically Stabilized Earth Wall Systems	sq. foot	3697

Designed Nov 2024
Detailed Nov 2024
Checked Nov 2024

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

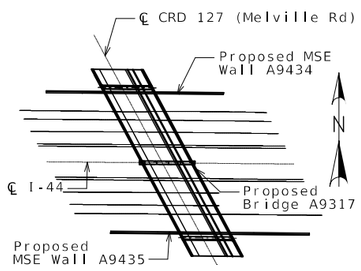
Sheet No. 1 of 7

◓ Indicates location of borings.

Notice and Disclaimer Regarding Boring Log Data

The locations of all subsurface borings for this structure are shown on the plan sheet for this structure. The boring data for all locations indicated, as well as any other boring logs or other factual records of subsurface data and investigations performed by the department for the design of the project, are shown on Sheets No. 4 thru 7 and may be included in the Electronic Bridge Deliverables. They will also be available from the Project Contact upon written request. No greater significance or weight should be given to the boring data depicted on the plan sheets than is given to the subsurface data available from the district or elsewhere.

The Commission does not represent or warrant that any such boring data accurately depicts the conditions to be encountered in constructing this project. A contractor assumes all risks it may encounter in basing its bid prices, time or schedule of performance on the boring data depicted here or those available from the district, or on any other documentation not expressly warranted, which the contractor may obtain from the Commission.



LOCATION SKETCH

MSE Wall Systems Data Table

Proprietary Wall Systems		Combination Wall Systems			
Manufacturer	System	Facing Unit Manufacturer	Facing Unit	Geogrid Manufacturer	Geogrid

MSE Wall Systems Data Table is to be completed by MoDOT construction personnel to record the manufacturer of the proprietary wall system or the manufacturers of the combination wall system that was used for constructing the MSE wall.

General Notes:

SEC./SUR. 4 TWP. 29N RGE. 22W

Design Specifications:

2002 AASHTO LFD (17th Ed.) Standard Specifications (Section 5 ASD Design)
Seismic Performance Category = A
Acceleration Coefficient = 0.09

Design Loading:

Φ_b = 20° and Unit weight, γ_b = 120 pcf for retained backfill material to be retained by the mechanically stabilized earth wall system.

Φ_f = 34° for improved foundation ground where wall is to bear. Unimproved foundation data is not applicable. Foundation Improvement is required full lenth of the wall.

For improved foundation ground, the allowable bearing pressure is 5.5 ksf.

The maximum applied bearing pressure for the controlling design case at the foundation level shall be shown on the shop drawings and shall be less than the allowable bearing pressure for foundation ground provided herein. For seismic design the maximum applied bearing pressure shall be less than two times the allowable bearing pressure.

Allowable bearing pressure and limits of improved foundation ground shall not be adjusted from that as shown on the plans.

Contractor shall include design Φ_f (actual $\Phi_f \geq 34°$) and the total unit weight, γ_f, for the select granular backfill (reinforced backfill and wedge area backfill) for structural systems on shop drawings. Contractor shall identify source of select granular backfill material, submit proctor in accordance with AASHTO T 99 (ASTM D698) and gradation with the shop drawings. When backfill material is too coarse to develop a proctor curve the contractor shall determine the maximum dry density (relative density) in accordance with ASTM D4253 and ASTM D4254 and assume percent passing the 200 sieve for optimum water content.

Total unit weight, γ_f = (95% compaction) x (maximum dry density) x (1 + optimum water content)

Design Φ_f = 34°for the select granular backfill (reinforced backfill) only for structural systems.

Factor of safety shall be 2.0 for overturning and 1.5 for sliding.

For seismic design the factor of safety shall be 1.5 for overturning and 1.1 for sliding.

Use default values for the pullout friction factor, F^*, in accordance with AASHTO figure 5.8.5.2A and default value for scale effect correction factor, α, in accordance with AASHTO table 5.8.5.2A. For approved steel strips not shown in AASHTO figure 5.8.5.2A, use $F^* \geq 2.0$ at zero depth and $F^* \geq \text{Tan } \Phi_f$ at 20 feet depth and Φ_f design = 34°. F^* and α values shall be shown on the shop drawings.

Design Unit Stresses:

All concrete for leveling pad and coping shall be Class B or B-1 with f'c = 4000 psi.

The minimum compressive strength of concrete for precast modular panel shall be 4,000 psi in accordance with Sec 1052.

Miscellaneous:

The MSE wall system shall be built vertical.

The MSE wall system shall be built in accordance with Sec 720.

The MSE wall system shall be a precast modular panel wall system.

Panel, concrete block and coping (or capstone) reinforcement shall be epoxy coated.

A filter cloth meeting the requirements for a Separation Geotextile material shall be placed between the select granular backfill for structural systems and the backfill being retained by the mechanically stabilized earth wall system.

Coping shall be required on this structure. When CIP coping sections extend beyond the limits of a single panel, bond breaker (roofing felt or other approved alternate) between wall panel and coping is required. Coping joints shall use 3/4-inch chamfers and shall be sealed with 3/4-inch joint filler. Coping reinforcement shall terminate 1 1/2-inch minimum from face of coping joint.

The contractor shall be solely responsible to coordinate construction of the wall with bridge and roadway construction and ensure that the bridge and roadway construction, resulting or existing obstructions, shall not impact the construction or performance of the wall. Soil reinforcement shall be designed and placed to avoid damage by pile driving, guardrail post installation, utility and sign foundations. (See Roadway and Bridge plans.)

Control Point #514
N: 517039.25
E: 1397801.35
Elev. 1222.12
Sta. 875+18.07
83.90' Lt. (I-44)
5/8" I.B. W/ Aluminum Cap

Control Point #515
N: 516847.15
E: 1399681.98
Elev. 1219.86
Sta. 894+00.43
90.54' Rt. (I-44)
5/8" I.B. W/ Aluminum Cap

RETAINING WALL ALONG EB I-44 NEAR END BENT NO. 3 OF BRIDGE A9317

CRD 127 OVER I-44
ABOUT 1.2 MILES WEST OF ROUTE 13
BEGINNING STATION 879+66.08 ℄ I-44

JOSHUA D. JOLLIFF NUMBER PE-2006002824 STATE OF MISSOURI ENGINEER
12/29/2024 1:39:21 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
12/27/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
BR	1

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9435

REV.	DESCRIPTION	DATE

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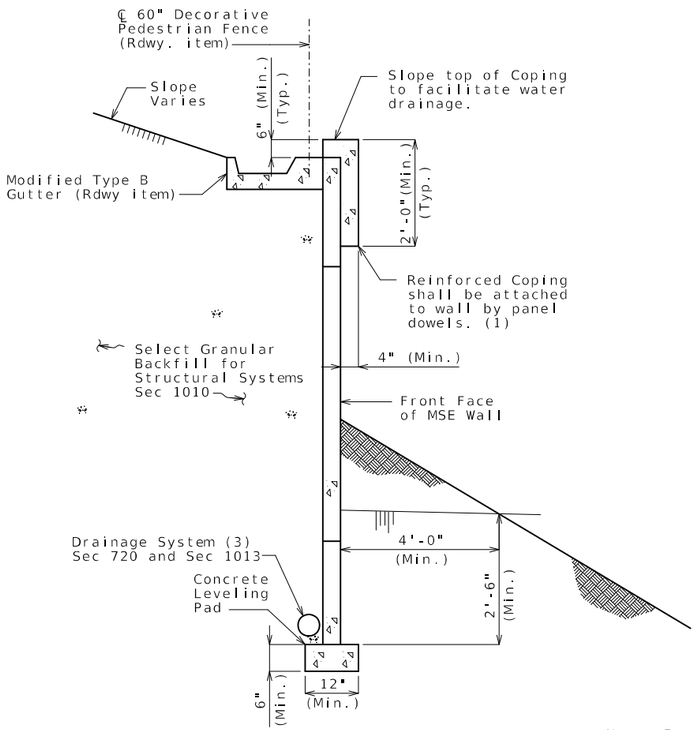
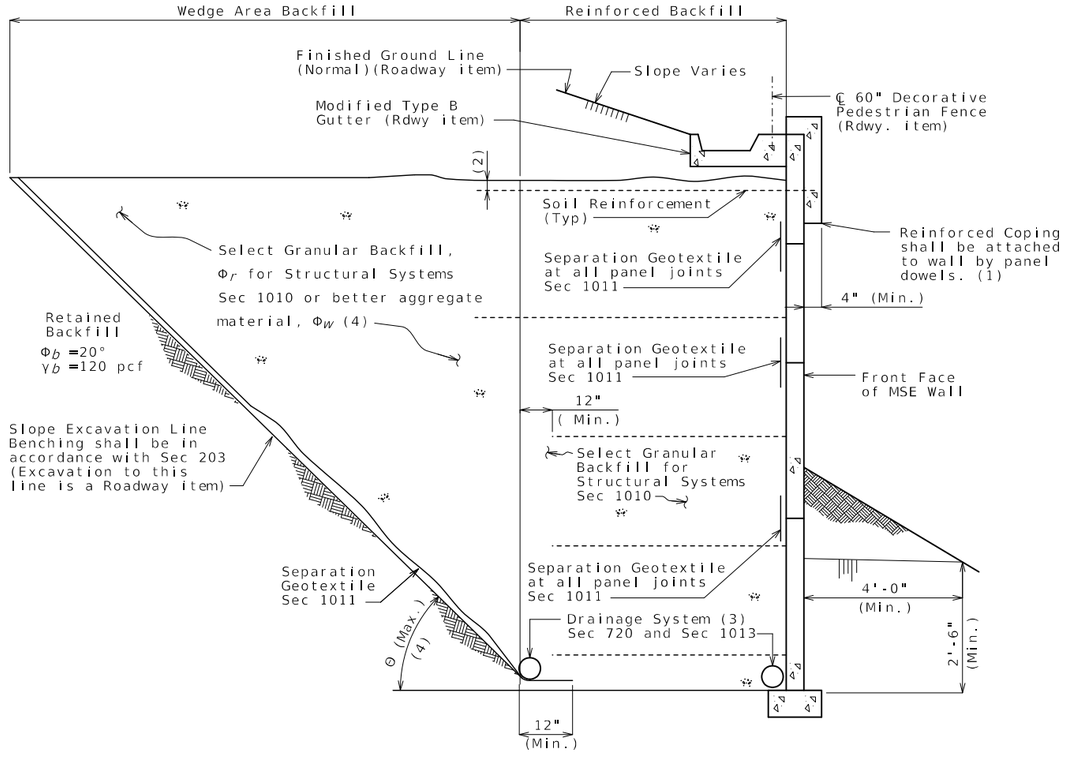


TYPICAL SECTION THRU PRECAST MODULAR PANEL WALL

Note: For additional information, see "TYPICAL SECTION THRU PRECAST MODULAR PANEL WALL UNDER BRIDGE SHOWING GROUND IMPROVEMENTS".



TYPICAL SECTION THRU PRECAST MODULAR PANEL WALL SHOWING FILTER CLOTH

General Notes Cont.:

Minimum 18" wide Geotextile strips shall be centered at vertical and horizontal joints of panel. Geotextile material shall be adhered to back face of panel using an adhesive compound supplied by the manufacturer. All edges of each fabric strip shall provide a positive seal. A minimum 18" overlap shall be provided between spliced filter fabric.

Aluminized soil reinforcement shall have edges coated with coating material per manufacturer.

Soil reinforcement shall be spaced to avoid roadway drop inlet behind wall.

All steel soil reinforcements shall be separated from other metallic elements by at least 3 inches.

The splay angle should be less than 15° and tensile capacity of splayed reinforcement shall be reduced by the cosine of the splay angle. Soil reinforcement shall clear the obstruction by at least 3 inches.

No reinforcement shall be left unconnected to the wall face or arbitrarily cut/bent in the field to avoid the obstruction.

Where interference between the vertical obstruction and the soil reinforcement is unavoidable, the design of the wall near the obstruction may be modified using one of the alternatives in FHWA-NHI-10-24, Section 5.4.2. Show detail layout on the drawings. For wall designs with horizontal obstructions in reinforced soil mass, see FHWA-NHI-10-024, Section 5.4.3.

Excavation:
Excavation quantities and pay items are given on the roadway plans. Excavation quantities are based on a soil reinforcement length of 0.8H. The soil reinforcement length may vary based upon the wall design selected by the contractor. Plan excavation quantities will be paid regardless of any actual quantities removed based on the soil reinforcement length and design selected.

(1) Inverted U-shape reinforced capstone may be used in lieu of coping. Panel dowels for level-up concrete shall be required and provided by manufacturer. The dowels shall be field trimmed to clear the capstone by a minimum of 1 1/2 inches and a maximum of 2 1/2 inches.

(2) Topmost layer of reinforcement shall be fully covered with select granular backfill for structural systems, as approved by the wall manufacturer, before placement of the Separation Geotextile.

(3) Minimum 6" diameter perforated PVC or PE pipe.

Manufacturer shall show drain details on design plans to be submitted as shown on MoDOT MSE wall plans and/or roadway plans.

Contractor shall modify the drain details as shown if it will improve flow as may be the case for stepped leveling pad, and for an uneven ground line (approval of the engineer required).

Material Properties Used in Design				
Reinf. Fill/Select Granular Backfill		Active Force Computations		Foundation
Φ°	γ (pcf)	Φ°	γ (pcf)	Φ°

Note: MSE Wall designer shall include table on shop drawings and provide values used in the design computations. Effects of cohesion shall be ignored unless approved by the engineer.

Show range of acceptable theta (Θ) angle on shop drawings which must be consistent with design computations and proposed construction of wall. Show active force computation properties on shop drawings and in design computations. Coordination between wall designer (manufacturer) and contractor is required before shop drawing submittal.

(4) Select granular backfill shall extend a minimum of 12" beyond the end of all soil reinforcement. Where the angle, Θ, between the retained backfill excavation/fill line and the horizontal is less than 90°, the wedge area backfill between Θ and 90° shall be filled with select granular backfill for structural systems meeting the requirements of Section 1010.

- For $(45° + \Phi_b/3) < \Theta \leq 90°$, properties for retained backfill shall be used for active force computations.

- For $\Theta \leq (45° + \Phi_b/3)$, contractor shall have the option to use select granular backfill, Φ_f, or better aggregate material, Φ_W for active force computations in the wedge area backfill. For active force computations, the angle of internal friction for wedge area backfill material, Φ_f or Φ_W, shall be limited to 34° unless determined otherwise in accordance with Section 1010. If Φ_f or $\Phi_W > 34°$ is desired for wedge area backfill then test report shall be submitted with shop drawings. Φ_f or Φ_W shall not be greater than 40° for computations. Final configuration of this option shall be sent to Geotechnical Section for a new overall global stability analysis. Design Φ_W shall be shown on the shop drawings if used.

The slope excavation line shall be benched and separation geotextile shall be placed between the retained backfill and either select granular backfill or better aggregate material, and between the select granular backfill and better aggregate material.

DETAILS FOR MSE WALL

Detailed Nov 2024
Checked Nov 2024

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

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
12/29/2024 1:39:41 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
12/27/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
BR	2

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9435

REV.	DESCRIPTION	DATE

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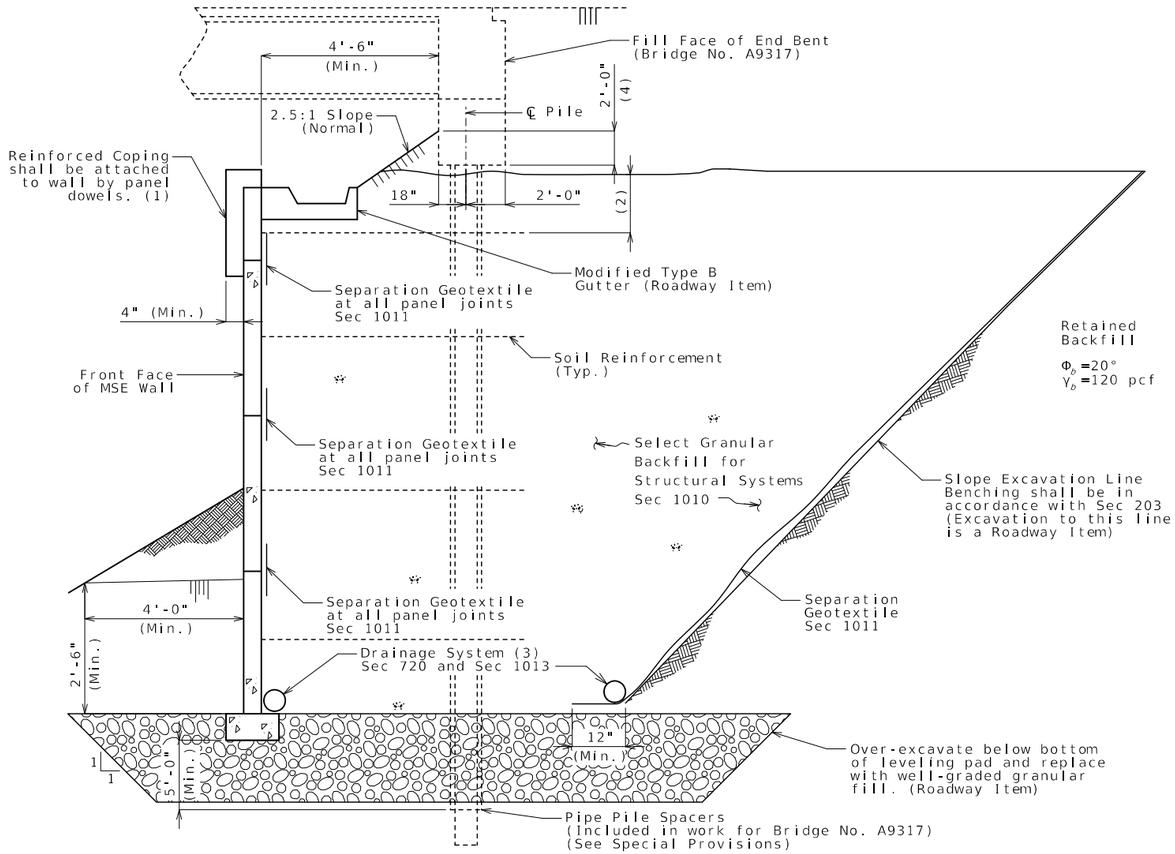


TYPICAL SECTION THRU PRECAST MODULAR PANEL WALL
UNDER BRIDGE SHOWING GROUND IMPROVEMENTS

Note: For additional information, see "TYPICAL SECTION THRU PRECAST MODULAR PANEL WALL SHOWING FILTER CLOTH".

(1) Inverted U-shape reinforced capstone may be used in lieu of coping. Panel dowels for level-up concrete shall be required and provided by manufacturer. The dowels shall be field trimmed to clear the capstone by a minimum of 1 1/2 inches and a maximum of 2 1/2 inches.

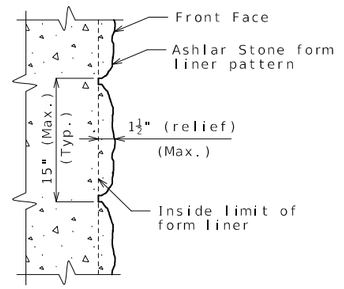
(2) Topmost layer of reinforcement shall be fully covered with select granular backfill for structural systems, as approved by the wall manufacturer, before placement of the Separation Geotextile.

(3) Minimum 6" diameter perforated PVC or PE pipe.

Manufacturer shall show drain details on design plans to be submitted as shown on MoDOT MSE wall plans and/or roadway plans.

Contractor shall modify the drain details as shown if it will improve flow as may be the case for stepped leveling pad, and for an uneven ground line (approval of the engineer required).

(4) See bridge plans.



FORM LINER DETAIL
(PRECAST MODULAR PANEL WALL)

Notes:

The cost of form liners for MSE wall systems, complete in place, will be considered completely covered by the contract unit price for Mechanically Stabilized Earth Wall System.

Form liner shall be constructed in accordance with Special Provisions.

The following is a list of form liner manufacturers and types which may be used. Depth of relief for all form liner pattern's shall vary up to 1 1/2". The height of any single 'stone' shall be 15" maximum.

- Scott System, Inc.: Form liner pattern #167 "Ashlar Stone"
- Fitzgerald Formliners: Form liner pattern #16986 "Ashlar Stone"
- Greenstreak: Form liner pattern #330 "Ashlar Stone"
- Spec Formliners: Form liner pattern #1515 "Ashlar Stone"
- Customrock: Form liner pattern #12020 "Tollway Ashlar"
- An approved equal

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
12/29/2024 1:39:47 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
12/27/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
BR	3

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9435

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REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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SPRINGFIELD, MO 65807 (417) 869-6009
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Detailed Nov 2024
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DETAILS FOR MSE WALL

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

Missouri Department of Transportation
Construction and Materials

BORING NO. B-301
Page 1 of 1

Job No.: 20221081.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** RK
Station: **Northing:** 516901.6852 **Date of Work:** 09/27/22-09/27/22
Offset: **Easting:** 1398356.737 **Depth to Water:**
Elevation: 1220.2 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550,Split-Spoon Sampler, Shelby Tube, NQ
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 96% **Drilling Method:** FA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-0.8' Portland cement concrete (9.6")	1220						
		0.8-1.0' Crushed limestone (2.4")							
		1.0-8.9' (CH) Reddish brown, fat CLAY, trace sand and gravel			33	6-5-6 (17)		PP = 3.00 tsf	MC = 20.1%
5			1215		31			PP = 2.00 tsf	MC = 16.4%
					78	2-2-4 (9)		PP = 1.00 tsf	MC = 56.1%
10		8.9-11.3' LIMESTONE, tan, highly weathered and Reddish brow, fat CLAY	1210		56	32-14-14 (42)		PP = 1.00 tsf	MC = 61.4%
					100	50/0.3		PP = 0.50 tsf	MC = 36.6%
		12.5' See Boring B-301A for detailed subsurface information below 11.3 feet. Refusal at 11.3 feet. Bottom of borehole at 11.3 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: **Coordinate Zone:** **Coordinate Proj. Factor:**
Coordinate Datum: **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 11/10/23 17:58 - \\TSI\PROJECTS\STL\GEOTECH\2022 PROJECTS\20221081.00 REPLACEMENT OF MELVILLE RD A0441) BRIDGE OVER I-44 (J8S3156)\WORKING FILES\MODOT GINT\MELVILLE MODOT.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. B-301A
Page 1 of 1

Job No.: 20221081.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** RK
Station: **Northing:** 516901.6852 **Date of Work:** 09/27/22-09/27/28
Offset: **Easting:** 1398359.7372 **Depth to Water:**
Elevation: 1220.2 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550,Auger Cuttings, NQ
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 96% **Drilling Method:** FA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-0.8' Portland cement concrete (9.6")	1220						
		0.8-1.0' Crushed limestone (2.4")							
		1.0-4.0' (CH) Reddish brown, fat CLAY, trace sand and gravel							
5		4.0-4.5' Tan, highly weathered LIMESTONE	1215						
		4.5-19.5' LIMESTONE, gray, hard, moderatley weathered, coarsely crystalline, thin bedded			100 (61)		Cu Test Results UCS = 1570 ksf		
10		9.5' - slightly to moderately weathered below 9.5 ft.	1210						
		11.7' - chert inclusion.			98 (90)		Cu Test Results UCS = 1260 ksf		
		12.9' - chert inclusion.							
15			1205						
		18.0' - highly weathered			100 (70)		Cu Test Results UCS = 1470 ksf		
		Refusal at 4.5 feet.. Bottom of borehole at 19.5 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: **Coordinate Zone:** **Coordinate Proj. Factor:**
Coordinate Datum: **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

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For locations of borings, see Sheet No. 1.

BORING DATA

Detailed Nov 2024
Checked Nov 2024

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

Sheet No. 4 of 7

L:\MoDOT\22004246-00_New\Deliverable\!!!2024 1227 J8S3156 Final PS&E\Bridge Deliverables\A9435 - Melville over I-44_Wall 2\Plan Sheet DGNs\B_A9435_004_J8S3156_BORING_DATA1.dgn 3:11:43 PM 12/27/2024

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

12/29/2024 1:39:54 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
12/27/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
BR	4

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9435

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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REV.

BORING NO. B-302
Page 1 of 1

Missouri Department of Transportation
Construction and Materials

Job No.: 20221081.00	**County:** Greene	**Route:** I-44	
Design:	**Skew:**	**Location:** Springfield, Missouri	
Bent:	**Logged By:** JM	**Operator:** RK	
Station:	**Northing:** 516901.8891	**Date of Work:** 09/27/22-09/27/22	
Offset:	**Easting:** 1398299.7448	**Depth to Water:**	
Elevation: 1220.8	**Requested Northing:**	**Depth Hole Open:**	
Requested Station:	**Requested Easting:**	**Time Change:**	
Requested Offset:	**Equipment:** CME 550 Auger Cuttings, NQ		
Requested Elevation:	**Location Note:**		
Drill No.:	**Hammer Efficiency:** 96%	**Drilling Method:** FA	

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-0.8' Portland cement concrete (9.6") 0.1' - rough drilling 0.8-1.0' Crushed limestone (2.4") 1.0-4.0' (CH) Red, fat CLAY, trace and and gravel	1220						
5		4.0-5.5' LIMESTONE, highly weathered Refusal at 5.5 feet. Bottom of borehole at 5.5 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: **Coordinate Zone:** **Coordinate Proj. Factor:**

Coordinate Datum: **Coordinate Units:** U.S. Survey Feet

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BORING NO. B-303
Page 1 of 1

Missouri Department of Transportation
Construction and Materials

Job No.: 20221081.00	**County:** Greene	**Route:** I-44	
Design:	**Skew:**	**Location:** Springfield, Missouri	
Bent:	**Logged By:** JM	**Operator:** RK	
Station:	**Northing:** 516823.3373	**Date of Work:** 09/22/22-09/22/22	
Offset:	**Easting:** 1398334.7992	**Depth to Water:**	
Elevation: 1241.7	**Requested Northing:**	**Depth Hole Open:**	
Requested Station:	**Requested Easting:**	**Time Change:**	
Requested Offset:	**Equipment:** CME 550,Split-Spoon Sampler, NQ		
Requested Elevation:	**Location Note:**		
Drill No.:	**Hammer Efficiency:** 96%	**Drilling Method:** FA	

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-29.7' (CH) Reddish brown, fat CLAY	1240		44	4-12-27 (59)		PP = 4.50 tsf	MC = 12.2%
5					17	6-11-4 (23)		PP = 4.50 tsf	MC = 6.1%
		6.0' - trace and and gravel.	1235		72	2-2-3 (8)		PP = 1.50 tsf	MC = 55.5%
10					61	2-2-3 (8)		PP = 2.50 tsf	MC = 55.1%
			1230		33	1-2-3 (8)		PP = 1.00 tsf	LL = 123 PL = 31 MC = 39.7%
15					89	0-1-2 (5)		PP = 1.00 tsf	MC = 59.0%
			1225		8	1-1-1 (3)		PP = 1.50 tsf	MC = 38.8%
20			1220		22	0-0-1 (2)		PP = 0.50 tsf	MC = 64.7%
25			1215		100	1-50/0.0'		PP = 1.00 tsf	MC = 50.9%
		29.0-29.7' LIMESTONE, heavily weathered Refusal at 29.7 feet. Bottom of borehole at 29.7 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: **Coordinate Zone:** **Coordinate Proj. Factor:**

Coordinate Datum: **Coordinate Units:** U.S. Survey Feet

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For locations of borings, see Sheet No. 1.

BORING DATA

Detailed Nov 2024
Checked Nov 2024

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STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

12/29/2024 1:40:00 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
12/27/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
BR	5

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9435

DATE	DESCRIPTION	REV.

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LETTER BOREHOLE - MODOT 20150728.GDT - 11/10/23 17:58 - \\TSI\PROJECTS\STLGEOTECH\2022 PROJECTS\20221081.00 REPLACEMENT OF MELVILLE RD A0441) BRIDGE OVER I-44 (J8S3156)\WORKING FILES\MODOT GINT\MELVILLE MODOT.GPJ

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Missouri Department of Transportation
Construction and Materials

BORING NO. B-501
Page 1 of 2

Job No.: 20221081.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** AM
Station: **Northing:** 516831.9202 **Date of Work:** 09/20/22-09/20/22
Offset: **Easting:** 1398296.9445 **Depth to Water:**
Elevation: 1241.0 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550,Split-Spoon Sampler, Shelby Tube, NQ
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 96% **Drilling Method:** FA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-3.5' CHERT, white and Reddish brown gravel, trace clay	1240						
				X	33	15-30-39 (104)			MC = 9.9%
		3.5-31.5' Reddish brown, fat CLAY with gravel, trace organics		X	56	35-50		PP >4.50 tsf	MC = 20.6%
5			1235						
				X	72	6-13-7 (30)		PP = 3.00 tsf	MC = 54.5%
				■	83			PP = 2.50 tsf	MC = 51.8%
10			1230						
				X	100	3-3-4 (11)		PP = 2.50 tsf	MC = 45.1%
				X	44	3-4-50 (81)		PP = 1.50 tsf	MC = 53.6%
15			1225						
				X	56	3-9-14 (35)		PP = 1.50 tsf	MC = 35.8%
				X	61	6-4-3 (11)		PP = 2.00 tsf	MC = 58.6%
20			1220						
				X	100	2-2-12 (21)		PP = 3.50 tsf	MC = 57.4%
				X	100	2-2-3 (8)		PP = 1.00 tsf	MC = 64.7%
25			1215						
				X	100	6-2-2 (6)		PP = 1.00 tsf	
				X	32	4-50/0.3'		PP = 1.50 tsf	MC = 13.7%
30		29.0-31.5' LIMESTONE, heavily weathered	1210						
		31.5-41.5' LIMESTONE, gray, hard, moderately weathered, finely crystalline, thin bedded		■	75 (60)				
35		34.0' - 6" drop observed.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: **Coordinate Zone:** **Coordinate Proj. Factor:**
Coordinate Datum: **Coordinate Units:** U.S. Survey Feet

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Missouri Department of Transportation
Construction and Materials

BORING NO. B-501
Page 2 of 2

Job No.: 20221081.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** AM
Station: **Northing:** 516831.9202 **Date of Work:** 09/20/22-09/20/22
Offset: **Easting:** 1398296.9445 **Depth to Water:**
Elevation: 1241.0 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550,Split-Spoon Sampler, Shelby Tube, NQ
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 96% **Drilling Method:** FA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
35		31.5-41.5' LIMESTONE, gray, hard, moderately weathered, finely crystalline, thin bedded *(continued)*	1205		100 (93)		Qu Test Results UCS = 1270 ksf		
40		Refusal at 31.5 feet. Bottom of borehole at 41.5 feet.	1200		100 (100)		Qu Test Results UCS = 1350 ksf		

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: **Coordinate Zone:** **Coordinate Proj. Factor:**
Coordinate Datum: **Coordinate Units:** U.S. Survey Feet

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For locations of borings, see Sheet No. 1.

BORING DATA

Detailed Nov 2024
Checked Nov 2024

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STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

12/29/2024 1:40:05 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
12/27/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
BR	6

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9435

DESCRIPTION	DATE

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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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Construction and Materials

BORING NO. B-502
Page 1 of 2

Job No.: 20221081.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** AM
Station: **Northing:** 516830.2314 **Date of Work:** 09/19/22-09/19/22
Offset: **Easting:** 1398407.8135 **Depth to Water:**
Elevation: 1241.6 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550,No Recovery, Split-Spoon Sampler, Shelby Tube, NQ
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 96% **Drilling Method:** FA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-3.5' (GC) White and brown clayey GRAVEL (GC)	1240		56	18-38-50 (132)			MC = 16.5%
5		3.5-6.0' (SM) Red, clayey SAND, trace gravel and organics			33	3-17-20 (56)		PP = 3.00 tsf	MC = 29.5%
		6.0-27.4' (CH) Reddish brown, fat CLAY, trace sand	1235		100			PP = 3.00 tsf	MC = 25.9%
10		10.0' - large chert fragment in shoe.			11	2-5-11 (24)			MC = 46.6%
			1230		44	2-3-6 (14)		PP = 2.50 tsf	MC = 58.5%
15					100	2-2-3 (8)		PP = 2.50 tsf	MC = 57.7%
			1225		100	2-3-7 (15)		PP = 1.50 tsf	MC = 60.4%
20					11	3-4-4 (12)		PP = 1.50 tsf	MC = 50.0%
			1220		100	5-3-1 (6)		PP = 1.00 tsf	LL = 144 PL = 33 MC = 38.6%
25					56	1-1-2 (5)		PP = 1.00 tsf	MC = 38.4%
			1215		44	6-18-32 (75)		PP = 1.00 tsf	MC = 57.1%
30		27.4-27.5' (CH) Sandy fat CLAY, with chert 27.5' - highly weathered chert. 28.0-38.5' LIMESTONE, gray, hard, slightly-weathered, finely crystalline, thin bedded 30.0' -vuggy for 1/10 ft.	1210		100 (71)	(0)	Qu Test Results UCS = 1250 ksf		
35									

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: **Coordinate Zone:** **Coordinate Proj. Factor:**
Coordinate Datum: **Coordinate Units:** U.S. Survey Feet

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Missouri Department of Transportation
Construction and Materials

BORING NO. B-502
Page 2 of 2

Job No.: 20221081.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** AM
Station: **Northing:** 516830.2314 **Date of Work:** 09/19/22-09/19/22
Offset: **Easting:** 1398407.8135 **Depth to Water:**
Elevation: 1241.6 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550,No Recovery, Split-Spoon Sampler, Shelby Tube, NQ
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 96% **Drilling Method:** FA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
35		28.0-38.5' LIMESTONE, gray, hard, slightly-weathered, finely crystalline, thin bedded *(continued)*	1205		97 (97)		Qu Test Results UCS = 1180 ksf		
		Refusal at 28.5 feet. Bottom of borehole at 38.5 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: **Coordinate Zone:** **Coordinate Proj. Factor:**
Coordinate Datum: **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 11/10/23 17:58 - \\TSI\PROJECTS\STL\GEOTECH\2022 PROJECTS\20221081.00 REPLACEMENT OF MELVILLE RD A0441) BRIDGE OVER I-44 (J8S3156)\WORKING FILES\MODOT GINT\MELVILLE MODOT.GPJ

For locations of borings, see Sheet No. 1.

BORING DATA

Detailed Nov 2024
Checked Nov 2024

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

L:\MoDOT\22004246-00_New\Deliverable\!!!2024 1227 J8S3156 FinalPS&E\Bridge Deliverables\A9435 - Melville over I-44_Wall 2\Plan Sheet DGNs\B_A9435_007_J8S3156_BORING_DATA4.dgn 3:12:56 PM 12/27/2024

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
12/29/2024 1:40:11 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
12/27/2024

ROUTE	STATE
CRD 127	MO
DISTRICT	SHEET NO.
BR	7

COUNTY
GREENE

JOB NO.
J8S3156

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9435

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

CMT
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ENGINEERING CORPORATION - 000631

REV.