MAD

PROJECT ID: 5630-06-61

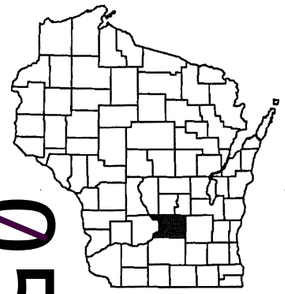
WITH:

COUNTY: COLUMBIA

APRIL 2020

ORDER OF SHEETS

TOTAL SHEETS = 82



05

DESIGN DESIGNATION

A.A.D.T.	2017	=	1,500
A.A.D.T.	2037	=	1,800
D.H.V		=	275
D.D.		=	61/39
T.		=	13.7%
DESIGN SPEED		=	55 MPH
ESALS		=	490,000

CONVENTIONAL SYMBOLS

PLAN		PROFILE	
CORPORATE LIMITS		GRADE LINE	
PROPERTY LINE		ORIGINAL GROUND	
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	ROCK
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	LABEL
EXISTING RIGHT OF WAY		GRADE ELEVATION	95.36
PROPOSED OR NEW R/W LINE		CULVERT (Profile View)	
SLOPE INTERCEPT		UTILITIES	
REFERENCE LINE	100'E8'	ELECTRIC	E
EXISTING CULVERT		FIBER OPTIC	FO
PROPOSED CULVERT (Box or Pipe)		GAS	G
COMBUSTIBLE FLUIDS	CAUTION	SANITARY SEWER	SAN
MARSH AREA		STORM SEWER	SS
WOODED OR SHRUB AREA		TELEPHONE	T
		WATER	W
		UTILITY PEDESTAL	
		POWER POLE	
		TELEPHONE POLE	

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

SAUK CITY - IH 39

CTH DL TO ARCO DRIVE

STH 78

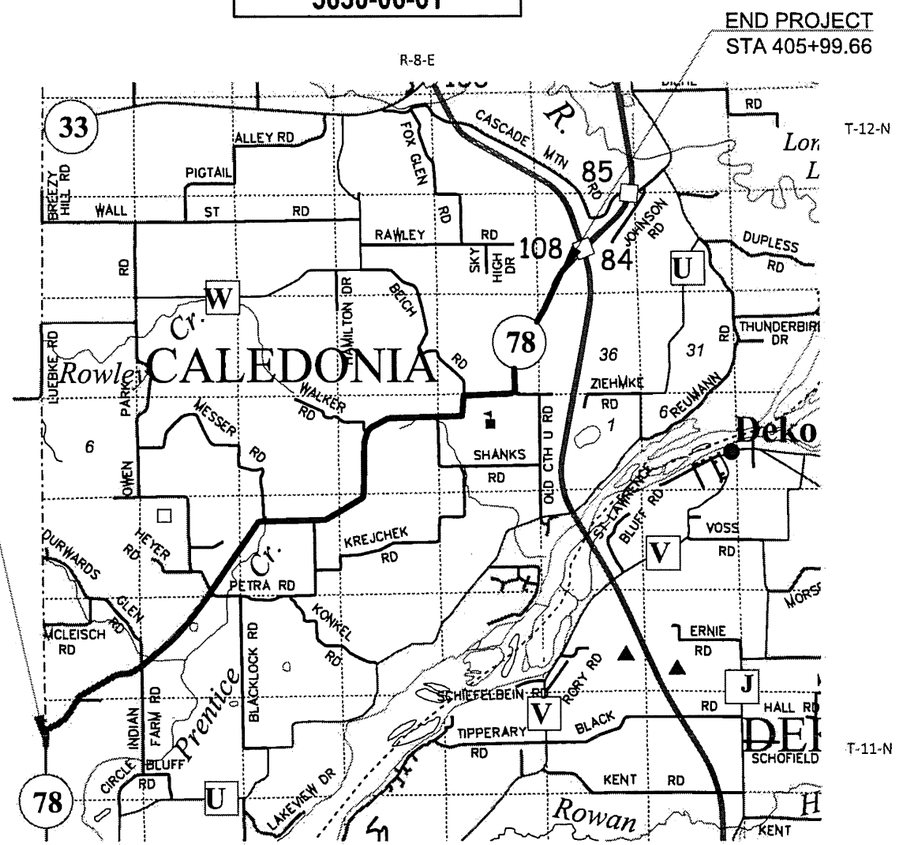
COLUMBIA COUNTY

STATE PROJECT NUMBER
5630-06-61

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5630-06-61	WISC 2020128	1

END PROJECT
STA 405+99.66

BEGIN PROJECT
STA 1+75.00
X: 500,185.10
Y: 349,901.10



LAYOUT

SCALE 0 1 1/2 MI

TOTAL NET LENGTH OF CENTERLINE = 7.656 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, COLUMBIA COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCE MAY BE USED AS GROUND DISTANCES.

ELEVATION SHOWN ON THIS PLAN ARE REFERENCE TO THE NORTH AMERICAN VERTIAL DATUM OF 1988, NAVD (2012).

ORIGINAL PLANS PREPARED BY

benesch
WISCONSIN
Alfred Benesch & Company
1100 West Canal Street, Suite 150
Milwaukee, Wisconsin 53233
414-308-1310 Job No. 20229.02

AMANDA E. ZACHARIAS E-35716 MILWAUKEE WISCONSIN
PROFESSIONAL ENGINEER

DATE 11/6/19 (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	THE SIGMA GROUP
Designer	ALFRED BENESCH & CO
Project Manager	MAHESH SHRESTHA
Regional Examiner	SW REGION
Regional Supervisor	WILLIAM STROBEL

APPROVED FOR THE DEPARTMENT

DATE 11/8/19 (Signature)

E

FILE NAME: Y:\MILWAUKEE\20200S\20229.02\ENG_DOCS\56300631\SHEETSPLAN\010101_TI.DWG PLOT DATE: 11/5/2019 1:37 PM PLOT BY: WEIGAND, BEN PLOT NAME:

UTILITY CONTACTS

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MADISON, WI 53718
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TDS METROCOM
COMMUNCATIONS
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MERRIMAC, WI 53561
BRANDON SUCHLA
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DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com

OTHER AGENCIES

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DNR SOUTH CENTRAL REGION
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FITCHBURG, WI 53711
ERIC HEGGELUND
(608) 228-7927
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MILWAUKEE, WI 53233
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azacharias@bensch.com

WISDOT
SOUTH WEST REGION
2101 WRIGHT STREET
MADISON, WI 53704
MAHESH SHRESTHA
(608) 245-2674
Mahesh.Shrestha@dot.wi.gov

PAVEMENT LOCATION	TOTAL PAVEMENT THICKNESS	LAYER	TYPE
STH 78 STA 1+75.00 to 123+50.00	3 ½"	1 ¾" UPPER 1 ¾" LOWER	4 LT 58-28 S
STH 78 STA 123+50.00 to 405+99.66	1 ¾"	1 ¾" UPPER	4 LT 58-28 S

ORDER OF SECTION 2 SHEETS

STANDARD ABBREVIATIONS

AGG	AGGREGATE	HORIZ	HORIZONTAL	SHLDR	SHOULDER
AADT	ANNUAL AVERAGE DAILY TRAFFIC	INL	INLET	SW	SIDEWALK
ASPH	ASPHALT DRIVEWAY	INV	INVERT	S	SOUTH
AVG	AVERAGE	JCT	JUNCTION	SPECS	SPECIFICATIONS
ADT	AVERAGE DAILY TRAFFIC	LT	LEFT	SF	SQUARE FEET
BM	BENCH MARK	LF	LINEAR FOOT	SY	SQUARE YARD
CB	CATCH BASIN	LS	LUMP SUM	STD	STANDARD
C/L	CENTERLINE	MH	MANHOLE	SDD	STANDARD DETAIL DRAWINGS
CONC	CONCRETE	ML	MATCH LINE	STH	STATE TRUNK HIGHWAYS
CO	COUNTY	N	NORTH	STA	STATION
CTH	COUNTY TRUNK HIGHWAY	Y	NORTH GRID COORDINATE	SS	STORM SEWER
CWT	HUNDREDWEIGHT	NO	NUMBER	STR	STRUCTURE OR STRUCTURAL
CY	CUBIC YARD	PAVT	PAVEMENT	TEL	TELEPHONE
DHV	DESIGN HOUR VOLUME	PERM	PERMANENT	TEMP	TEMPORARY
DIA	DIAMETER	PLE	PERMANENT LIMITED EASEMENT	TLE	TEMPORARY LIMITED EASEMENT
DWY	PRIVATE DRIVEWAY	PT	POINT	T	TON
FE	FIELD ENTRANCE	PCC	PORTLAND CEMENT CONCRETE	TYP	TYPICAL
E	EAST	PROJ	PROJECT	UG	UNDERGROUND
X	EAST GRID COORDINATE	PL	PROPERTY LINE	USH	UNITED STATES HIGHWAY
ELEC	ELECTRIC	R/L	REFERENCE LINE	W	WATER
ELEV	ELEVATION	RT	RIGHT	WM	WATER MAIN
ESALS	EQUIVALENT SINGLE AXLE LOADS	R/W	RIGHT-OF-WAY	WV	WATER VALVE
ESTR	EXISTING SIGN TO REMAIN	RD	ROAD	W	WEST
EXC	EXCAVATION	RDWY	ROADWAY	YD	YARD
EBS	EXCAVATION BELOW SUBGRADE	SEC	SECTION		
EXIST	EXISTING				
FT	FOOT				
AGG	GRAVEL DRIVEWAY				

GENERAL NOTES

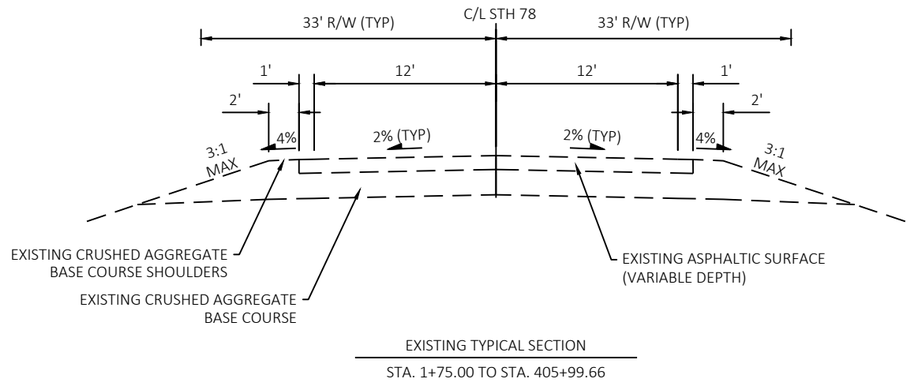
1. THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA.
2. ADJUST PERMANENT SIGN LOCATIONS TO AVOID UTILITY IMPACTS. PROPOSED LOCATIONS TO BE REVIEWED AND APPROVED BY THE ENGINEER.
3. NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.
4. DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE SEEDED. PAYMENT INCLUDED AS PART OF BARRIER SYSTEM GRADING SHAPING FINISHING.
5. HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.
6. THE CONTRACTOR'S PAVING OPERATION SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, PASSING OR PARKING LANE.
7. PAVING LIMITS AT INTERSECTIONS ARE APPROXIMATE. EXACT DIMENSIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
8. THE EXACT LOCATIONS AND LIMITS OF PRIVATE ENTRANCES AND FIELD ENTRANCES WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
9. ALIGNMENT AND STATIONING ARE APPROXIMATE. ESTABLISH AN ALIGNMENT DOWN THE CENTERLINE OF STH 78 BASED ON FIELD MEASUREMENTS. PAYMENT IS INCLUDED AS PART OF THE ITEM "CONSTRUCTION STAKING RESURFACING REFERENCE."
10. EXACT LOCATION AND LIMITS OF REMOVING DISTRESSED PAVEMENT MILLING TO BE DETERMINED BY THE ENGINEER IN THE FIELD.
11. THERE ARE TWO UN-CATALOGUED BURIAL SITES THAT ABUT THE PROJECT AREA. SEE PLAN SHEETS FOR LOCATIONS. SITE LOCATIONS SHALL NOT BE USED FOR BORROW OR WASTE DISPOSAL, AND SHOULD NOT BE USED FOR THE STAGING OF PERSONNEL, EQUIPMENT AND/OR SUPPLIES.
12. REMOVING ASPHALTIC SURFACE IS PAID BY THE SQUARE YARD REGARDLESS OF THE DEPTH OF MILL. NO ADDITIONAL PAYMENT WILL BE MADE FOR VARIABLE DEPTH MILLING.
13. TAKE SPECIAL CARE WHEN MILLING AND PAVING ADJACENT TO ANY SURVEY MONUMENTS TO AVOID DAMAGING MONUMENT.

EROSION CONTROL GENERAL NOTES

1. RE-TOPSOIL DISTURBED AREAS, AS DESIGNATED BY THE ENGINEER. SEED AND PLACE EROSION MAT ON TOP-SOILED AREAS, AS DESIGNATED BY THE ENGINEER, WITHIN FIVE (5) CALENDAR DAYS AFTER PLACEMENT OF TOPSOIL. PAYMENT FOR TOPSOIL AND SEEDING INCLUDED AS PART OF BARRIER SYSTEM GRADING SHAPING FINISHING. IF GRADED AREAS ARE LEFT EXPOSED FOR MORE THAN (14) CALENDAR DAYS, SEED THOSE AREAS WITH TEMPORARY SEED.
2. STOCKPILE EXCESS MATERIAL OR SPOILS ON UPLAND AREAS AWAY FROM WETLANDS, FLOODPLAINS AND WATERWAYS. STOCKPILED SOIL SHALL BE PROTECTED AGAINST EROSION. IF STOCKPILED MATERIAL IS LEFT FOR MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THE STOCKPILE WITH TEMPORARY SEED.
3. QUANTITIES FOR EROSION CONTROL ITEMS HAVE BEEN INCLUDED IN THE PROJECT, BUT ARE NOT REPRESENTED ON THE PLAN. THE LOCATIONS AND TYPE OF EROSION CONTROL ITEMS WILL BE DETERMINED BY THE CONTRACTOR'S ECIP AND BY THE ENGINEER. EROSION CONTROL ITEMS SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE ITEM IS NO LONGER REQUIRED.

PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	PROJECT OVERVIEW	SHEET 3	E

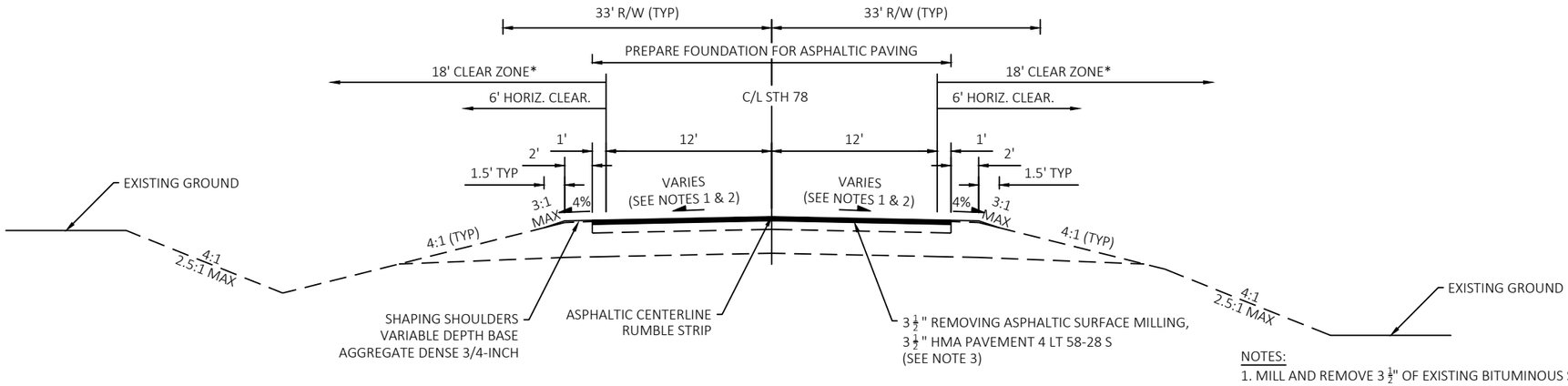
FILE NAME : Y:\MILWAUKEE\20200S\20229.02\ENG_DOCS\56300631\SHEETSPLAN\020201_PO.DWG
LAYOUT NAME - 020201_po
PLOT DATE : 1/22/2019 4:31 PM PLOT BY : WEIGAND, BEN PLOT NAME : PLOT SCALE : 1 IN:0.5 MI
WISDOT/CADDS SHEET 42



EXISTING TYPICAL SECTION

STA. 1+75.00 TO STA. 405+99.66

EXISTING PAVEMENT BORINGS (FOR REFERENCE ONLY)				
BORING #	STATION	OFFSET	EX ASPHALT THICKNESS	EX BASE THICKNESS
B1	3+78.40	6' RT	8 INCH	4 INCH (BASE)
B2	17+51.20	9' RT	7 INCH	7 INCH (BASE)
B3	27+01.60	12' RT	6 INCH	6 INCH (BASE)
B4	43+91.20	6' LT	3 INCH	17 INCH (RAP)
B5	59+22.40	9' LT	5 INCH	4 INCH (RAP) 4 INCH (BASE)
B6	82+45.60	3' LT	4 INCH	3 INCH (BASE) 4 INCH (RAP) 3 INCH (BASE)
B7	96+18.40	6' RT	3 INCH	4 INCH (BASE) 4 INCH (BASE)
B8	108+85.60	9' RT	4 INCH	4 INCH (RAP) 4 INCH (BASE)
B9	122+05.60	3' RT	3 INCH	7 INCH (RAP) 3 INCH (BASE)
B10	136+31.20	6' LT	3 INCH	12 INCH (RAP) 3 INCH (BASE)
B11	148+45.60	3' LT	3 INCH	11 INCH (RAP/BASE)
B12	163+76.80	9' LT	4 INCH	8 INCH (RAP) 4 INCH (BASE)
B13	176+96.80	6' RT	4 INCH	6 INCH (RAP) 6 INCH (BASE)
B14	191+22.40	9' RT	5 INCH	5 INCH (RAP) 5 INCH (BASE)
B15	206+00.80	12' RT	3 INCH	6 INCH (RAP)
B16	219+73.60	3' RT	5 INCH	11 INCH (RAP/BASE)
B17	232+40.80	6' LT	4 INCH	12 INCH (RAP) 4 INCH (BASE)
B18	247+19.20	3' LT	3 INCH	12 INCH (RAP)
B19	256+67.20	9' RT	4 INCH	10 INCH (RAP) 6 INCH (BASE)
B20	280+98.40	12' RT	3 INCH	10 INCH (RAP) 5 INCH (BASE)
B21	295+24.00	12' LT	3 INCH	9 INCH (BASE)
B22	305+80.00	6' LT	3 INCH	12 INCH (RAP) 9 INCH (BASE)
B23	317+94.40	3' LT	3 INCH	10 INCH (RAP) 7 INCH (BASE)
B24	329+56.00	6' RT	3 INCH	7 INCH (RAP)
B25	340+64.80	9' RT	4 INCH	13 INCH (RAP)
B26	354+37.60	3' RT	3 INCH	13 INCH (RAP)
B27	367+57.60	6' LT	4 INCH	10 INCH (RAP) 14 INCH (BASE)
B28	380+77.60	6' RT	3 INCH	10 INCH (RAP) 11 INCH (BASE)
B29	396+08.80	9' RT	3 INCH	13 INCH (RAP) 6 INCH (BASE)
B30	403+48.00	3' LT	4 INCH	5 INCH (RAP) 6 INCH (BASE)



FINISHED TYPICAL SECTION

STA. 1+75.00 TO STA. 123+50.00

NOTES:

1. MILL AND REMOVE 3 $\frac{1}{2}$" OF EXISTING BITUMINOUS SURFACE AT CENTERLINE (ESTABLISH A 2% CROSS-SLOPE IN AREAS WITHOUT SUPER ELEVATION)

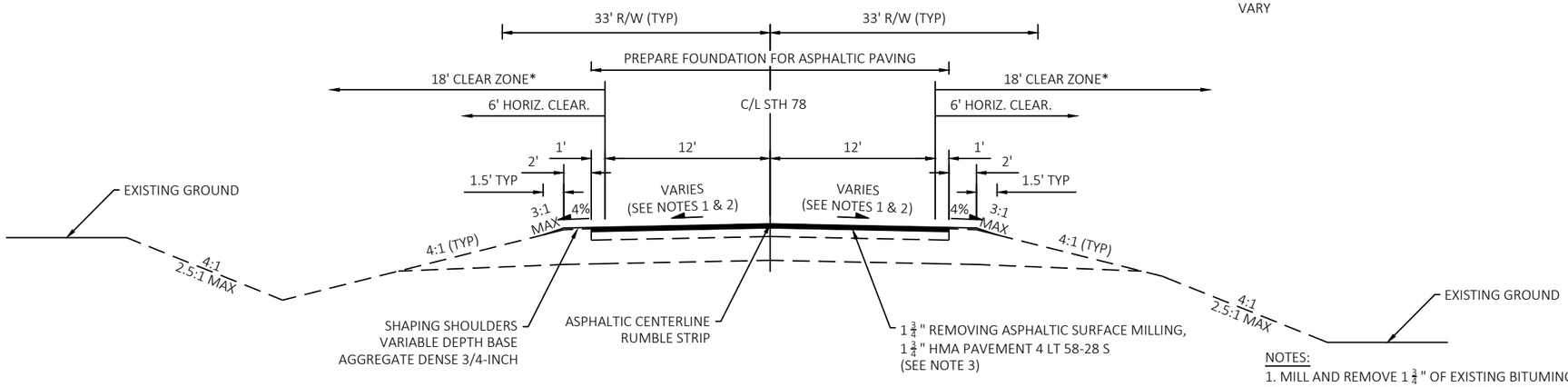
2. SEE SUPERELEVATION DETAIL.

3. APPLY TACK COAT AT A RATE OF 0.07/GAL/SY TO THE MILLED SURFACE, AND 0.05/GAL/SY BETWEEN HMA LAYERS

4. PLACE "SAFETY EDGE" ON THE LANE EDGE OF ALL HMA PAVEMENT PLACED.

5. ADJUSTMENTS TO MILLING DEPTH MAY BE REQUIRED BASED ON FIELD CONDITIONS PER THE ENGINEERS DISCRETION.

* CLEAR ZONE SHOWN IS DESIRABLE, CONDITIONS IN THE FIELD VARY



FINISHED TYPICAL SECTION

STA. 123+50.00 TO STA. 405+99.66

NOTES:

1. MILL AND REMOVE 1 $\frac{3}{4}$" OF EXISTING BITUMINOUS SURFACE AT CENTERLINE (ESTABLISH A 2% CROSS-SLOPE IN AREAS WITHOUT SUPER ELEVATION)

2. SEE SUPERELEVATION DETAIL.

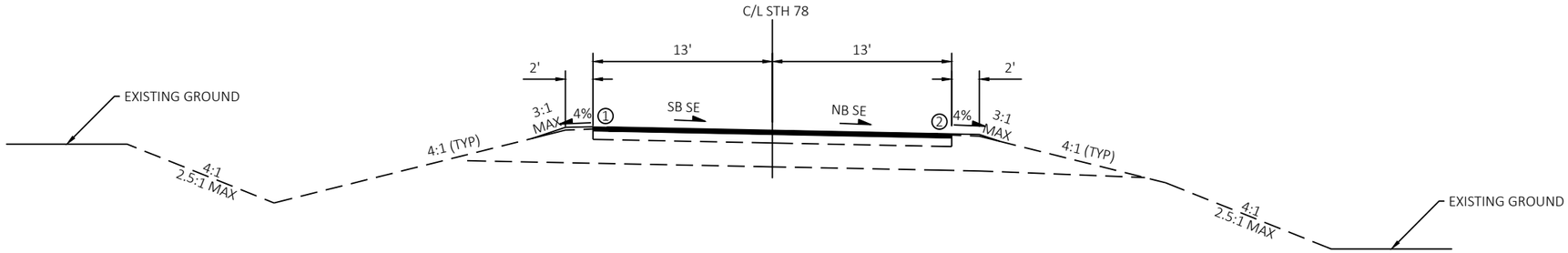
3. APPLY TACK COAT AT A RATE OF 0.07/GAL/SY TO THE MILLED SURFACE

4. PLACE "SAFETY EDGE" ON THE LANE EDGE OF ALL HMA PAVEMENT PLACED.

5. ADJUSTMENTS TO MILLING DEPTH MAY BE REQUIRED BASED ON FIELD CONDITIONS PER THE ENGINEERS DISCRETION.

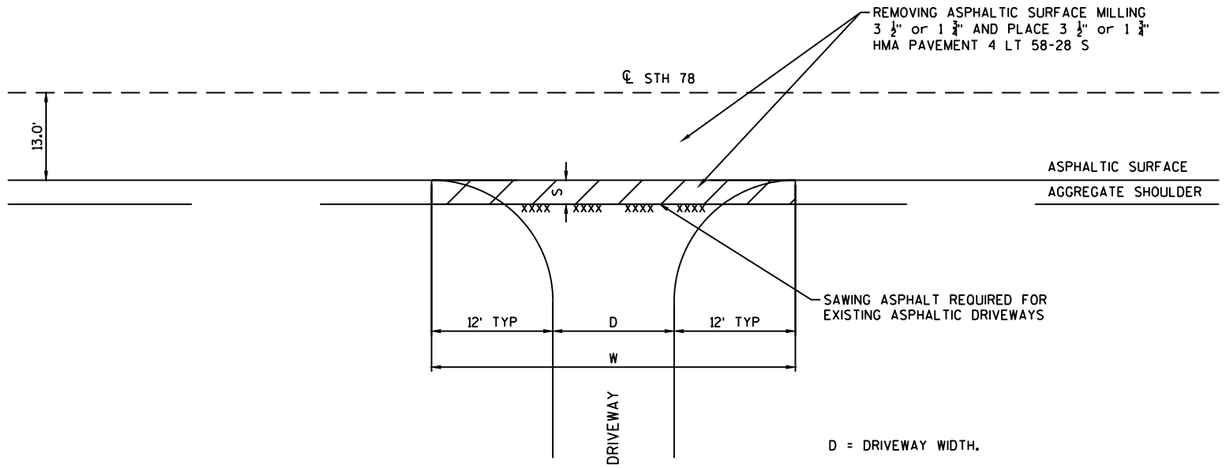
* CLEAR ZONE SHOWN IS DESIRABLE, CONDITIONS IN THE FIELD VARY

PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	FINISHED TYPICAL SECTIONS	SHEET 5	E



SUPERELEVATION DETAIL

CURVE	STATION	SB SE	GRADE CHANGE AT POINT ①	NB SE	GRADE CHANGE AT POINT ②
1	6+66.99 to 9+98.63	5.60%	MATCH	8.00%	+2.6"
2	13+27.11 to 2+81.13	3.40%	+0.1"	3.40%	+2.7"
22	18+12.52 to 24+73.03	2.50%	+1.2"	2.50%	+1.4"
3	29+67.16 to 32+57.71	5.90%	+1.2"	5.90%	MATCH
4	54+31.81 to 57+09.28	5.90%	+2.9"	5.90%	+1.7"
5	61+44.54 to 64+93.64	4.70%	MATCH	1.20%	MATCH
6	167+12.97 to 169+57.64	5.20%	MATCH	6.70%	MATCH
7	200+38.30 to 208+00.99	5.30%	+0.1"	6.70%	MATCH
8	216+80.11 to 222+15.45	2.10%	MATCH	3.30%	MATCH
10	225+27.41 to 227+87.03	5.50%	+0.6"	5.50%	+1.4"
11	253+52.16 to 255+58.37	MATCH	MATCH	MATCH	MATCH
12	261+20.36 to 263+71.56	1.40%	MATCH	3.60%	MATCH
13	273+52.29 to 275+99.67	3.50%	+3.2"	3.50%	MATCH
15	312+50.50 to 314+55.73	5.60%	MATCH	5.60%	+2.7"
16	323+24.17 to 324+92.36	5.80%	+0.4"	6.60%	MATCH
18	344+04.50 to 345+59.44	MATCH	MATCH	MATCH	MATCH
19	348+22.69 to 351+65.05	6.70%	MATCH	5.80%	+1.3"
20	369+37.85 to 371+89.34	5.70%	+0.4"	5.70%	MATCH
21	391+40.07 to 393+96.08	MATCH	MATCH	MATCH	MATCH

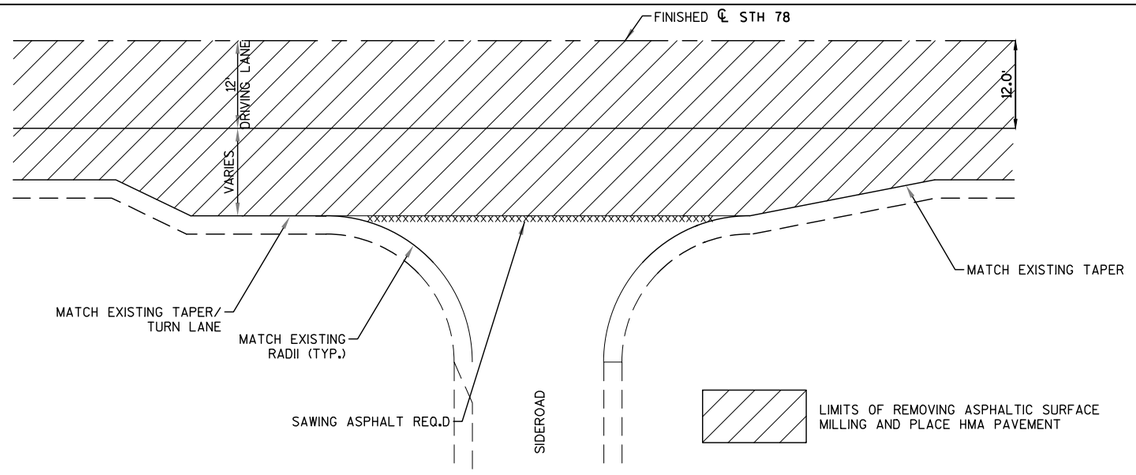


D = DRIVEWAY WIDTH.

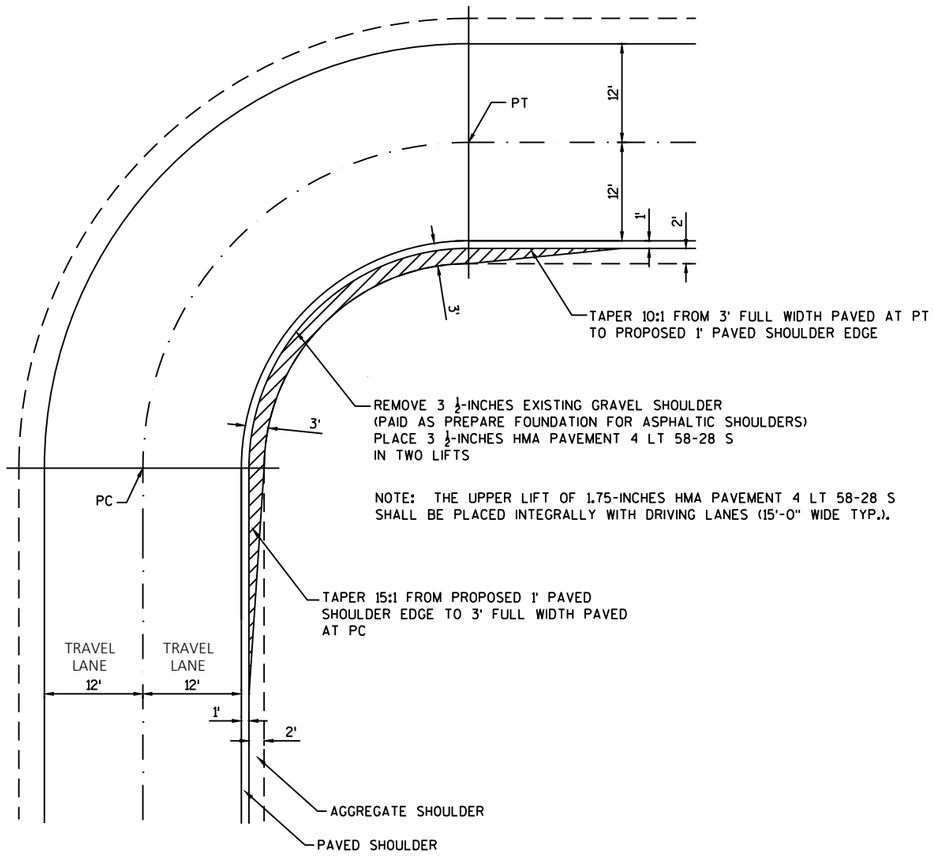
S = 5' MIN OR TO FINISHED SHOULDER WHICHEVER IS GREATER. MATCH POINT TO BE VERIFIED IN THE FIELD BY THE ENGINEER.

W = TOTAL WIDTH TO BE VERIFIED IN THE FIELD BY THE ENGINEER.

TYPICAL DRIVEWAY DETAIL

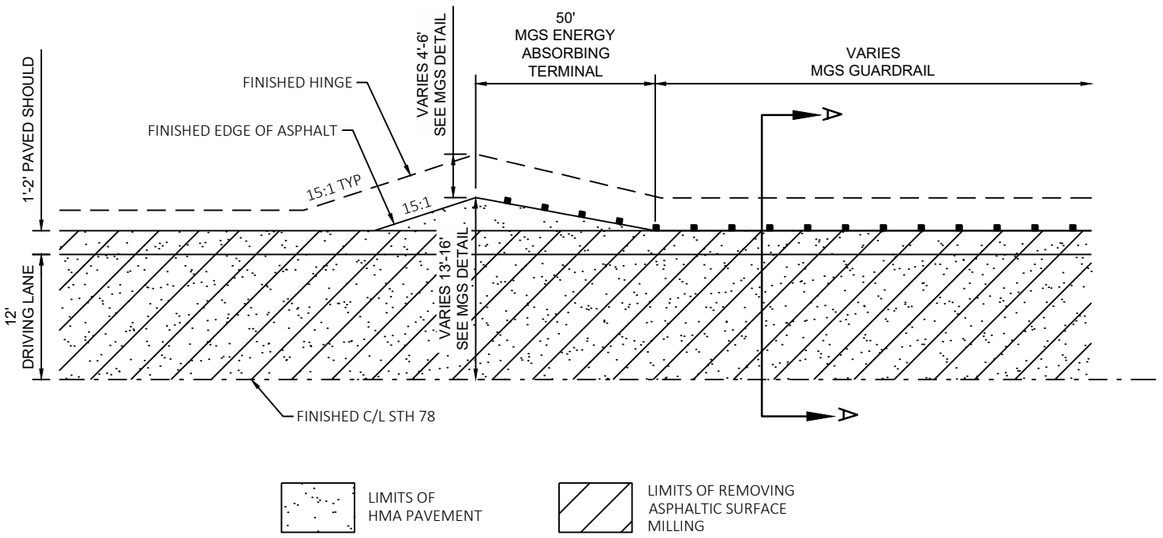


TYPICAL SIDE ROAD DETAIL



CURVE WIDENING DETAIL

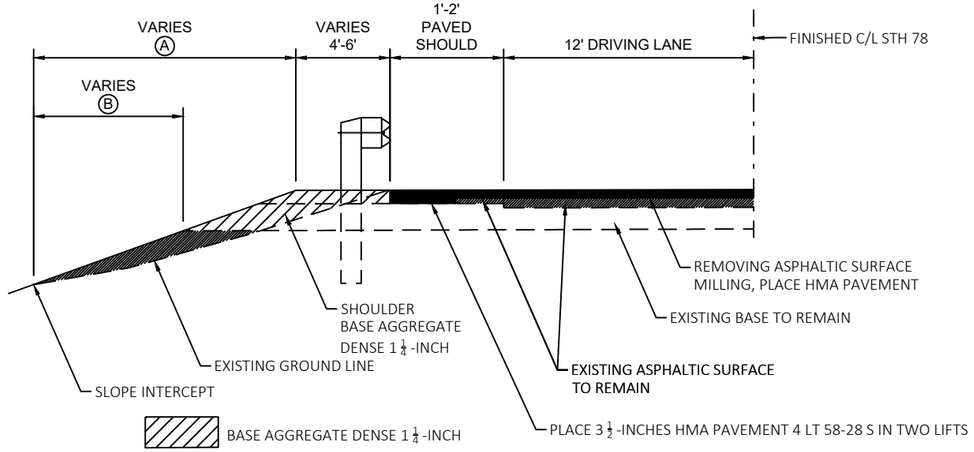
STA. 6+66 (PC) TO 9+99 (PT)
STA. 13+27 (PC) TO 24+73 (PT)
STA. 29+67 (PC) TO 32+58 (PT)
STA. 53+31 (PC) TO 57+10 (PT)
STA. 61+44 (PC) TO 64+94 (PT)
STA. 167+13 (PC) TO 169+58 (PT)
STA. 200+38 (PC) TO 208+01 (PT)
STA. 225+27 (PC) TO 227+87 (PT)
STA. 253+52 (PC) TO 255+59 (PT)
STA. 261+20 (PC) TO 263+72 (PT)
STA. 273+52 (PC) TO 276+00 (PT)
STA. 312+50 (PC) TO 314+56 (PT)
STA. 323+24 (PC) TO 323+93 (PT)
STA. 344+04 (PC) TO 345+60 (PT)
STA. 348+22 (PC) TO 351+65 (PT)
STA. 369+37 (PC) TO 371+90 (PT)



LIMITS OF HMA PAVEMENT

LIMITS OF REMOVING ASPHALTIC SURFACE MILLING

MIDWEST GUARDRAIL SYSTEM (MGS) LAYOUT DETAIL



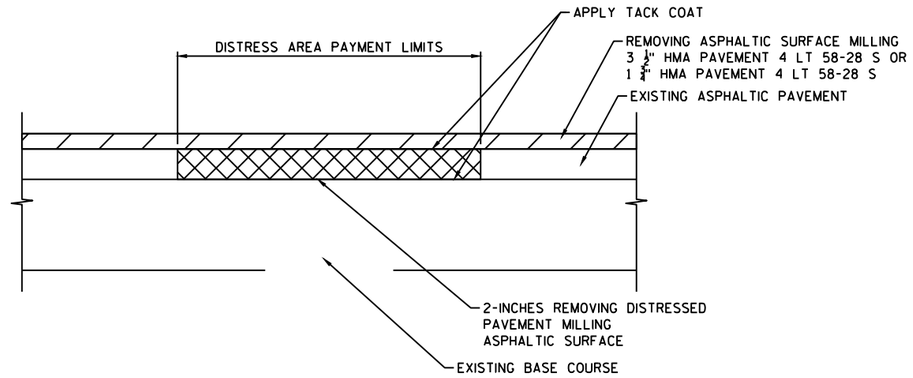
BASE AGGREGATE DENSE 1 ¼-INCH

BORROW MATERIAL (PAID FOR UNDER BARRIER SYSTEM GRADING SHAPING FINISHING

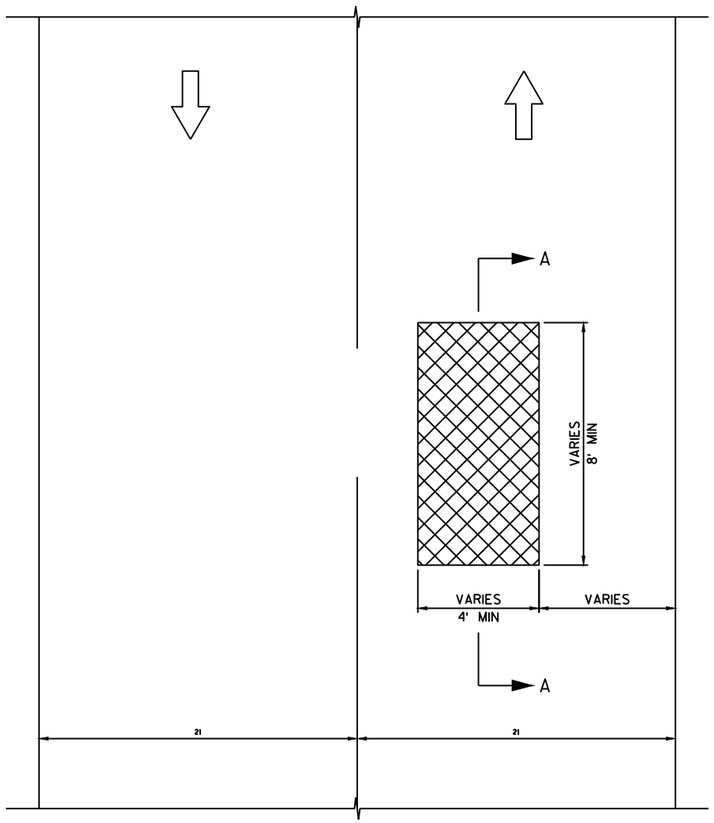
Ⓐ LIMITS OF EROSION MAT CLASS I TYPE B, FERTILIZER TYPE A, AND SEEDING MIXTURE NO. 30 (AS DIRECTED BY THE ENGINEER). PAID UNDER BARRIER SYSTEM GRADING SHAPING FINISHING BID ITEM.

Ⓑ LIMITS OF SALVAGED TOPSOIL (AS DIRECTED BY THE ENGINEER). PAID UNDER BARRIER SYSTEM GRADING SHAPING FINISHING BID ITEM.

SECTION A-A



PAVEMENT SECTION AT DISTRESS AREAS
SECTION A-A

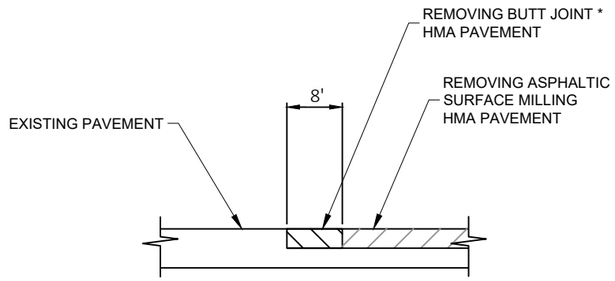


REMOVING DISTRESSED PAVEMENT MILLING

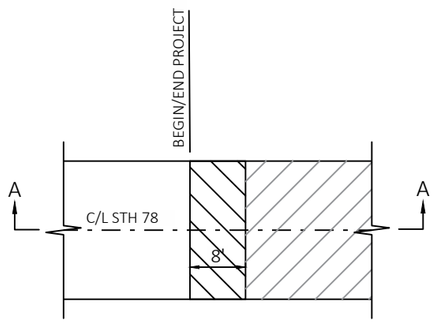
TRAVEL DIRECTION

PLAN VIEW

EXACT LOCATION AND LIMITS OF REMOVING DISTRESSED PAVEMENT MILLING TO BE DETERMINED BY THE ENGINEER IN THE FIELD.



SECTION A-A

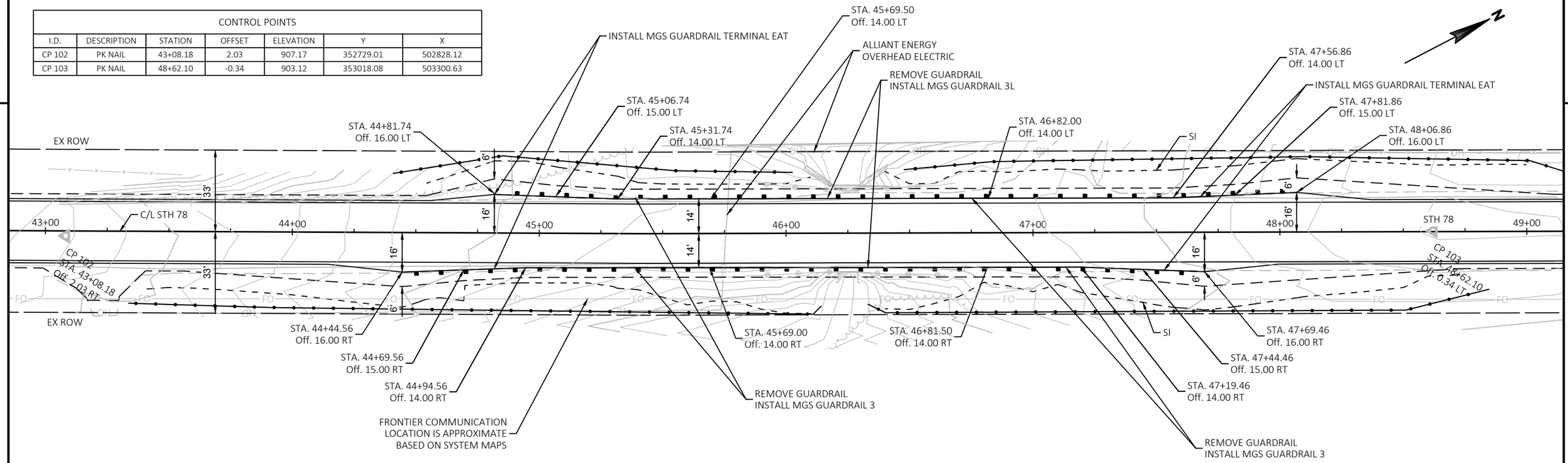


TYPICAL MAINLINE BUTT JOINT DETAIL

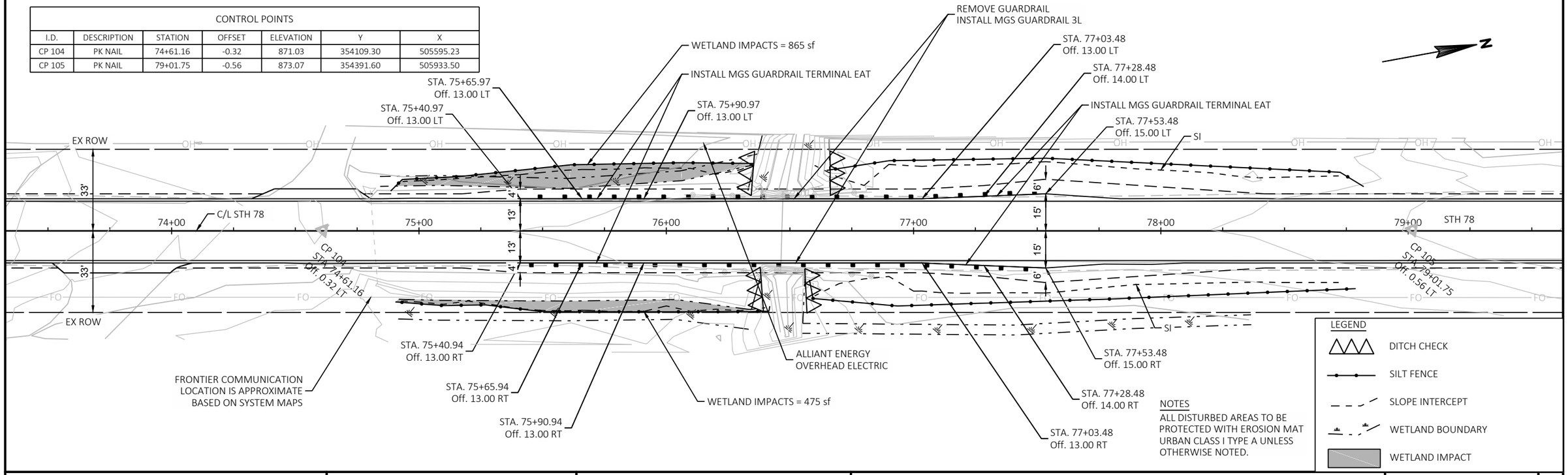
* STA 1+75.00 - REMOVING ASPHALTIC SURFACE BUTT JOINTS
STA 405+99.66 - REMOVING PAVEMENT BUTT JOINTS

2

CONTROL POINTS						
I.D.	DESCRIPTION	STATION	OFFSET	ELEVATION	Y	X
CP 102	PK NAIL	43+08.18	2.03	907.17	352729.01	502828.12
CP 103	PK NAIL	48+62.10	-0.34	903.12	353018.08	503300.63



CONTROL POINTS						
I.D.	DESCRIPTION	STATION	OFFSET	ELEVATION	Y	X
CP 104	PK NAIL	74+61.16	-0.32	871.03	354109.30	505595.23
CP 105	PK NAIL	79+01.75	-0.56	873.07	354391.60	505933.50



NOTES

ALL DISTURBED AREAS TO BE PROTECTED WITH EROSION MAT URBAN CLASS I TYPE A UNLESS OTHERWISE NOTED.

PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	MGS GUARDRAIL DETAIL	SHEET 10	E

2

2

DAHLKE DR

ENVIRONMENTALLY SENSITIVE AREA (CEMETERY)

WEST OF DASHED LINE ENVIRONMENTALLY SENSITIVE AREA (MOUNDS)

CTH DL

SEE TYPICAL SIDE ROAD DETAIL

SEE TYPICAL SIDE ROAD DETAIL

STA 5+27 TO 11+40 ASPHALTIC BINDER ENHANCED FRICTION SURFACE TREATMENT

BEGIN PROJECT STA 1+75.00

BEGIN RESURFACING STA 1+75.00 MATCH EXISTING REMOVING ASPHALTIC SURFACE BUTT JOINTS REQ'D

5 10 15 20 25 30

DWY (AGG)

DWY (AGG)

FE (AGG)

REMOVING ASPHALTIC SURFACE MILLING 3 ½ -INCHES HMA PAVEMENT 4 LT 58-28

CL STH 78

STH 78

DWY (AGG)

DWY (AGG)

SEE TYPICAL SIDE ROAD DETAIL

BLAU DR

N

REMOVE EXISTING GUARDRAIL PLACE MGS GUARDRAIL 3, 3L, AND TERMINAL EAT (SEE MGS GUARDRAIL DETAIL)

REMOVING ASPHALTIC SURFACE MILLING 3 ½ -INCHES HMA PAVEMENT 4 LT 58-28

35 40 45 50 55 60

STH 78

CL STH 78

DWY (AGG)

FE (AGG)

FE (AGG)

DWY (AGG)

N

PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	PLAN DETAILS	SHEET 11	E

FILE NAME : Y:\MILWAUKEE\20200S\20229.02\ENG_DOCS\56300631\SHEETSPLAN\021201_PD.DWG
LAYOUT NAME - 021201_pd

PLOT DATE : 1/24/2019 9:00 AM PLOT BY : WEIGAND, BEN PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 44

2

2

SEE TYPICAL SIDE ROAD DETAIL

DURNWARDS GLEN RD

REMOVE EXISTING GUARDRAIL
PLACE MGS GUARDRAIL 3L AND TERMINAL EAT
(SEE MGS GUARDRAIL DETAIL)

REMOVING ASPHALTIC SURFACE MILLING
3 ½ -INCHES HMA PAVEMENT 4 LT 58-28

65 70 75 80 85 90 95

DWY (ASPH)

DWY (AGG)

DWY (ASPH)

DWY (ASPH)

STH 78

CL STH 78

FE (AGG)

FE (AGG)

INDIAN FARM RD

SEE TYPICAL SIDE ROAD DETAIL

ATC TRANSMISSION

OH

REMOVING ASPHALTIC SURFACE MILLING
1 ¾ -INCHES HMA PAVEMENT 4 LT 58-28

OWEN PARK RD

SEE TYPICAL SIDE ROAD DETAIL

REMOVING ASPHALTIC SURFACE MILLING
3 ½ -INCHES HMA PAVEMENT 4 LT 58-28

DWY (ASPH)

100 105 110 115 120 125

STH 78

FE (AGG)

CL STH 78

DWY (AGG)

DWY (AGG)

STA 123+50 CL STH 78
END 3 ½ -INCH MILL AND OVERLAY
BEGIN 1 ¾ -INCH MILL AND OVERLAY

SEE TYPICAL SIDE ROAD DETAIL

120A CALEDONIA S GPS AZ
Sta: 97+84.38
Off: 36.14 RT

PETRA RD

ATC TRANSMISSION

OH

PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	PLAN DETAILS	SHEET 12	E

FILE NAME : Y:\MILWAUKEE\20200S\20229.02\ENG_DOCS\56300631\SHEETSPLAN\021201_PD.DWG
LAYOUT NAME - 021202_pd

PLOT DATE : 1/22/2019 4:35 PM PLOT BY : WEIGAND, BEN PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 44

2

2

DWY (AGG)

DWY (ASPH)

DWY (AGG)

DWY (AGG)

REMOVING ASPHALTIC SURFACE MILLING 1 3/4 -INCHES HMA PAVEMENT 4 LT 58-28

130

135

140

145

STH 78

150

155

CL STH 78

FE (AGG)

N

SEE TYPICAL SIDE ROAD DETAIL

MESSER RD

DWY (AGG)

170

FE (AGG)

175

165

CL STH 78

180

DWY (ASPH)

STH 78

REMOVING ASPHALTIC SURFACE MILLING 1 3/4 -INCHES HMA PAVEMENT 4 LT 58-28

FE (AGG)

160

185

FE (AGG)

ATC TRANSMISSION

190

N

PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	PLAN DETAILS	SHEET 13	E

FILE NAME : Y:\MILWAUKEE\20200S\20229.02\ENG_DOCS\56300631\SHEETSPLAN\021201_PD.DWG
LAYOUT NAME - 021203_pd

PLOT DATE : 10/14/2019 11:34 AM PLOT BY : WEIGAND, BEN PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 44

2

2

N

ATC TRANSMISSION

190

195

200

205

210

215

220

REMOVING ASPHALTIC SURFACE MILLING
1 ¾ -INCHES HMA PAVEMENT 4 LT 58-28

SEE TYPICAL SIDE
ROAD DETAIL

PETRA RD

STH 78

CL STH 78

DWY
(ASPH)

FE
(AGG)

N

DWY
(ASPH)

220

225

230

235

240

245

250

STH 78

CL STH 78

DWY
(AGG)

FE
(AGG)

DWY
(ASPH)

REMOVING ASPHALTIC SURFACE MILLING
1 ¾ -INCHES HMA PAVEMENT 4 LT 58-28

ATC TRANSMISSION

PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	PLAN DETAILS	SHEET 14	E

FILE NAME : Y:\MILWAUKEE\20200S\20229.02\ENG_DOCS\56300631\SHEETSPLAN\021201_PD.DWG
LAYOUT NAME - 021204_pd

PLOT DATE : 1/22/2019 4:35 PM PLOT BY : WEIGAND, BEN PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 44

2

WALKER RD

SEE TYPICAL SIDE ROAD DETAIL

255 260 265 270 275 280 285

DWY (AGG)

DWY (AGG)

CL STH 78

STH 78

DWY (ASPH)

DWY (ASPH)

REMOVING ASPHALTIC SURFACE MILLING 1 3/4 -INCHES HMA PAVEMENT 4 LT 58-28

ATC TRANSMISSION

N

285 290 295 300 305 310 315

DWY (ASPH)

FE (AGG)

DWY (AGG)

CL STH 78

DWY (AGG)

REMOVING ASPHALTIC SURFACE MILLING 1 3/4 -INCHES HMA PAVEMENT 4 LT 58-28

STH 78

SEE TYPICAL SIDE ROAD DETAIL

FE (AGG)

FE (AGG)

DWY (AGG)

DWY (AGG)

FE (AGG)

SHANKS RD

PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	PLAN DETAILS	SHEET 15	E

FILE NAME : Y:\MILWAUKEE\20200S\20229.02\ENG_DOCS\56300631\SHEETSPLAN\021201_PD.DWG
LAYOUT NAME - 021205_pd

PLOT DATE : 1/22/2019 4:35 PM PLOT BY : WEIGAND, BEN PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

2

BEICH RD

SEE TYPICAL SIDE ROAD DETAIL

STH 78

CL STH 78

REMOVING ASPHALTIC SURFACE MILLING $1\frac{3}{4}$-INCHES HMA PAVEMENT 4 LT 58-28

SAW CUT AT 12 FEET RIGHT OF CENTERLINE, MATCH EXISTING COMMERCIAL ENTRANCE WIDENING

1/4 CORNER 575
Sta: 337+21.49
Off: 3.18 LT

1/4 CORNER 576
Sta: 336+93.38
Off: 3.22 LT

DWY (ASPH)

DWY (ASPH)

FE (AGG)

DWY (AGG)

DWY (AGG)

FE (AGG)

DWY (AGG)

FE (AGG)

DWY (AGG)

DWY (AGG)

315 320 325 330 335 340 345 350

345 350 355 360 365 370 375 380

REMOVING ASPHALTIC SURFACE MILLING $1\frac{3}{4}$-INCHES HMA PAVEMENT 4 LT 58-28

ATC TRANSMISSION

QLD CNTY U RD

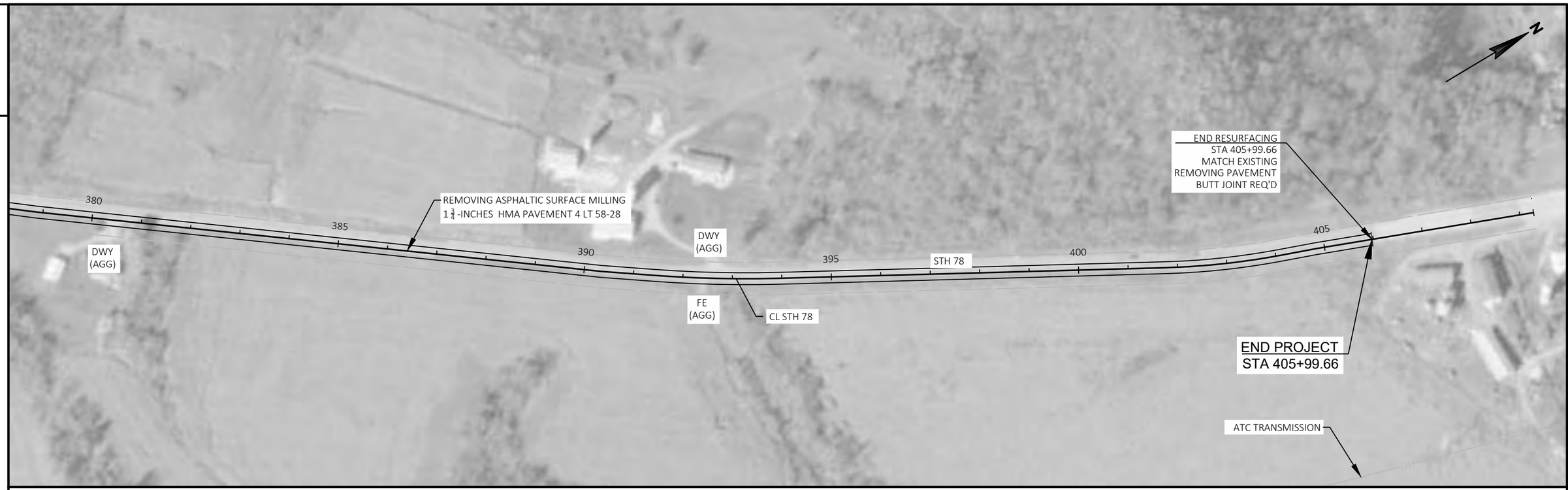
DWY (ASPH)

PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	PLAN DETAILS	SHEET 16	E

FILE NAME : Y:\MILWAUKEE\20200S\20229.02\ENG_DOCS\56300631\SHEETSPLAN\021201_PD.DWG
LAYOUT NAME - 021206_pd

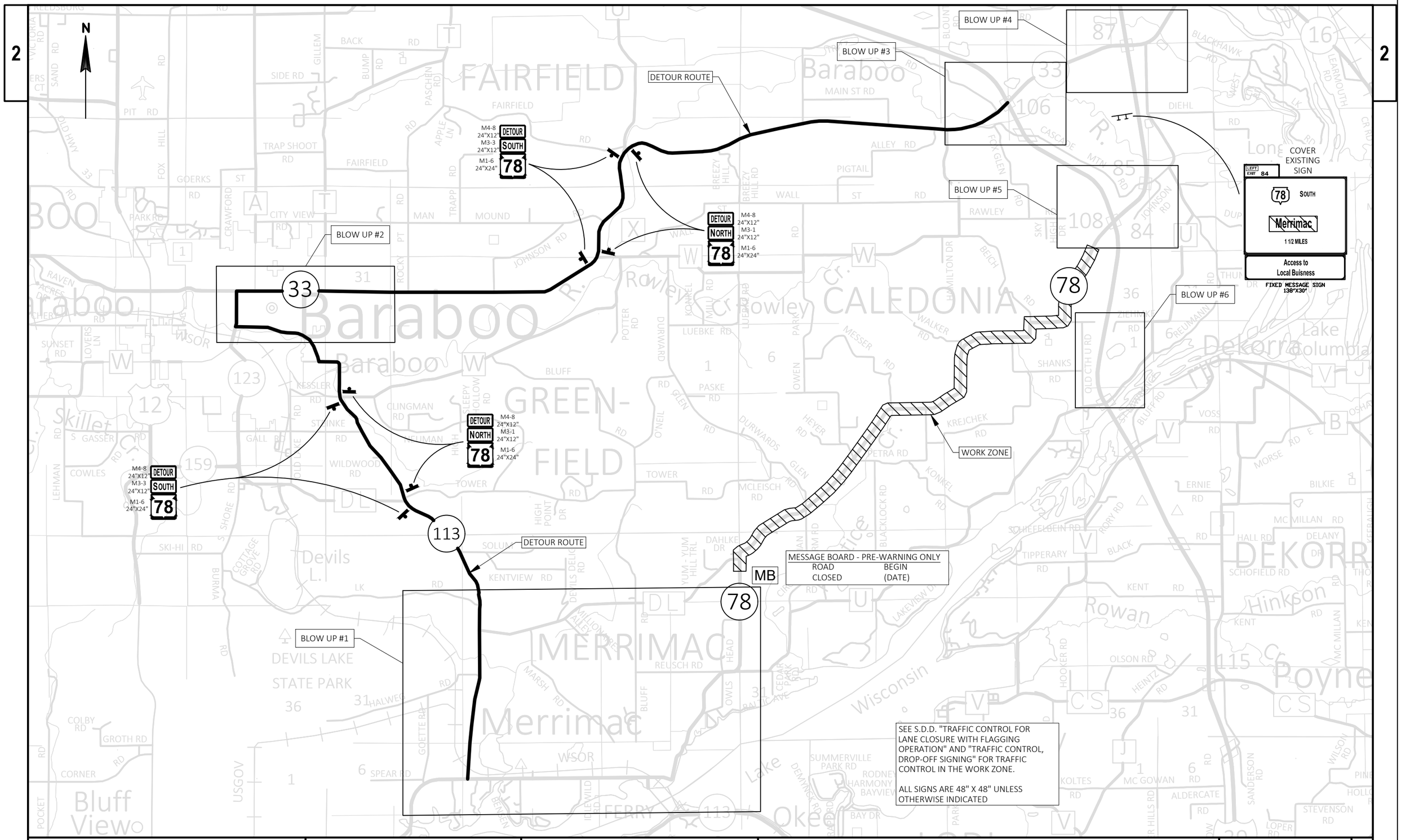
PLOT DATE : 1/22/2019 4:35 PM PLOT BY : WEIGAND, BEN PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 44



2

PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	PLAN DETAILS	SHEET 17	E



PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	DETOUR ROUTE SIGNING	SHEET 18	E

FILE NAME : Y:\MILWAUKEE\20200S\20229.02\ENG_DOCS\56300631\SHEETSPLAN\027001_DT.DWG
LAYOUT NAME - detour overview
PLOT DATE : 1/22/2019 5:08 PM
PLOT BY : WEIGAND, BEN
PLOT NAME :
PLOT SCALE : Custom

2

M4-8 24"X12"
M3-3 24"X12"
M1-6 24"X24"
DETOUR SOUTH 78

DETOUR NORTH 78
M4-8 24"X12"
M3-1 24"X12"
M1-6 24"X24"

DETOUR NORTH 78
M4-8 24"X12"
M3-1 24"X12"
M1-6 24"X24"
MO6-1 21"X21"

N

DETOUR NORTH 78
M4-8 24"X12"
M3-1 24"X12"
M1-6 24"X24"

78
MO6-1 21"X21"

2

RD

DL

U

ROAD CLOSED
1 1/2 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3
60"X30"

113

M4-8A 24"X18"
END DETOUR
M3-3 24"X12"
SOUTH 78

COVER EXISTING SIGN
NORTH 78 | SOUTH 113 | SOUTH 78

COVER EXISTING SIGN
NORTH 78 | SOUTH 113 | SOUTH 78

G20-51 60"X24"
DETOUR NEXT 24 MILES

Merrimac

DETOUR NORTH 78
M4-8 24"X12"
M3-1 24"X12"
M1-6 24"X24"

DETOUR NORTH 78
M4-8 24"X12"
M3-1 24"X12"
M1-6 24"X24"
MO5-1R 21"X21"

WSOR

DETOUR NORTH 78
M4-8 24"X12"
M3-1 24"X12"
M1-6 24"X24"
MO6-1 21"X21"

M4-8 24"X12"
M3-1 24"X12"
M1-6 24"X24"
DETOUR NORTH 78

78

Portage
Baraboo

Detour Route

COVER EXISTING SIGN
Portage
Madison

ROAD CLOSED
4 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3
60"X30"

M3-1 24"X12"
M1-6 24"X24"
NORTH 78
DETOUR AHEAD
W20-2A

M4-8 24"X12"
DETOUR NORTH SOUTH 113 78 113
MO5-1L 21"X21"

DETOUR NORTH 78
M4-8 24"X12"
M3-1 24"X12"
M1-6 24"X24"
MO6-1 21"X21"

ROAD OPEN TO MERRIMAC
R10-61
60"X30"

DETOUR NORTH 78
M4-8 24"X12"
M3-1 24"X12"
M1-6 24"X24"
MO6-1 21"X21"

COVER EXISTING SIGN
NORTH 78 | SOUTH 113

FERRY

113

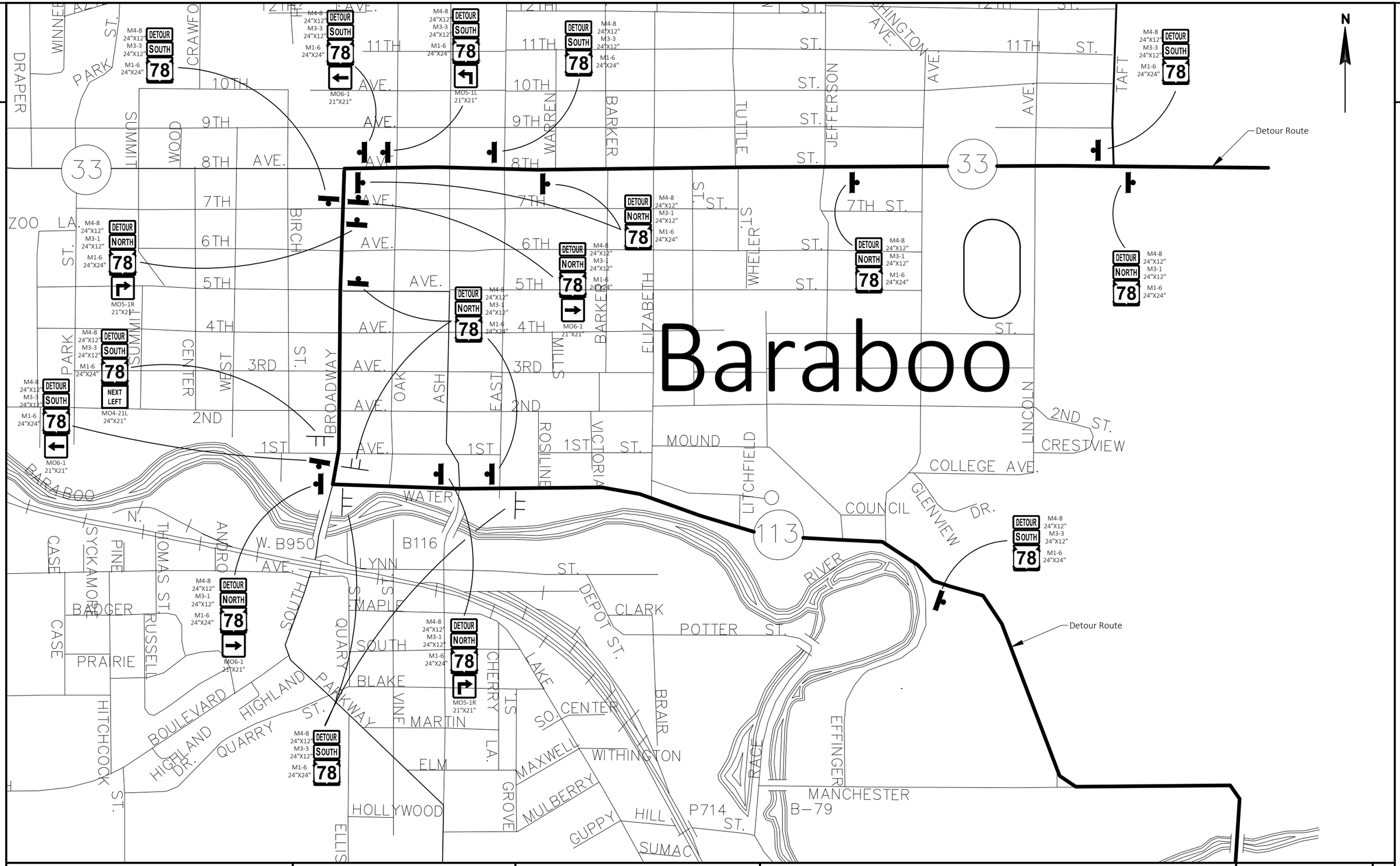
M4-8 24"X12"
DETOUR SOUTH NORTH 78 78
MO6-1 21"X21"

M3-1 24"X12"
M1-6 24"X24"
NORTH 78
DETOUR AHEAD
W20-2A

PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	DETOUR ROUTE SIGNING - BLOW UP #1	SHEET 19	E

FILE NAME : R:\PROJECTS\D1_56300631\027001_DT.DWG
LAYOUT NAME - detour blow up #1

PLOT DATE : 9/17/2018 1:33 PM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : Custom



PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	DETOUR ROUTE SIGNING - BLOW UP #2	SHEET 20	E

FILE NAME : R:\PROJECTS\D1_56300631\027001_DT.DWG
LAYOUT NAME - detour Blow up #2

PLOT DATE : 9/17/2018 1:33 PM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : Custom

WISDOT/CADDS SHEET 42

2

2

M3-3
36"X18"
M1-6
36"X36"
DETOUR AHEAD
W20-2A

2000'

1000'

M4-8
36"X18"
M3-3
36"X18"
M1-6
36"X36"
MO5-2R
30"X30"

M4-8
24"X12"
M3-3
24"X12"
M1-6
24"X24"
MO6-1
21"X21"

M4-8
24"X12"
M3-3
24"X12"
M1-6
24"X24"
MO6-1
21"X21"

M4-8
24"X12"
M3-1
24"X12"
M1-6
24"X24"

M4-8
36"X18"
M3-3
36"X18"
M1-6
36"X36"
MO6-2
30"X30"

M4-8
24"X12"
M3-3
24"X12"
M1-6
24"X24"

M4-8
24"X12"
M3-3
24"X12"
M1-6
24"X24"
MO6-1
21"X21"

M4-8
24"X12"
M3-1
24"X12"
M1-6
24"X24"

M4-8
24"X12"
M3-3
24"X12"
M1-6
24"X24"

M4-8
36"X18"
M3-3
36"X18"
M1-6
36"X36"
MO5-2R
30"X30"

M4-8
24"X12"
M3-1
24"X12"
M1-6
24"X24"

33

N

Baraboo River

Baraboo River

COVER
EXISTING
SIGN

EXITS 108 A-B
NORTH 39
SOUTH 78
Wausau
Merrimac
1 MILE

90

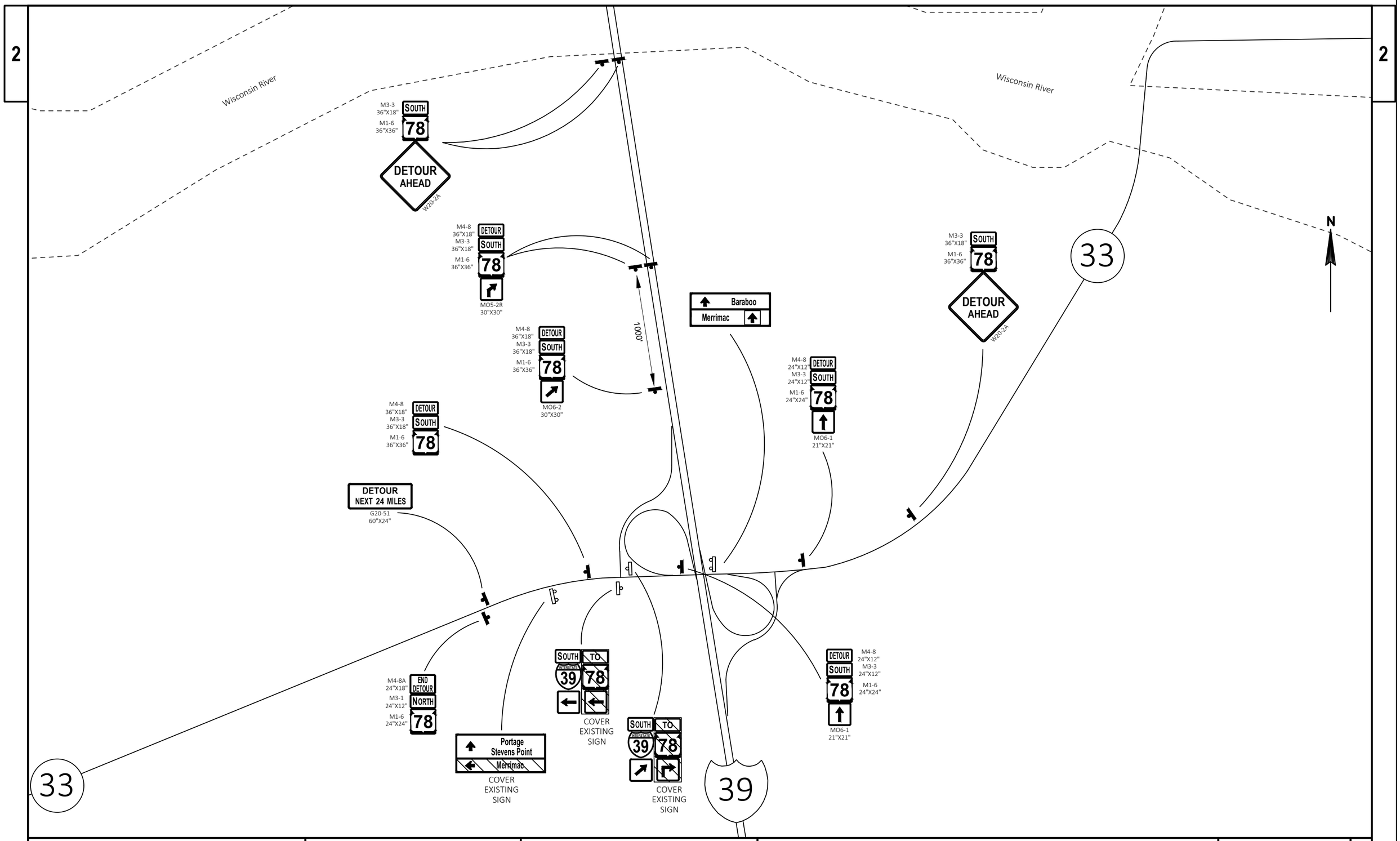
94

W

PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	DETOUR ROUTE SIGNING - BLOW UP #3	SHEET 21	E

FILE NAME : R:\PROJECTS\D1_56300631\027001_DT.DWG
LAYOUT NAME - detour Blow up #3

PLOT DATE : 9/17/2018 1:33 PM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : Custom



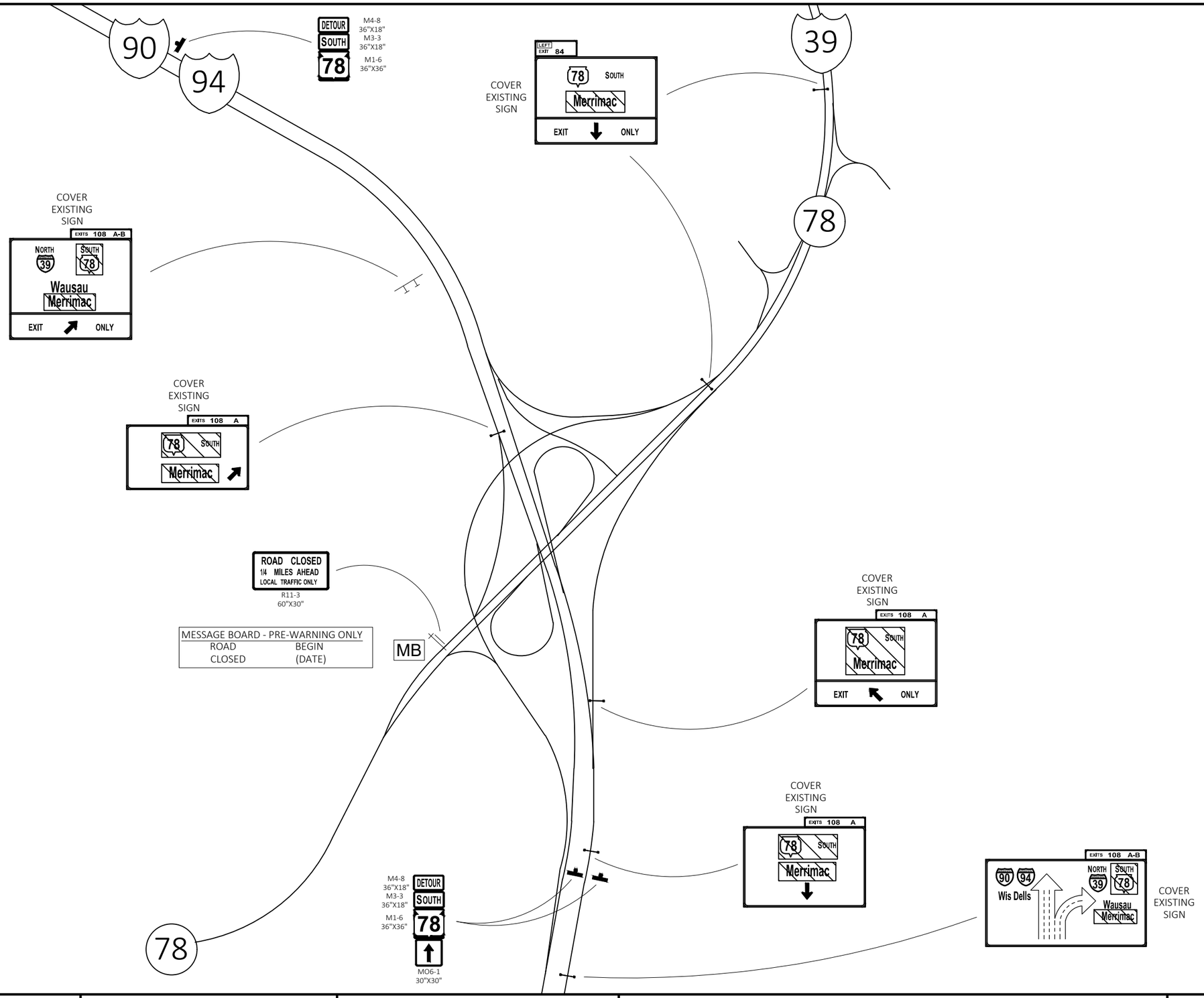
PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	DETOUR ROUTE SIGNING - BLOW UP #4	SHEET 22	E

FILE NAME : Y:\MILWAUKEE\20200S\20229.02\ENG_DOCS\56300631\SHEETSPLAN\027001_DT.DWG
LAYOUT NAME - detour Blow up #4

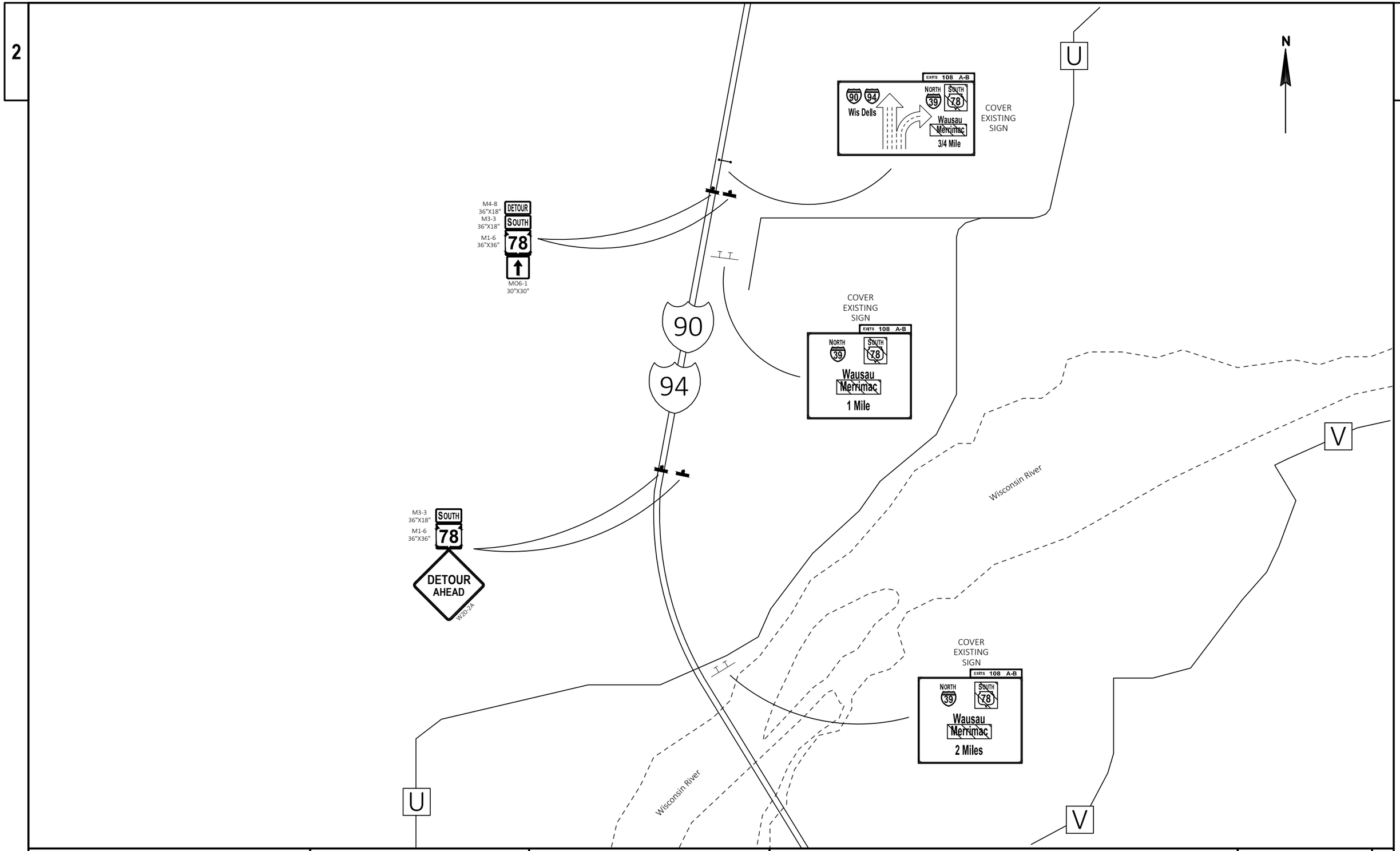
PLOT DATE : 1/22/2019 5:11 PM PLOT BY : WEIGAND, BEN PLOT NAME : PLOT SCALE : Custom

WISDOT/CADDS SHEET 42

2



PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	DETOUR ROUTE SIGNING - BLOW UP #5	SHEET 23	E



PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	DETOUR ROUTE SIGNING - BLOW UP #6	SHEET 24	E

FILE NAME : R:\PROJECTS\D1_56300631\027001_DT.DWG
LAYOUT NAME - detour Blow up #6

PLOT DATE : 9/17/2018 1:33 PM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : Custom

5630-06-61

Line	Item	Item Description	Unit	Total	Qty
0002	204.0105	Removing Pavement Butt Joints	SY	24.000	24.000
0004	204.0115	Removing Asphaltic Surface Butt Joints	SY	25.000	25.000
0006	204.0120	Removing Asphaltic Surface Milling	SY	122,358.000	122,358.000
0008	204.0165	Removing Guardrail	LF	324.000	324.000
0010	211.0100	Prepare Foundation for Asphaltic Paving (project) 01. 5630-06-61	LS	1.000	1.000
0012	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	116.000	116.000
0014	213.0100	Finishing Roadway (project) 01. 5630-06-61	EACH	1.000	1.000
0016	305.0110	Base Aggregate Dense 3/4-Inch	TON	2,914.000	2,914.000
0018	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	8.000	8.000
0020	305.0500	Shaping Shoulders	STA	809.000	809.000
0022	455.0605	Tack Coat	GAL	8,596.000	8,596.000
0024	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	1.000	1.000
0026	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	3.000	3.000
0028	460.2005	Incentive Density PWL HMA Pavement	DOL	15,790.000	15,790.000
0030	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	16,170.000	16,170.000
0032	460.2010	Incentive Air Voids HMA Pavement	DOL	15,790.000	15,790.000
0034	460.5224	HMA Pavement 4 LT 58-28 S	TON	15,790.000	15,790.000
0036	465.0105	Asphaltic Surface	TON	675.000	675.000
0038	465.0475	Asphalt Centerline Rumble Strips 2-Lane Rural	LF	40,425.000	40,425.000
0040	614.0010	Barrier System Grading Shaping Finishing	EACH	4.000	4.000
0042	614.2300	MGS Guardrail 3	LF	225.000	225.000
0044	614.2340	MGS Guardrail 3 L	LF	450.000	450.000
0046	614.2610	MGS Guardrail Terminal EAT	EACH	8.000	8.000
0048	618.0100	Maintenance And Repair of Haul Roads (project) 01. 5630-06-61	EACH	1.000	1.000
0050	619.1000	Mobilization	EACH	1.000	1.000
0052	624.0100	Water	MGAL	29.000	29.000
0054	628.1104	Erosion Bales	EACH	60.000	60.000
0056	628.1504	Silt Fence	LF	3,000.000	3,000.000
0058	628.1520	Silt Fence Maintenance	LF	3,000.000	3,000.000
0060	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0062	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0064	628.2006	Erosion Mat Urban Class I Type A	SY	1,203.000	1,203.000
0066	628.7504	Temporary Ditch Checks	LF	200.000	200.000
0068	628.7570	Rock Bags	EACH	60.000	60.000
0070	630.0200	Seeding Temporary	LB	5.000	5.000
0072	634.0622	Posts Wood 4x6-Inch X 22-FT	EACH	10.000	10.000
0074	638.2102	Moving Signs Type II	EACH	10.000	10.000
0076	642.5001	Field Office Type B	EACH	1.000	1.000

5630-06-61

Line	Item	Item Description	Unit	Total	Qty
0078	643.0300	Traffic Control Drums	DAY	720.000	720.000
0080	643.0420	Traffic Control Barricades Type III	DAY	240.000	240.000
0082	643.0705	Traffic Control Warning Lights Type A	DAY	480.000	480.000
0084	643.0900	Traffic Control Signs	DAY	17,100.000	17,100.000
0086	643.0910	Traffic Control Covering Signs Type I	EACH	12.000	12.000
0088	643.0920	Traffic Control Covering Signs Type II	EACH	9.000	9.000
0090	643.1000	Traffic Control Signs Fixed Message	SF	28.750	28.750
0092	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0094	643.5000	Traffic Control	EACH	1.000	1.000
0096	646.1020	Marking Line Epoxy 4-Inch	LF	150,838.000	150,838.000
0098	648.0100	Locating No-Passing Zones	MI	7.660	7.660
0100	649.0770	Temporary Marking Raised Pavement Marker Type II	EACH	810.000	810.000
0102	650.8000	Construction Staking Resurfacing Reference	LF	40,425.000	40,425.000
0104	650.9910	Construction Staking Supplemental Control (project) 01. 5630-06-61	LS	1.000	1.000
0106	650.9920	Construction Staking Slope Stakes	LF	1,073.000	1,073.000
0108	690.0150	Sawing Asphalt	LF	1,691.000	1,691.000
0110	740.0440	Incentive IRI Ride	DOL	30,600.000	30,600.000
0112	SPV.0060	Special 01. Verify Landmark Reference Monuments	EACH	3.000	3.000
0114	SPV.0060	Special 02. Landmark Reference Monuments Special	EACH	2.000	2.000
0116	SPV.0180	Special 01. Removing Distressed Pavement Milling	SY	6,021.000	6,021.000
0118	SPV.0180	Special 02. Asphaltic Binder Enhanced Friction Surface Treatment	SY	1,771.000	1,771.000

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REMOVALS

LOCATION	WIDTH FIRST PASS	WIDTH SECOND PASS	204.0105 REMOVING PAVEMENT BUTT JOINTS (SY)	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS (SY)	204.0120 REMOVING ASPHALTIC SURFACE MILLING (SY)	SPV.0180.01 REMOVING DISTRESSED PAVEMENT MILLING (SY)	NOTES
1+75 to 1+83	13.67	13.5	-	25	-	-	
1+83 to 123+50	13.67	13.5	-	-	36727	1837	ASSUMING 5% DISTRESSED PAVEMENT
123+50 to 405+92	13.42	13.25	-	-	83679	4184	ASSUMING 5% DISTRESSED PAVEMENT
405+92 to 406+00	13.42	13.25	24	-	-	-	
SIDEROADS							
CTH DL			-	-	227	-	
DAHLKE DR			-	-	51	-	
BLAU DR			-	-	55	-	
INDIAN FARM RD			-	-	-	-	
DURNWARDS GLEN RD			-	-	-	-	
PETRA RD			-	-	-	-	
OWEN PARK RD			-	-	-	-	
MESSER RD			-	-	-	-	
PETRA RD (NORTH)			-	-	-	-	
WALKER RD			-	-	32	-	
SHANKS RD			-	-	-	-	
BEICH RD			-	-	-	-	
OLD CNTY U RD			-	-	36	-	
DRIVEWAYS							ADDITIONAL 4' THROUGH PAVED DRIVEWAYS
73+75 RT	4		-	-	18	-	
74+60 LT	4		-	-	25	-	
162+40 LT	4		-	-	22	-	
109+20 LT	4		-	-	11	-	
128+25 LT	4		-	-	10	-	
162+40 LT	4		-	-	24	-	
206+15 RT	4		-	-	15	-	
252+85 LT	4		-	-	12	-	
253+35 RT	4		-	-	12	-	
272+50 LT	4		-	-	21	-	
275+50 LT	4		-	-	22	-	
286+30 RT	4		-	-	11	-	
315+25 RT	4		-	-	20	-	
317+25 RT	4		-	-	18	-	

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ALL ITEMS ON THIS PAGE ARE CATEGORY 0010

REMOVALS

LOCATION	WIDTH FIRST PASS	WIDTH SECOND PASS	204.0105 REMOVING PAVEMENT BUTT JOINTS (SY)	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS (SY)	204.0120 REMOVING ASPHALTIC SURFACE MILLING (SY)	SPV.0180.01 REMOVING DISTRESSED PAVEMENT MILLING (SY)	NOTES
CURVE WIDENING							LENGTH FROM PC TO PT PLUS TAPERS
6+66 to 9+99		2	-	-	79	-	
13+27 to 24+73		2	-	-	260	-	
29+67 to 32+58		2	-	-	70	-	
53+31 to 57+10		2	-	-	90	-	
61+44 to 64+96		2	-	-	84	-	
167+13 to 169+58		2	-	-	60	-	
200+38 to 208+01		2	-	-	175	-	
225+27 to 227+87		2	-	-	63	-	
253+52 to 255+59		2	-	-	51	-	
261+20 to 263+72		2	-	-	61	-	
273+52 to 276+00		2	-	-	61	-	
312+50 to 314+56		2	-	-	51	-	
323+24 to 323+93		2	-	-	21	-	
344+04 to 345+60		2	-	-	40	-	
348+22 to 351+65		2	-	-	82	-	
369+37 to 371+90		2	-	-	62	-	
TOTALS			**24**	**25**	**122358**	**6021**	

ASPHALTIC ITEMS

LOCATION	WIDTH FIRST PASS	WIDTH SECOND PASS	Depth (in)	Area (sy)	211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS (STA)	455.0605 TACK COAT * (GAL)	460.0105.S HMA PERCENT WITHIN LIMITS (PWL) TEST STRIP VOLUMETRICS (EACH)	460.0110.S HMA PERCENT WITHIN LIMITS (PWL) TEST STRIP DENSITY (EACH)	460.5224 HMA PAVEMENT 4 LT 58-28 S (TON)	465.0105 ASPHALTIC SURFACE (TON)	465.0475 ASPHALTIC CENTERLINE RUMBLE STRIPS 2-LANE RURAL (LF)	SPV.0180.02 ASPHALTIC BINDER ENHANCED FRICTION SURFACE TREATMENT (SY)
1+75 to 1+83	13.67	13.5	3.5	25	-	2	-	-	4.9	-	8	-
1+83 to 123+50	13.67	13.5	3.5	36727	-	2571	-	-	7198.5	205.8	12167	-
123+50 to 405+92	13.42	13.25	1.75	83679	-	5858	-	-	8200.6	468.7	28242	-
405+92 to 406+00	13.42	13.25	1.75	0	-	-	-	-	-	-	8	-
SIDEROADS												
CTH DL			3.5	227	-	16	-	-	44.5	-	-	-
DAHLKE DR			3.5	51	-	4	-	-	10.0	-	-	-
BLAU DR			3.5	55	-	4	-	-	10.8	-	-	-
INDIAN FARM RD			3.5	0	-	-	-	-	-	-	-	-
DURNWARDS GLEN RD			3.5	0	-	-	-	-	-	-	-	-
PETRA RD			1.75	0	-	-	-	-	-	-	-	-
OWEN PARK RD			1.75	0	-	-	-	-	-	-	-	-
MESSER RD			1.75	0	-	-	-	-	-	-	-	-
PETRA RD (NORTH)			1.75	0	-	-	-	-	-	-	-	-
WALKER RD			1.75	32	-	3	-	-	3.2	-	-	-
SHANKS RD			1.75	0	-	-	-	-	-	-	-	-
BEICH RD			1.75	0	-	-	-	-	-	-	-	-
OLD CNTY U RD			1.75	36	-	3	-	-	3.6	-	-	-

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ALL ITEMS ON THIS PAGE ARE CATEGORY 0010

ASPHALTIC ITEMS

LOCATION	WIDTH FIRST PASS	WIDTH SECOND PASS	Depth (in)	Area (sy)	211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS (STA)	455.0605 TACK COAT * (GAL)	460.0105.S HMA PERCENT WITHIN LIMITS (PWL) TEST STRIP VOLUMETRICS (EACH)	460.0110.S HMA PERCENT WITHIN LIMITS (PWL) TEST STRIP DENSITY (EACH)	460.5224 HMA PAVEMENT 4 LT 58-28 S (TON)	465.0105 ASPHALTIC SURFACE (TON)	465.0475 ASPHALTIC CENTERLINE RUMBLE STRIPS 2-LANE RURAL (LF)	SPV.0180.02 ASPHALTIC BINDER ENHANCED FRICTION SURFACE TREATMENT (SY)
DRIVEWAYS												
73+75 RT		4	3.5	18	-	2	-	-	3.6	-	-	-
74+60 LT		4	3.5	25	-	2	-	-	4.9	-	-	-
162+40 LT		4	1.75	22	-	2	-	-	2.2	-	-	-
109+20 LT		4	1.75	11	-	1	-	-	1.1	-	-	-
128+25 LT		4	1.75	10	-	1	-	-	1.0	-	-	-
162+40 LT		4	1.75	24	-	2	-	-	2.4	-	-	-
206+15 RT		4	1.75	15	-	2	-	-	1.5	-	-	-
252+85 LT		4	1.75	12	-	1	-	-	1.2	-	-	-
253+35 RT		4	1.75	12	-	1	-	-	1.2	-	-	-
272+50 LT		4	1.75	21	-	2	-	-	2.1	-	-	-
275+50 LT		4	1.75	22	-	2	-	-	2.2	-	-	-
286+30 RT		4	1.75	11	-	1	-	-	1.1	-	-	-
315+25 RT		4	1.75	20	-	2	-	-	2.0	-	-	-
317+25 RT		4	1.75	18	-	2	-	-	1.8	-	-	-
CURVE WIDENING												
5+27 to 11+40		2	3.5	79	12.26	6	-	-	15.5	-	-	1771
13+27 to 24+73		2	3.5	260	22.92	19	-	-	51.0	-	-	-
29+67 to 32+58		2	3.5	70	5.82	5	-	-	13.8	-	-	-
53+31 to 57+10		2	3.5	90	7.58	7	-	-	17.7	-	-	-
61+44 to 64+96		2	3.5	84	7.04	6	-	-	16.5	-	-	-
167+13 to 169+58		2	3.5	60	4.90	5	-	-	11.8	-	-	-
200+38 to 208+01		2	3.5	175	15.26	13	-	-	34.3	-	-	-
225+27 to 227+87		2	3.5	63	5.20	5	-	-	12.4	-	-	-
253+52 to 255+59		2	3.5	51	4.14	4	-	-	10.0	-	-	-
261+20 to 263+72		2	3.5	61	5.04	5	-	-	12.0	-	-	-
273+52 to 276+00		2	3.5	61	4.96	5	-	-	12.0	-	-	-
312+50 to 314+56		2	3.5	51	4.12	4	-	-	10.0	-	-	-
323+24 to 323+93		2	3.5	21	1.38	2	-	-	4.2	-	-	-
344+04 to 345+60		2	3.5	40	3.12	3	-	-	7.9	-	-	-
348+22 to 351+65		2	3.5	82	6.86	6	-	-	16.1	-	-	-
369+37 to 371+90		2	3.5	62	5.06	5	-	-	12.2	-	-	-
GUARDRAIL REPLACEMENT												
44+45 to 48+07		2	3.5	107.6	-	8	-	-	21.1	-	-	-
75+41 to 77+53		2	3.5	19.8	-	2	-	-	3.9	-	-	-
170+31 to 172+43		2	3.5	15.3	-	2	-	-	3.1	-	-	-
UNDISTRIBUTED					-	-	1	3	-	-	-	-
TOTALS					**116**	**8596**	**1**	**3**	**15790**	**675**	**40425**	**1771**

ALL ITEMS ON THIS PAGE ARE CATEGORY 0010

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PWL MIXTURE USE TABLE

LOCATION	STATION	MIXTURE USE	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	QUALITY MANAGEMENT PROGRAM TO BE USED FOR: MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
STH 78 LANES AND SHOULDERS	1+75 to 123+50	UPPER LAYER	4 LT 58-28 S	4 LT 58-28 S	3781	1.75	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE PWL HMA PAVEMENT 460.2005
STH 78 LANES AND SHOULDERS	1+75 to 123+50	LOWER LAYER	EXISTING BASE AGGREGATE	4 LT 58-28 S	3781	1.75	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE PWL HMA PAVEMENT 460.2005
STH 78 LANES AND SHOULDERS	123+50 to 405+92	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 LT 58-28 S	8228	1.75	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE PWL HMA PAVEMENT 460.2005
VARIOUS	1+75 to 405+92	DISTRESSED PAVEMENT PATCHES	EXISTING BASE AGGREGATE	ASPHALTIC SURFACE	675	VARIOUS	QMP AS PER SS 465	ACCEPTANCE BY ORDINARY COMPACTION

SHOULDER ITEMS

LOCATION	WIDTH FT	DEPTH FT	EXTRA SHOULD AREA EACH (SF)	AREA BOTH SIDES SF	305.0110 BASE AGGREGATE DENSE 3/4-INCH * (TON)	305.0500 SHAPING SHOULDERS (STA)
1+75 to 1+83	2	0.13	0.22	0.94	0.56	0.16
1+83 to 123+50	2	0.13	0.22	0.94	851.09	243.34
123+50 to 405+92	2	0.13	0.22	0.94	1975.53	564.84
405+92 to 406+00	2	0.13	0.22	0.94	0.56	0.16
DRIVEWAYS						
32+75 LT		0.13		295	2.74	-
43+25 RT		0.13		300	2.78	-
48+60 LT		0.13		420	3.89	-
48+75 RT		0.13		609	5.64	-
63+75 RT		0.13		890	8.25	-
162+40 RT		0.13		380	3.52	-
168+15 LT		0.13		1072	9.93	-
173+75 LT		0.13		480	4.45	-
228+30 LT		0.13		260	2.41	-
233+00 RT		0.13		360	3.34	-
261+75 RT		0.13		445	4.13	-
263+50 RT		0.13		275	2.55	-
312+30 RT		0.13		315	2.92	-
312+75 LT		0.13		630	5.84	-
314+20 RT		0.13		265	2.46	-
314+70 RT		0.13		195	1.81	-
342+75 RT		0.13		400	3.71	-
370+85 LT		0.13		365	3.38	-
372+60 RT		0.13		315	2.92	-
375+20 RT		0.13		315	2.92	-
376+00 LT		0.13		700	6.49	-
TOTALS					**2914**	**809**

* ASSUMES 1.5" NEW STONE

ALL ITEMS ON THIS PAGE ARE CATEGORY 0010

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EROSION CONTROL AND RESTORATION

LOCATION	624.0100 WATER (MGAL)	628.1104 EROSION BALES (EA)	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)	628.1905 MOBILIZATIONS EROSION CONTROL (EACH)	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL (EACH)	628.7504 TEMPORARY DITCH CHECKS (LF)	628.7570 ROCK BAGS (EA)	630.0200 SEEDING TEMPORARY (LB)
44+45 to 47+69 Rt	-	-	525	525	1	-	24	-	-
44+82 to 48+07 Lt	-	-	425	425	-	-	24	-	-
75+41 to 77+53 Rt	-	-	375	375	1	-	24	-	-
75+41 to 77+53 Lt	-	-	375	375	-	-	24	-	-
170+31 to 172+43 Rt	-	-	350	350	1	-	24	-	-
171+10 to 172+43 Lt	-	-	425	425	-	-	24	-	-
UNDISTRIBUTED	29	60	525	525	-	2	56	60	5
TOTALS	**29**	**60**	**3000**	**3000**	**3**	**2**	**200**	**60**	**5**

PAVEMENT MARKING

LOCATION *	646.1020 MARKING LINE EPOXY 4-INCH x	WHITE (LF)	x	YELLOW (LF)	648.0100 LOCATING NO-PASSING ZONES (MI)	649.0770 TEMPORARY RAISED PAVEMENT MARKERS TYPE II (EA)
1+75 to 70+85	*2*	13820	*2*	13820	-	139
70+85 to 83+00	*2*	2430	*1.25*	1519	-	25
83+00 to 91+00	*2*	1600	*0.25*	200	-	16
91+00 to 116+00	*2*	5000	*1.25*	3125	-	50
116+00 to 127+00	*2*	2200	*2*	2200	-	22
127+00 to 155+00	*2*	5600	*1.25*	3500	-	56
155+00 to 173+00	*2*	3600	*2*	3600	-	36
173+00 to 195+00	*2*	4400	*1.25*	2750	-	44
195+00 to 326+00	*2*	26200	*2*	26200	-	262
326+00 to 348+00	*2*	4400	*1.25*	2750	-	44
348+00 to 352+00	*2*	800	*2*	800	-	8
352+00 to 369+00	*2*	3400	*1.25*	2125	-	34
369+00 to 406+00	*2*	7399	*2*	7399	-	74
PROJECT		-		-	7.66	-
TOTALS		**150,838**			**7.66**	**810**

* LOCATIONS OF PASSING ZONES GIVEN FOR ESTIMATION ONLY. ACTUAL MARKINGS IN THE FIELD TO BE BASED ON LOCATION NO-PASSING ZONES.

PERMANENT SIGNING

LOCATION	634.0618 POSTS WOOD 4x6-INCH x 18-FT (EA)	638.2102 MOVING SIGNS TYPE II (EA)
UNDISTRIBUTED PASSING ZONE RELOCATIONS	10	10
TOTALS	**10**	**10**

ALL ITEMS ON THIS PAGE ARE CATEGORY 0010

TRAFFIC CONTROL

GROUP CODE	STAGE	LENGTH CALENDAR DAYS	643.0300 TRAFFIC CONTROL DRUMS PER DAY **	643.0300 DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III PER DAY **	643.0420 DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A PER DAY **	643.0705 DAY	643.0900 TRAFFIC CONTROL SIGNS PER DAY **	643.0900 DAY	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I EACH	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	643.0920 EACH	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	643.1050 TRAFFIC CONTROL SIGNS PCMS PER DAY **	643.1050 DAY
0010	DETOUR (OVERVIEW)	60	---	---	---	---	---		24	1440	1		---	28.75	2	14
	DETOUR (SHEET 1)	60	---	---	3	180	6	360	55	3300	---		5	---	---	---
	DETOUR (SHEET 2)	60	---	---	---	---	---	---	71	4260	---		---	---	---	---
	DETOUR (SHEET 3)	60	---	---	---	---	---	---	58	3480	1		---	---	---	---
	DETOUR (SHEET 4)	60	---	---	---	---	---	---	36	2160	---		4	---	---	---
	DETOUR (SHEET 5)	60	---	---	1	60	2	120	12	720	7		---	---	---	---
	DETOUR (SHEET 6)	60	---	---	---	---	---	---	14	840	3		---	---	---	---
	FLAGGING OPERATION	60	---	---	---	---	---	---	8	480	---		---	---	---	---
	GUARDRAIL INSTALL	45	16	720	---	---	---	---	4	180						
	UNDISTRIBUTED	60	---	---	---	---	---	---	4	240	---		---	---	---	---
		PROJECT TOTAL		720		240		480		17100	12		9	28.75		14

** INFORMATIONAL PURPOSES ONLY

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ALL ITEMS ON THIS PAGE ARE CATEGORY 0010

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MGS GUARDRAIL

LOCATION			204.0165 REMOVING GUARDRAIL (LF)	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)	614.0010 BARRIER SYSTEM GRADING SHAPING FINISHING (EACH)	614.2300 MGS GUARDRAIL 3 (LF)	614.2340 MGS GUARDRAIL 3L (LF)	614.2610 MGS GUARDRAIL TERMINAL EAT (EACH)	* EXCAVATION COMMON (CY)	* FILL (CY)	* BORROW (CY)	* TOPSOIL (SY)	628.2006 EROSION MAT URBAN CLASS I TYPE A (SY)	* FERTILIZER TYPE A (CWT)	* SEEDING MIXTURE NO. 30 (LB)
44+45 to	47+69	Rt	88	2	1	112.5	112.5	2	53.0	47.5	-	270	270	0.18	5
44+82 to	48+07	Lt	80	2	1	112.5	112.5	2	53.0	47.5	-	295	295	0.19	6
75+41 to	77+53	Rt	80	2	1	-	112.5	2	54.0	15.0	-	358	358	0.23	7
75+41 to	77+53	Lt	76	2	1	-	112.5	2	54.0	15.0	-	280	280	0.18	6
			324	**8**	**4**	**225.0**	**450.0**	**8**					**1,203**		

* NON-BID ITEM, ITEMS AND QUANTITIES LISTED FOR BID INFORMATION ONLY, ITEMS INCIDENTAL TO BARRIER SYSTEM GRADING SHAPING FINISHING.

SAWING

LOCATION	690.0150 SAWING ASPHALT (LF)
SIDEROADS	
CTH DL	125
DAHLKE DR	60
BLAU DR	50.00
INDIAN FARM RD	100
DURNWARDS GLEN RD	105
PETRA RD	95.00
OWEN PARK RD	95
MESSER RD	80
PETRA RD (NORTH)	70
WALKER RD	65
SHANKS RD	80
BEICH RD	145
OLD CNTY U RD	95
DRIVEWAYS	
73+75 RT	40
74+60 LT	56
162+40 LT	48
109+20 LT	23
128+25 LT	22
162+40 LT	52
206+15 RT	33
252+85 LT	25
253+35 RT	25
272+50 LT	46
275+50 LT	48
286+30 RT	24
315+25 RT	44
317+25 RT	40
	1691

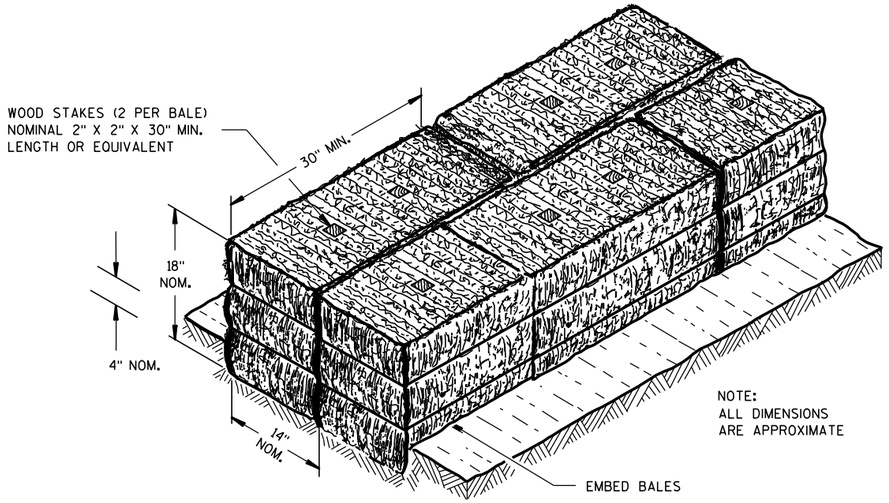
CONSTRUCTION STAKING

LOCATION			650.8000 RESURFACING REFERENCE (LF)	650.9910 SUPPLEMENTAL CONTROL (5320-02-60) (LS)	650.9920 SLOPE STAKES (EA)	SPV.0060.01 VERIFY LANDMARK REFERENCE MONUMENTS (EA)	SPV.0060.02 LANDMARK REFERENCE MONUMENTS SPECIAL (EA)
1+75 to	406+00		40425	-	-	-	-
44+45 to	47+69	Rt	-	-	324	-	-
44+82 to	48+07	Lt	-	-	325	-	-
75+41 to	77+53	Rt	-	-	212	-	-
75+41 to	77+53	Lt	-	-	212	-	-
Project			-	1	-	3	2
TOTALS			**40425**	**1**	**1073**	**3**	**2**

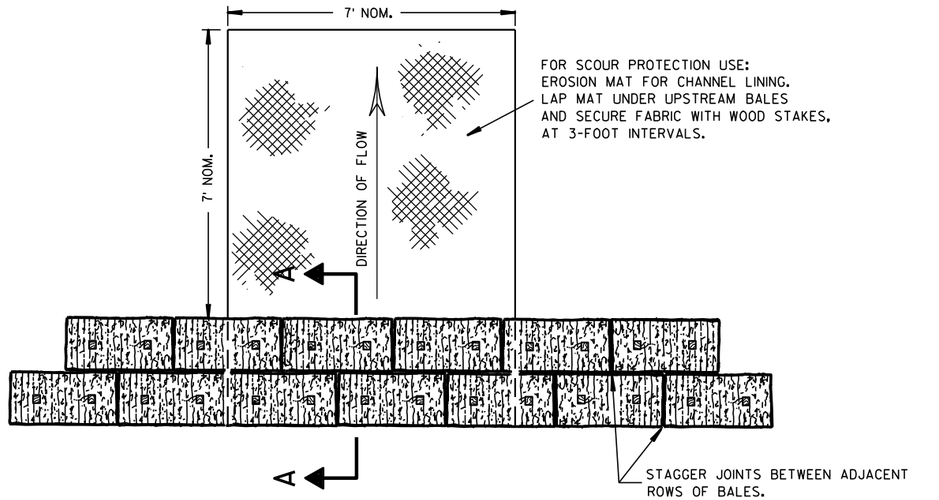
ALL ITEMS ON THIS PAGE ARE CATEGORY 0010

Standard Detail Drawing List

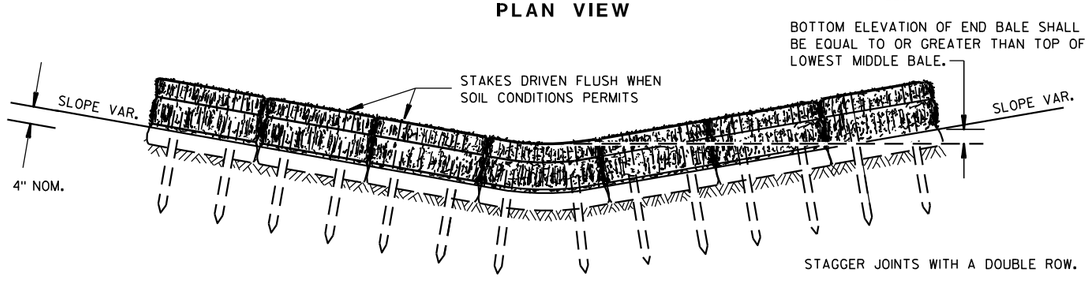
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
13A11-03A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-03B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
14B29-01	SAFETY EDGE
14B42-06A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B43-04A	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B43-04B	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B43-04C	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
15C02-07A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-07B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-07C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15C11-07A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-07	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C35-03A	PAVEMENT MARKING (INTERSECTIONS)
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
16A01-07	LANDMARK REFERENCE MONUMENTS AND COVERS



SECTION A-A



PLAN VIEW



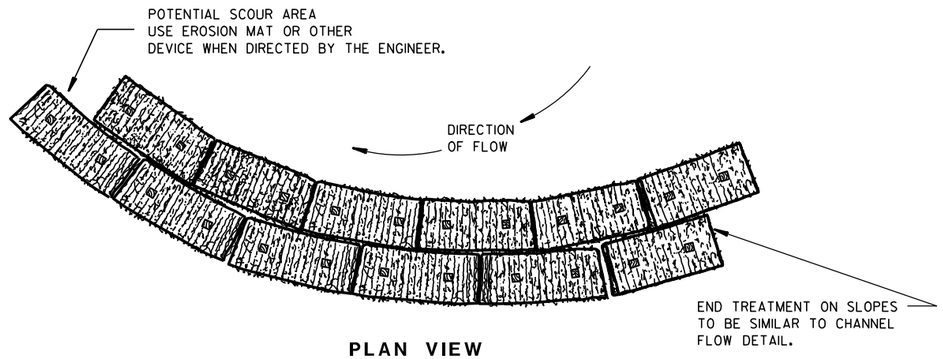
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

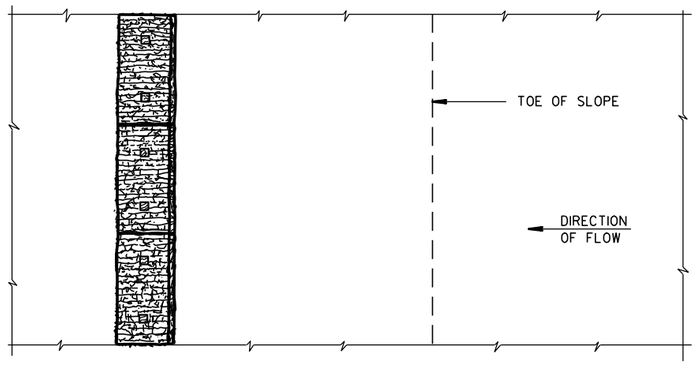
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(1) TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

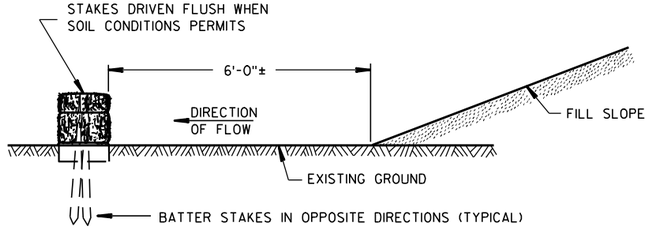


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

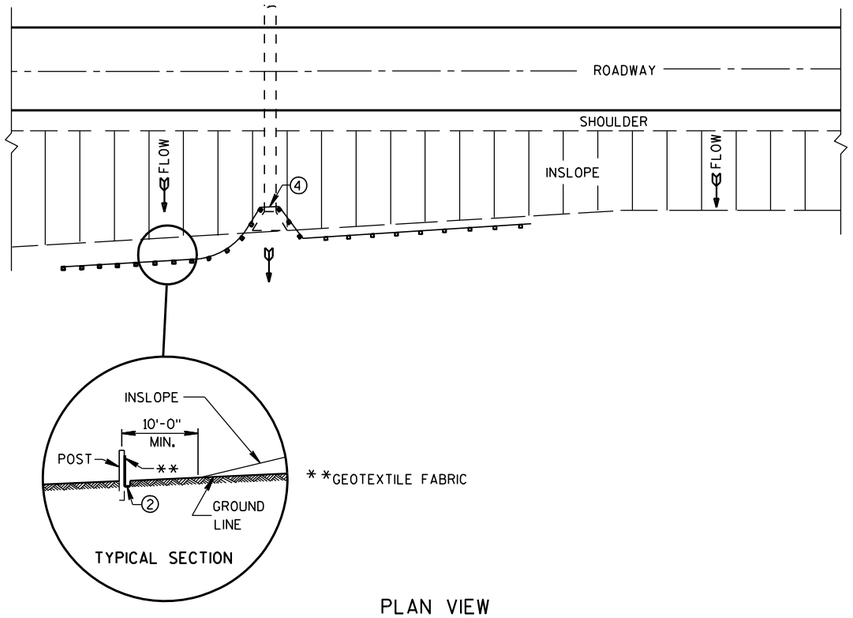
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 DATE — /S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

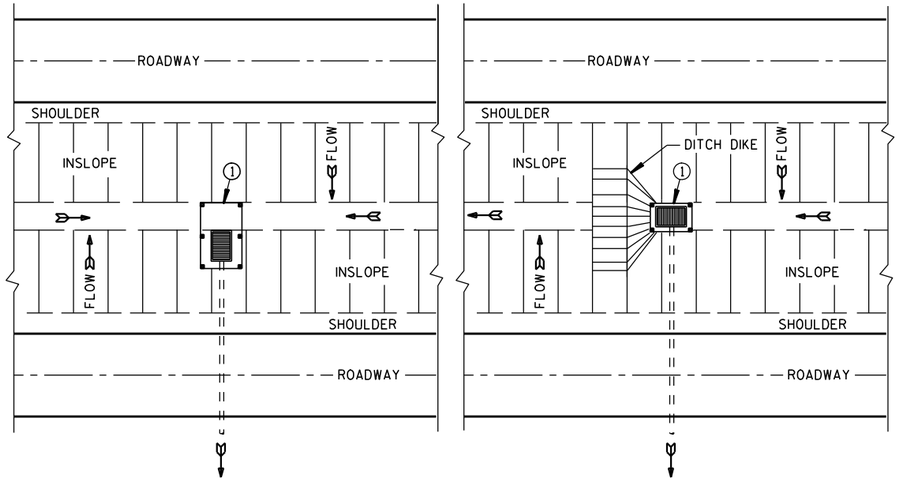
FHWA

6
S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

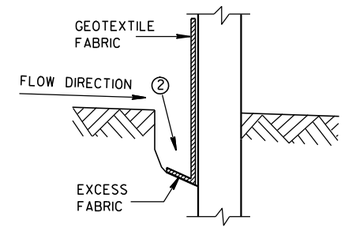
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

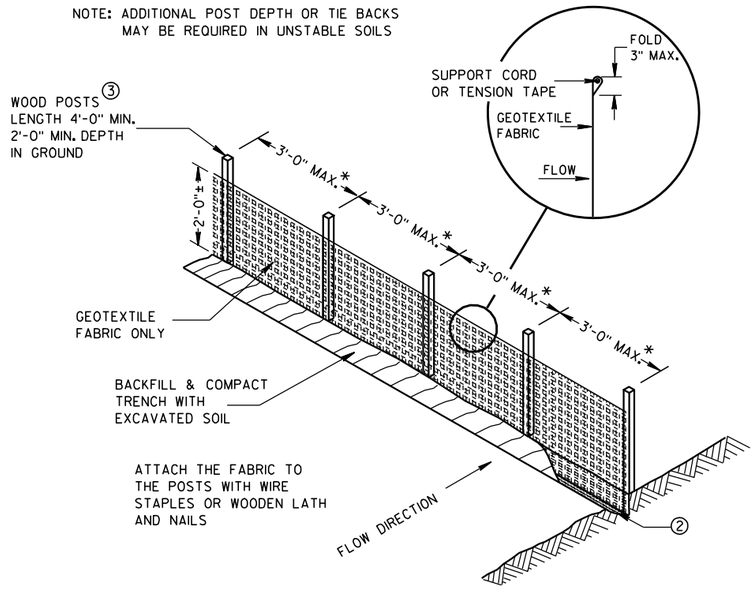
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

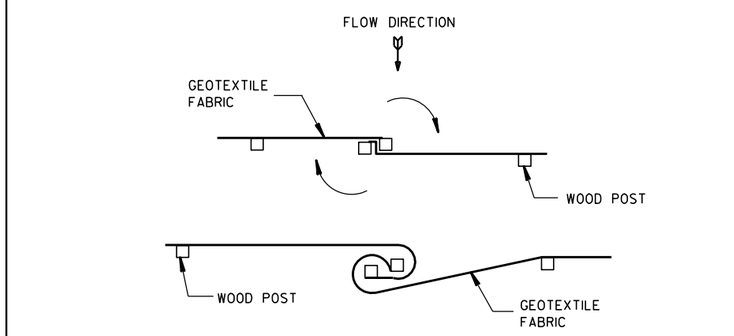
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



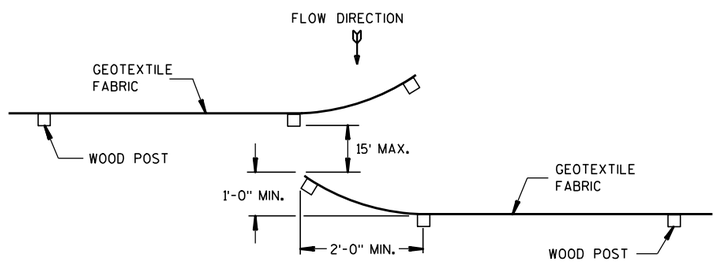
TRENCH DETAIL



SILT FENCE

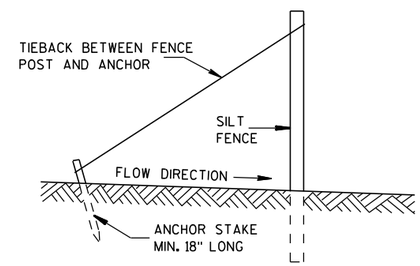


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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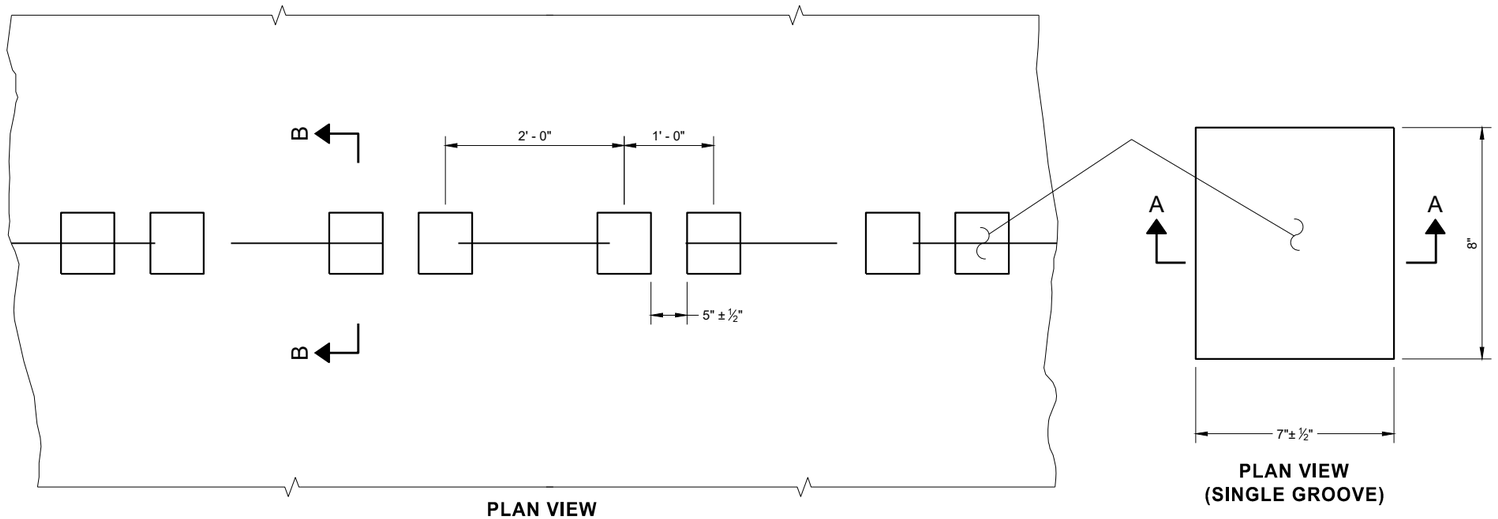
S.D.D. 8 E 9-6



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP

GENERAL NOTES

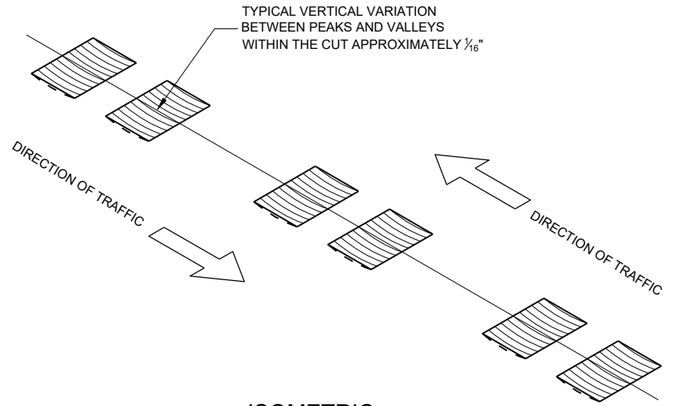
DETAILS OF CONSTRUCTION NO SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL CENTERLINE GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

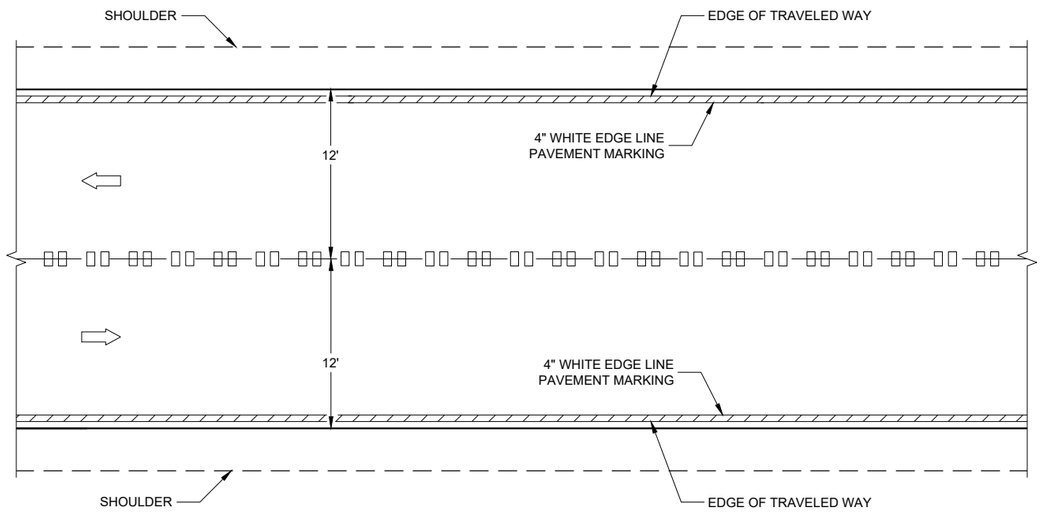
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

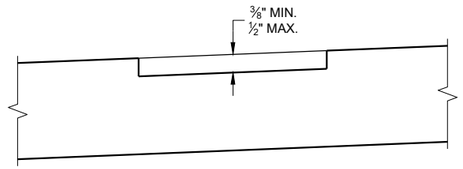
(1) CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



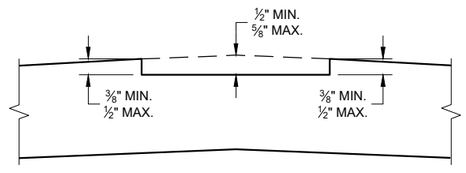
ISOMETRIC



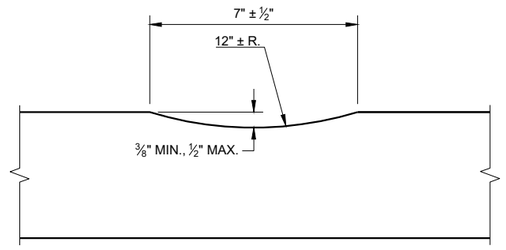
CENTERLINE GROOVES ON TWO-WAY ROADWAYS



SECTION B - B
SUPERELEVATED ROADWAY



SECTION B - B
CROWNED ROADWAY



SECTION A - A

2-LANE RURAL
CENTER LINE RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 13A11 - 03a

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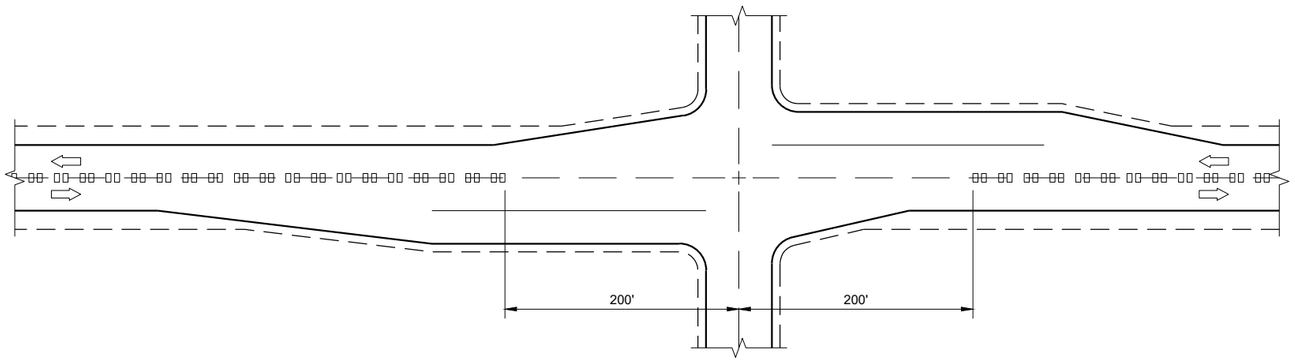
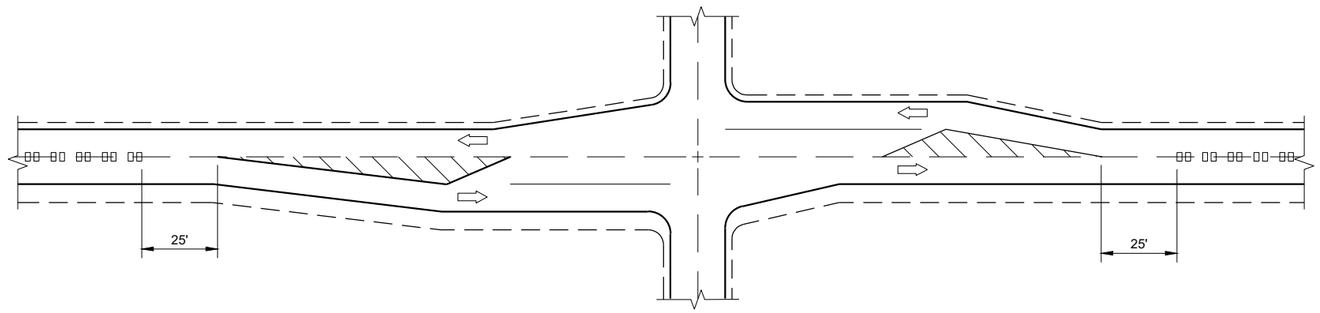
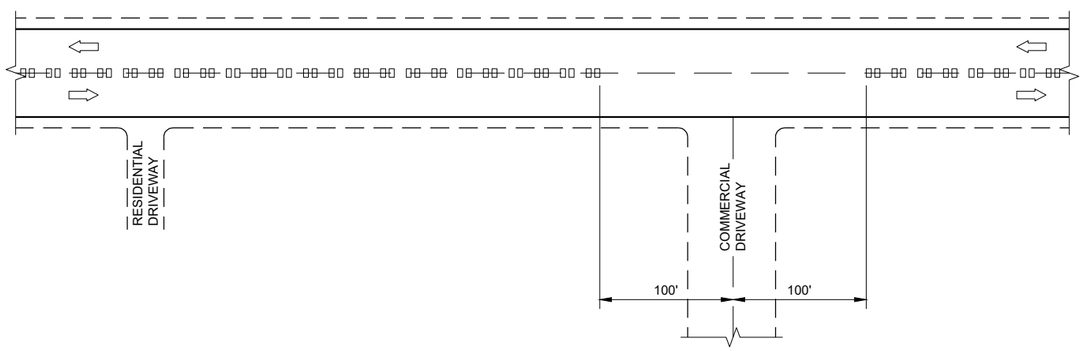
SDD 13A11 - 03a



CENTERLINE GROOVES AT INTERSECTIONS



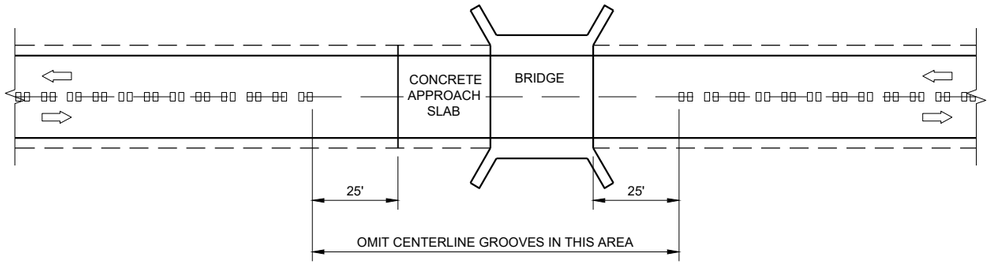
CENTERLINE GROOVES AT INTERSECTIONS (WITH LEFT TURN LANES)



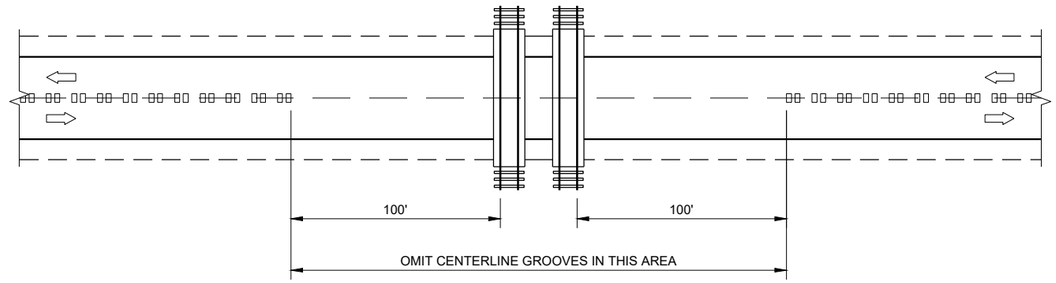
CENTERLINE GROOVES AT DRIVEWAYS (1)

GENERAL NOTES

(1) CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



CENTERLINE GROOVES AT BRIDGES



CENTERLINE GROOVES AT RAILROADS

2-LANE RURAL
CENTERLINE RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

SDD 13A11 - 03b

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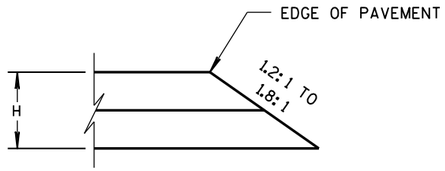
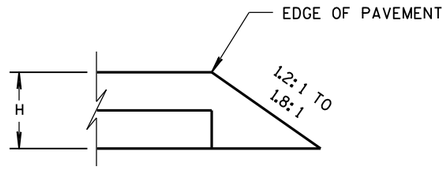
SDD 13A11 - 03b



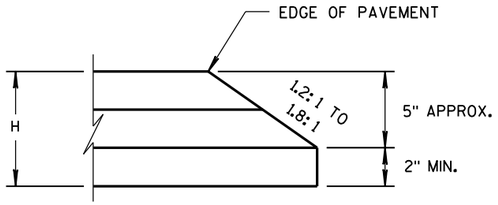
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



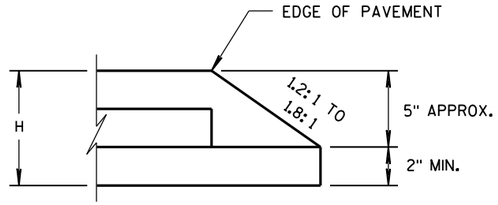
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

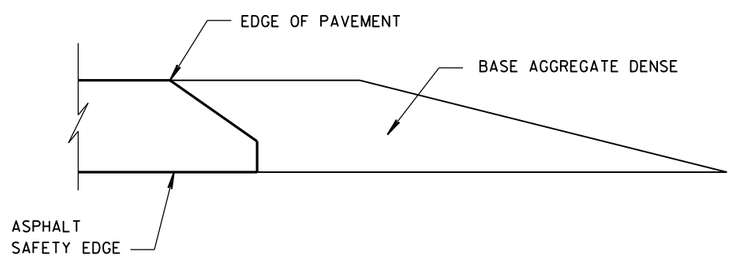
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

SAFETY EDGE SM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

(1) WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

(2) USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

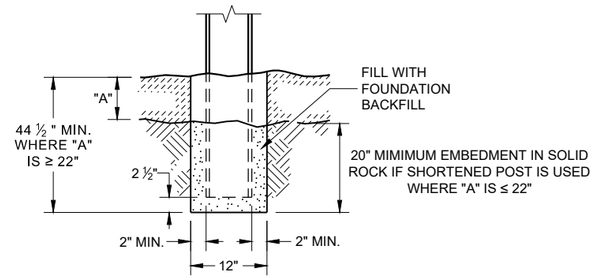
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

(4) WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

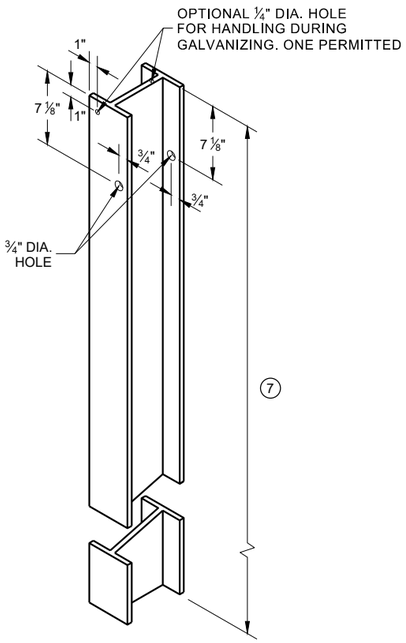
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS +1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

(6) WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

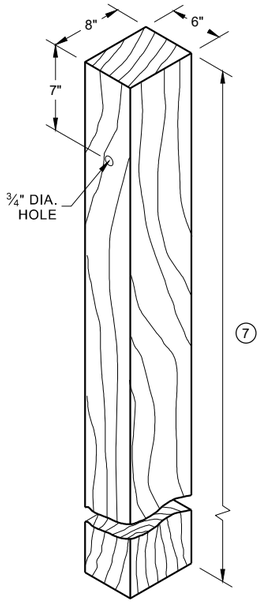
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



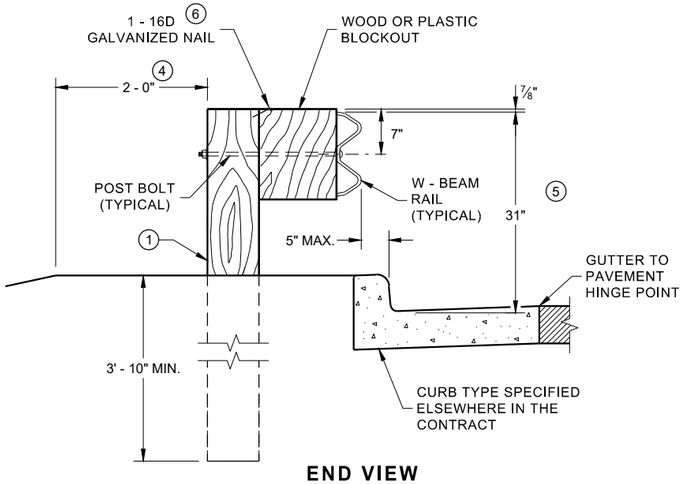
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



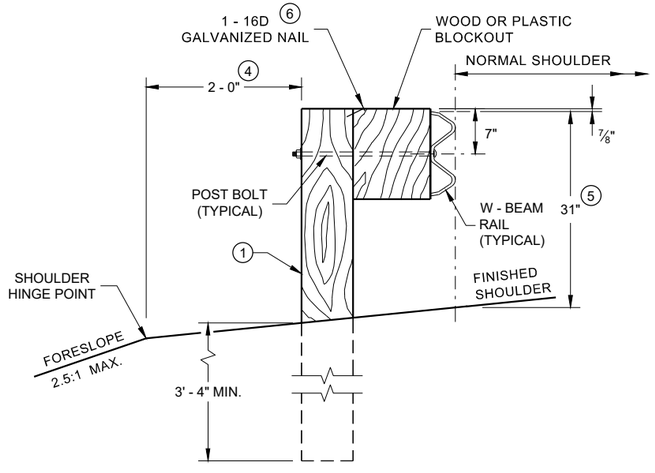
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



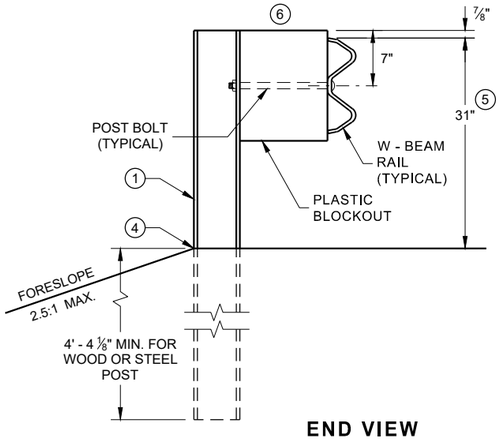
WOOD POST (6" X 8") NOMINAL (1)



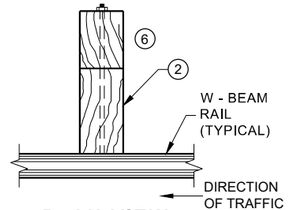
END VIEW
LOCATED ALONG A CURBED ROADWAY



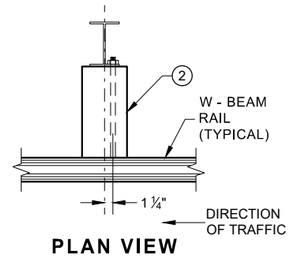
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



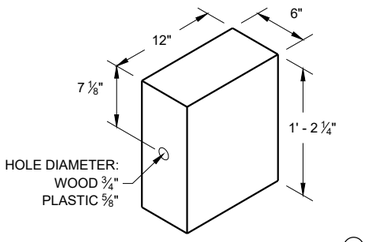
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B42 - 06a

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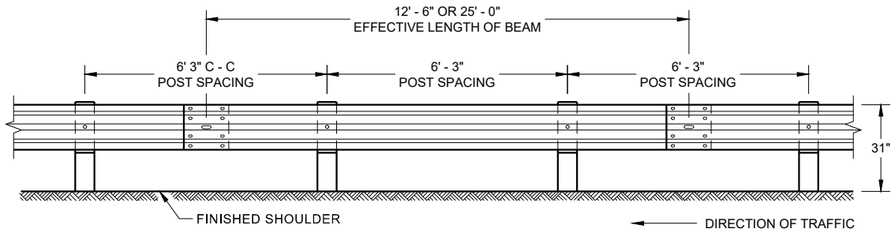
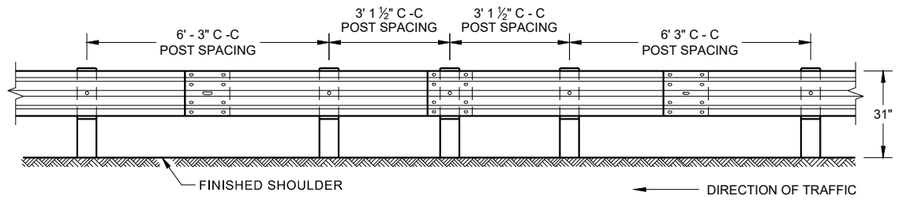
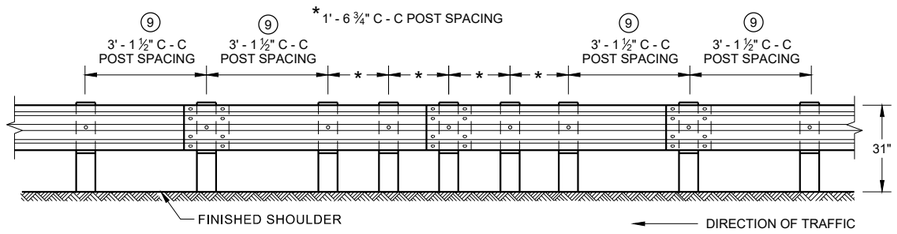
SDD 14B42 - 06a



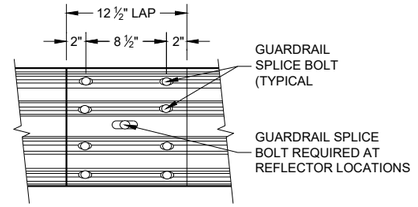
FRONT VIEW
POST SPACING STANDARD INSTALLATION



FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)



FRONT VIEW
QUARTER POST SPACING (QS)



FRONT VIEW
MID-SPAN BEAM SPLICE

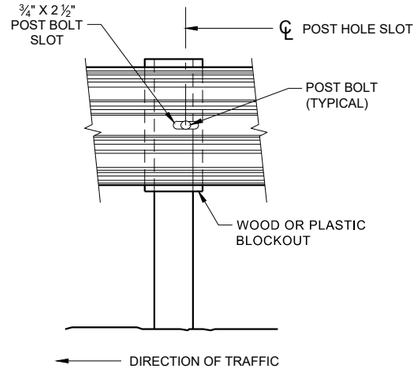
GENERAL NOTES

⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.

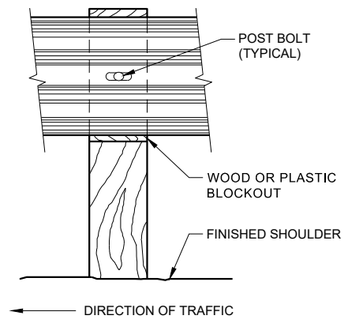
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A ¾" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

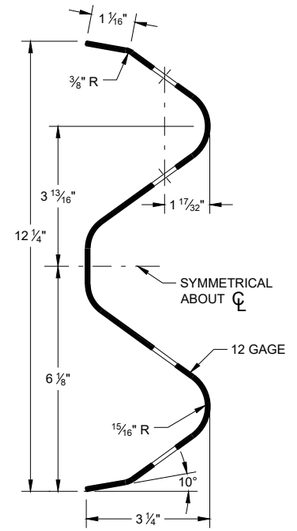
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



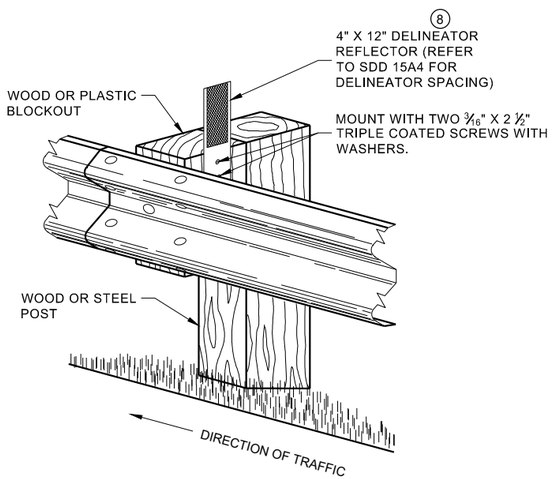
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL

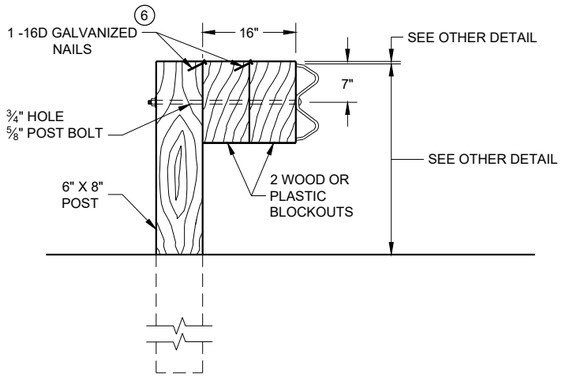


ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B42 - 06b

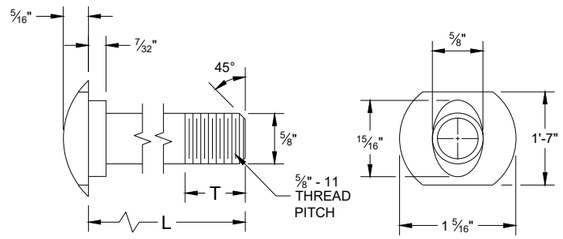


DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

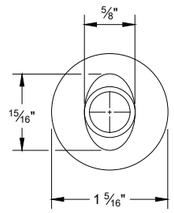
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3⁄16".
2. IF THE BOLT EXTENDS MORE THAN ¼" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

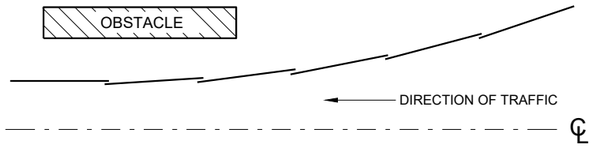


POST BOLT TABLE

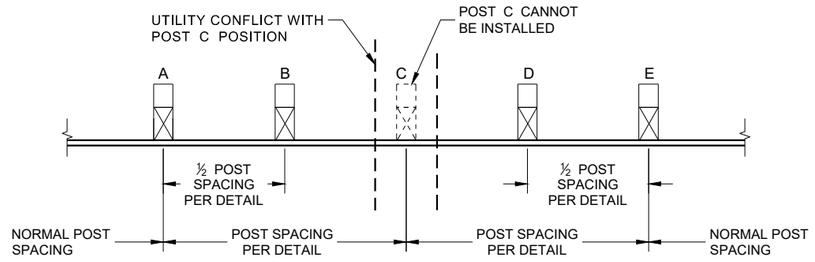
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



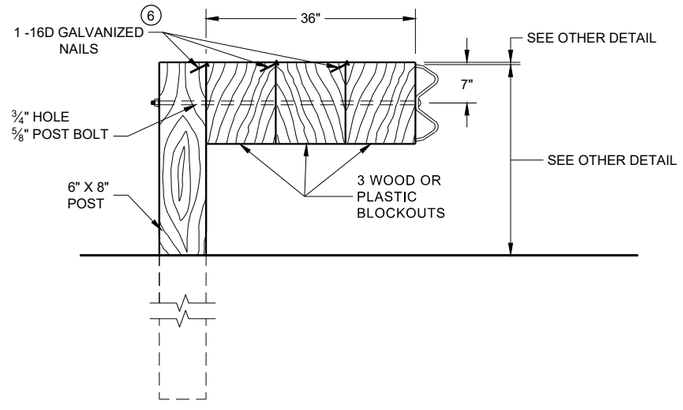
ALTERNATE BOLT HEAD



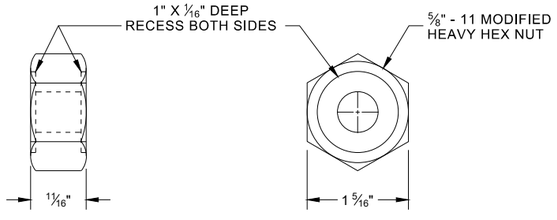
PLAN VIEW
BEAM LAPPING DETAIL



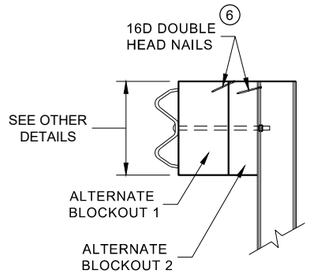
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



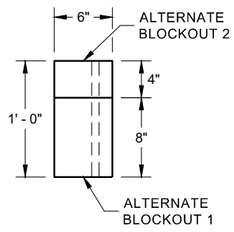
DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

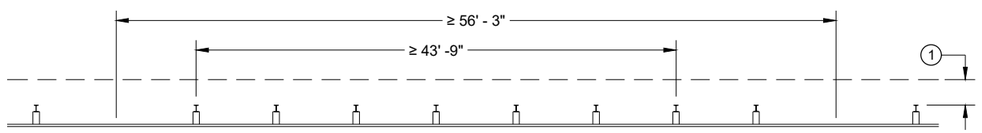
(6) WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

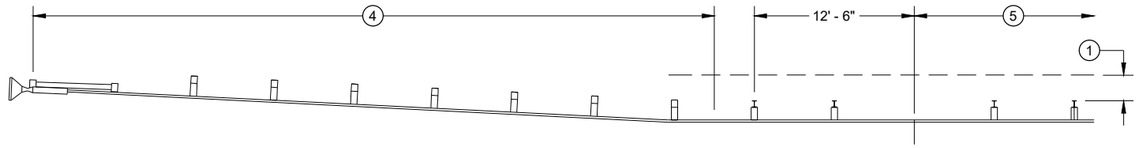
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

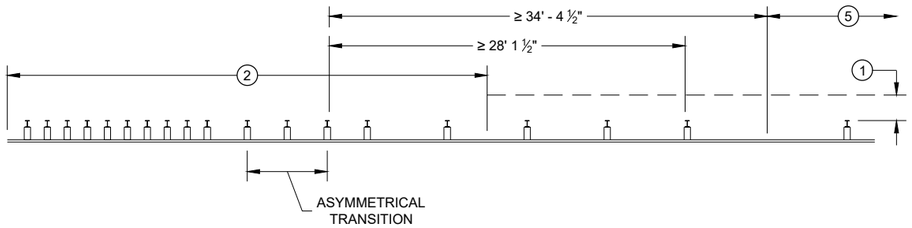
SDD 14B42 - 06c



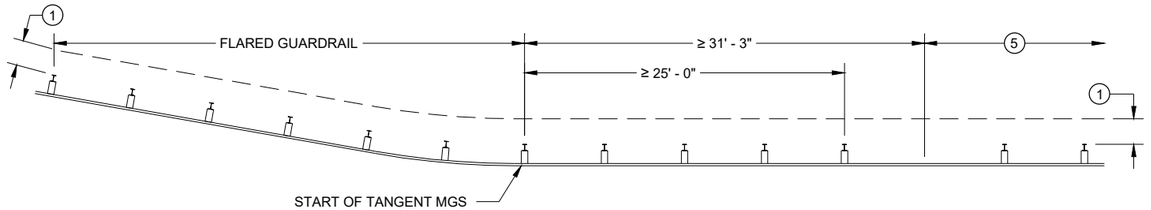
MISSING POST IN NORMAL BEAM GUARD RUN



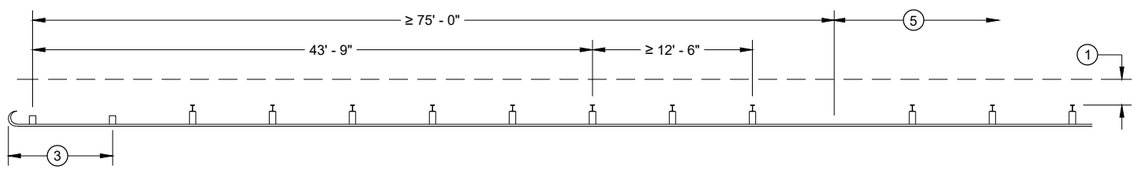
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



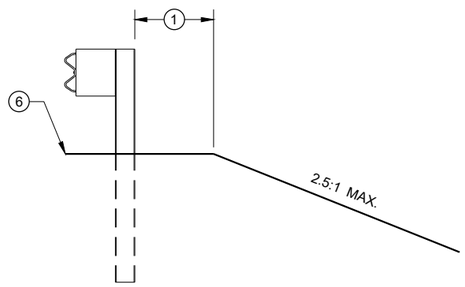
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



MISSING POST IN NORMAL BEAM GUARD RUN NEAR FLARED BEAM GUARD



MISSING POST IN NORMAL BEAM GUARD RUN NEAR TYPE 2 TERMINAL



CROSS SECTION VIEW

(1) MINIMUM OF 2 FEET OF GRADING BEHIND POST.

(2) SEE SDD 14B45 FOR MORE DETAILS.

(3) SEE SDD 14B47 FOR MORE DETAILS.

(4) SEE SDD 14B44 FOR MORE DETAILS.

(5) SEE MISSING POST IN NORMAL BEAM GUARD RUN FOR DISTANCE TO NEXT MISSING POST AND AREA FOR WELL DRAINED, COMPACTED SOILS.

(6) SEE PLAN FOR SHOULDER DESIGN.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR
FHWA

6

SDD 14B42 - 06d

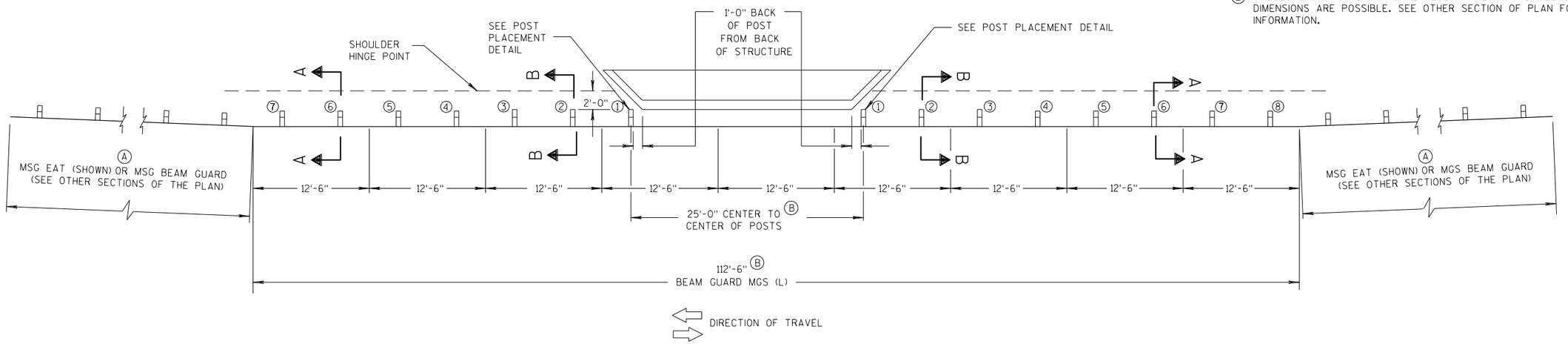
GENERAL NOTES

POSTS 1 THROUGH 3 ARE CRT POSTS.
ALL OTHER POSTS SHALL BE WOOD OR STEEL.

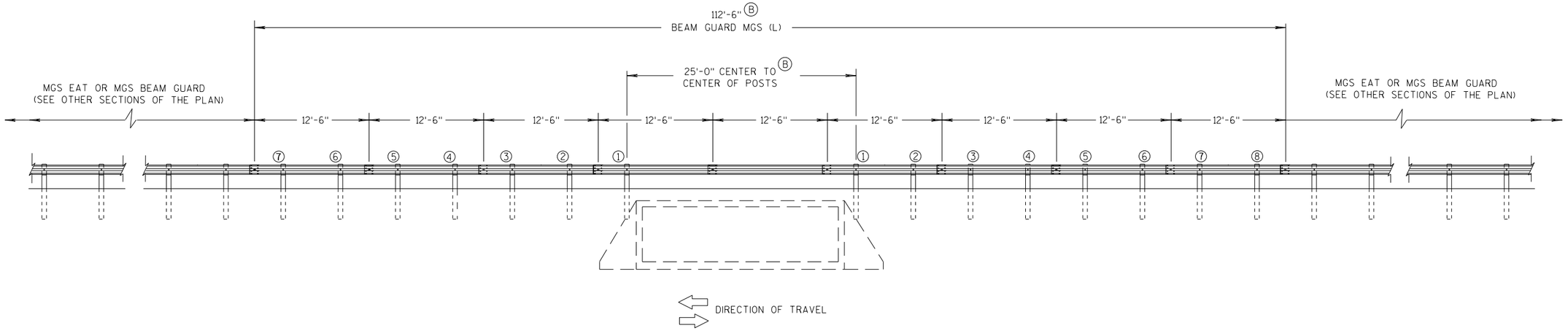
SEE SDD 14 B 42 FOR MORE DETAILS.

(A) FLARE FOR MGS EAT SHOWN. IF INSTALLING MGS NO FLARE NEEDED.

(B) VALUES SHOWN ON DRAWING REPRESENT THE MAXIMUM LENGTH. SHORTER DIMENSIONS ARE POSSIBLE. SEE OTHER SECTION OF PLAN FOR MORE INFORMATION.



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) TWO-WAY TRAFFIC

MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 43-4a

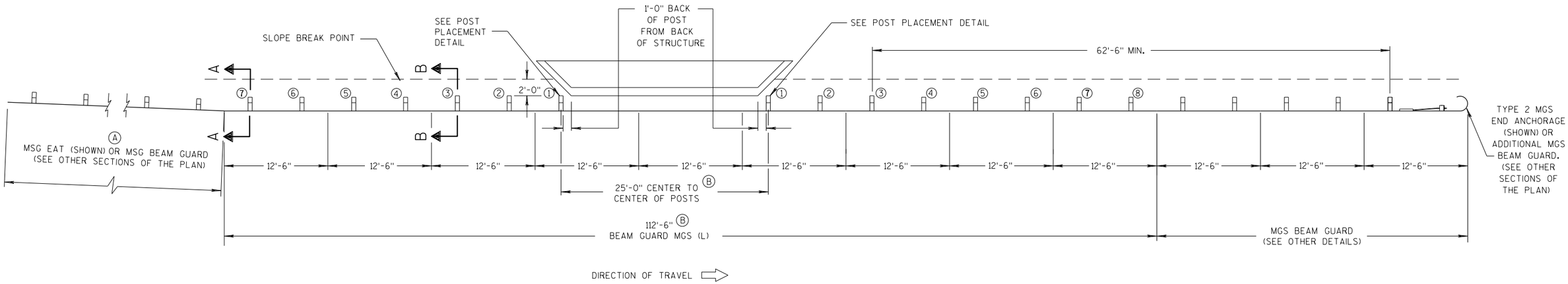
GENERAL NOTES

POSTS 1 THROUGH 3 ARE CRT POSTS.
ALL OTHER POSTS SHALL BE WOOD OR STEEL.

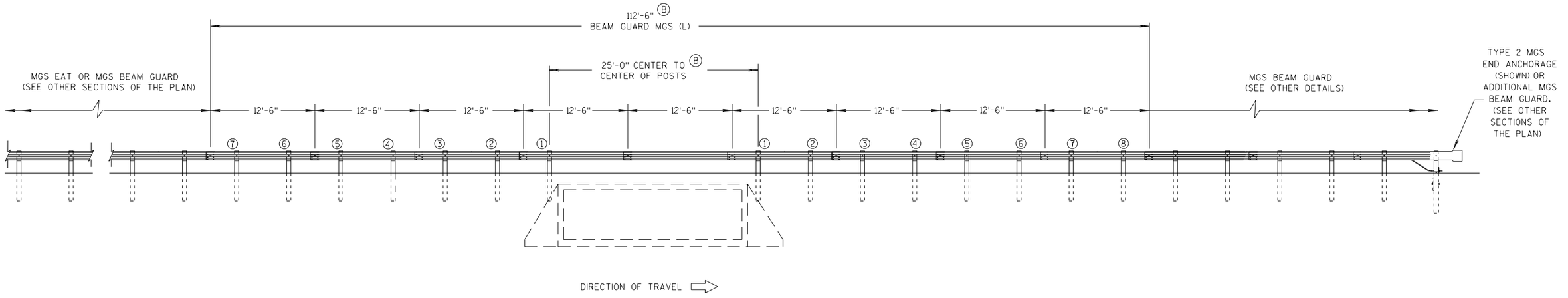
SEE SDD 14 B 42 FOR MORE DETAILS.

(A) FLARE FOR MGS EAT SHOWN. IF INSTALLING MGS NO FLARE NEEDED.

(B) VALUES SHOWN ON DRAWING REPRESENT THE MAXIMUM LENGTH. SHORTER DIMENSIONS ARE POSSIBLE. SEE OTHER SECTION OF PLAN FOR MORE INFORMATION.



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) ONE-WAY TRAFFIC

MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	45

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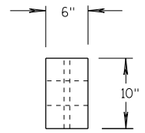
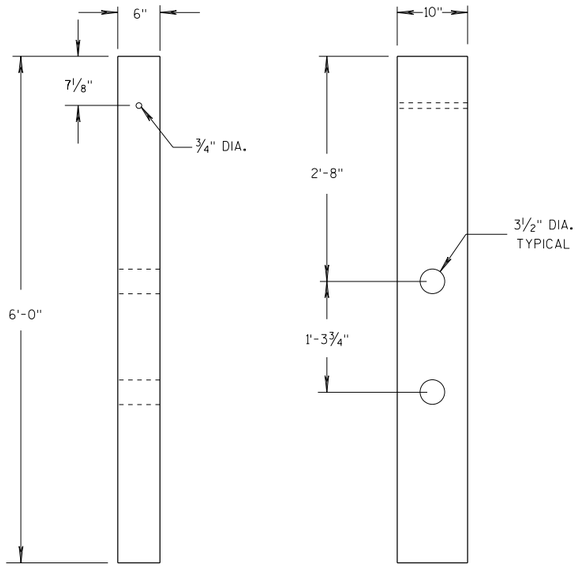
S.D.D. 14 B 43-4b

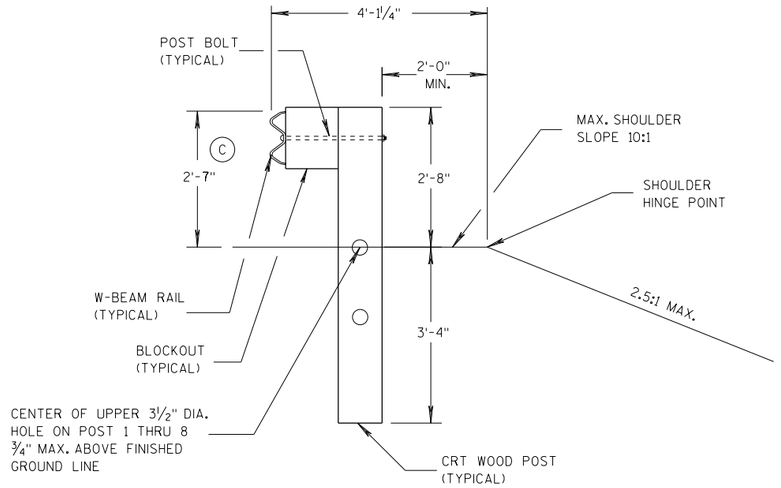


PLAN VIEW



FRONT VIEW SIDE VIEW

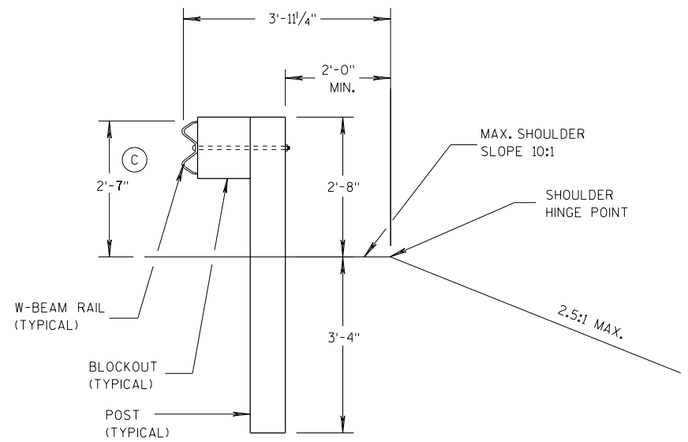
CRT WOOD POST



SECTION B-B

POSTS NO. 1-3

SEE OTHER DETAILS



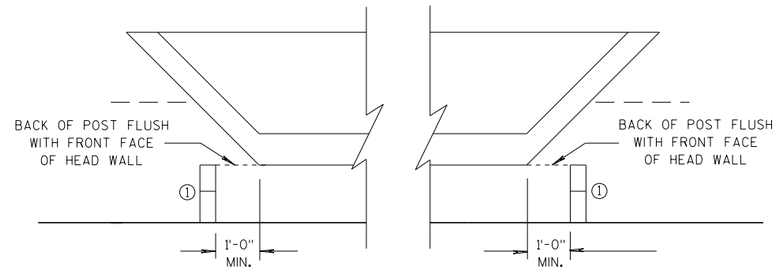
SECTION A-A

POSTS NO. 4-8

SEE OTHER DETAILS

GENERAL NOTES

(C) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



POST PLACEMENT DETAIL

MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT ENGINEER

6

S.D.D. 14 B 43-4c

6

S.D.D. 14 B 43-4c

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED

(C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.

(D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.

(E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

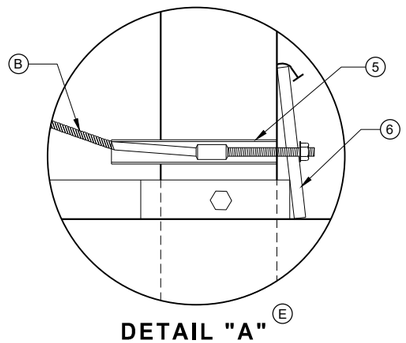
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

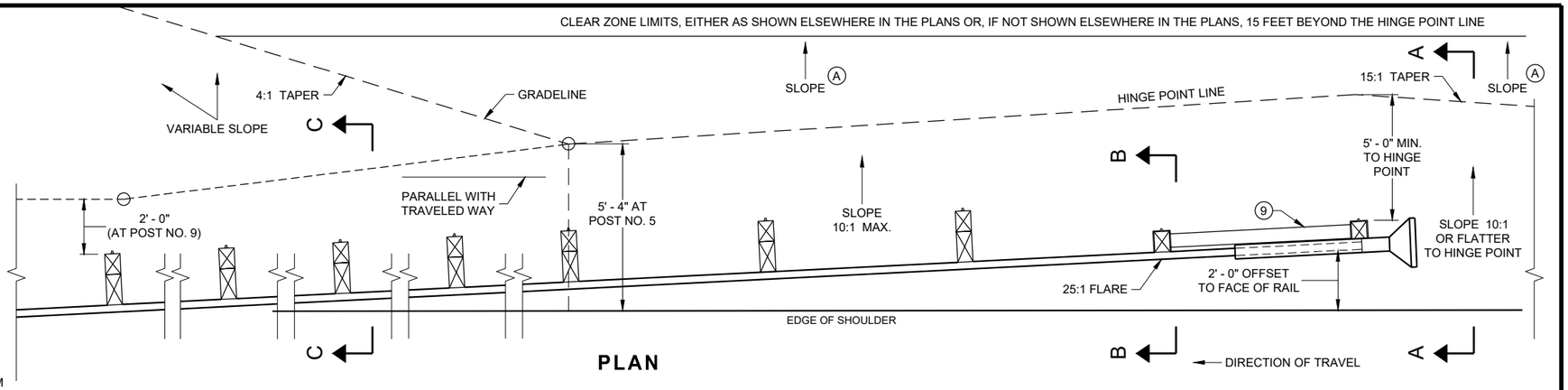
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

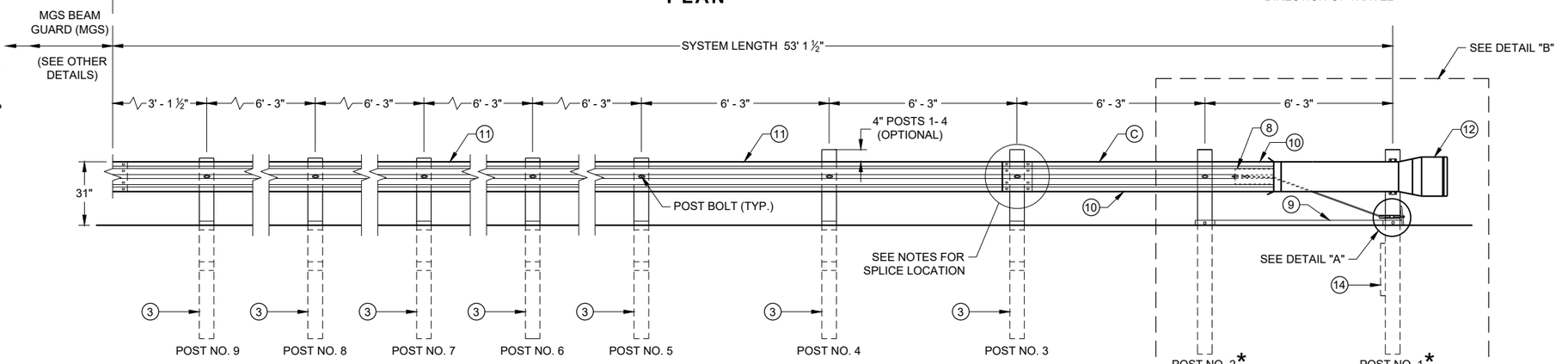
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

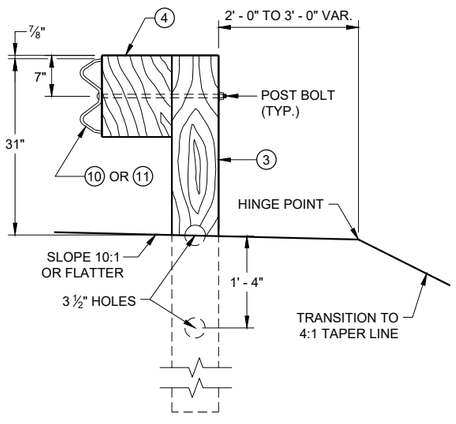
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



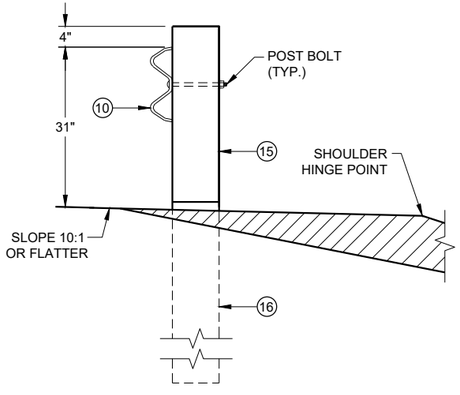
DETAIL "A" (E)



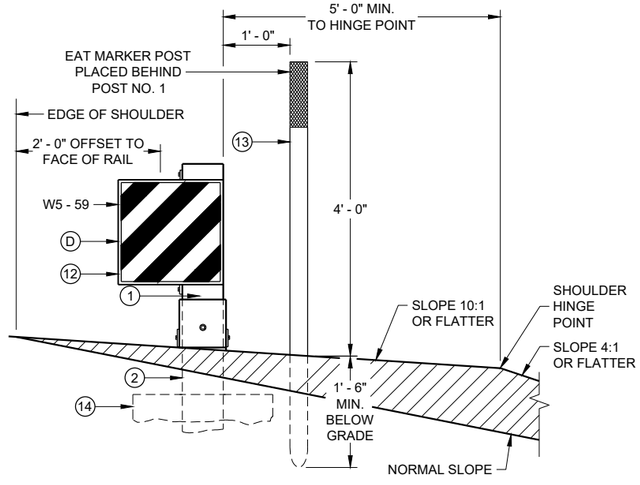




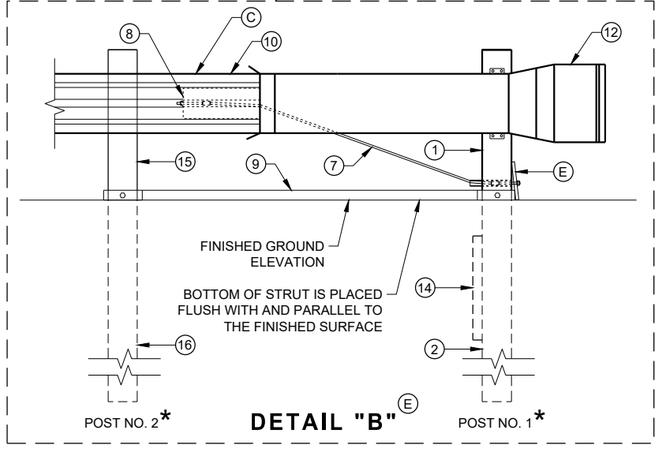
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*

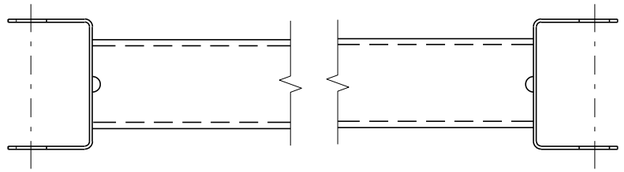


MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

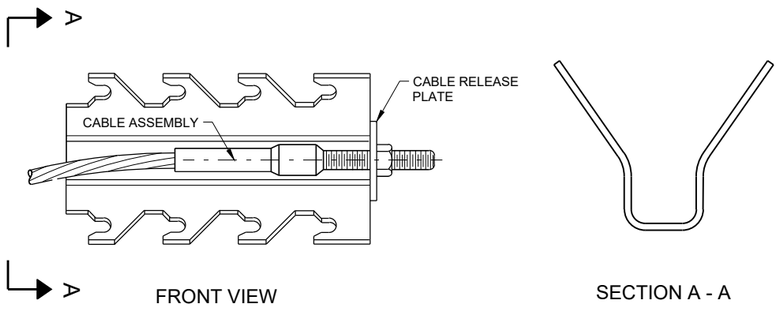
SDD 14B44 - 04a



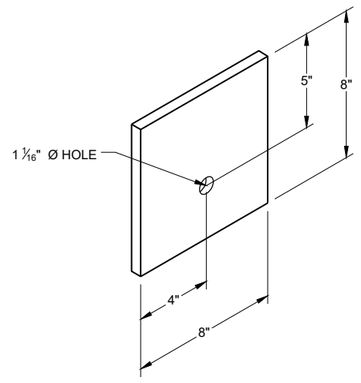
GENERIC GROUND STRUT (9) (E)

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUGACTURER'S DETAILS FOR MORE INFORMATION.
(1)	UPPER POST NO. 1 6" X 6" TUBE
(2)	LOWER POST NO. 1
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR CABLE BOX
(9)	GROUND STRUT
(10)	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
(12)	IMPACT HEAD
(13)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
(14)	SOIL PLATE
(15)	UPPER POST NO. 2
(16)	LOWER POST NO. 2



GENERIC ANCHOR CABLE BOX (9) (E)



BEARING PLATE (6) (E)

6

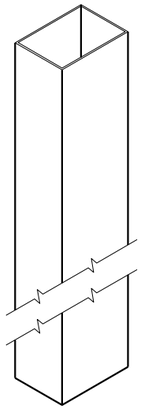
6

SDD 14B44 - 04b

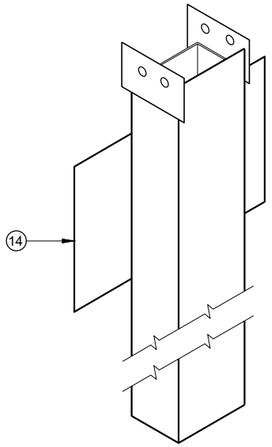
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



UPPER POST NO. 1 (1) (E)



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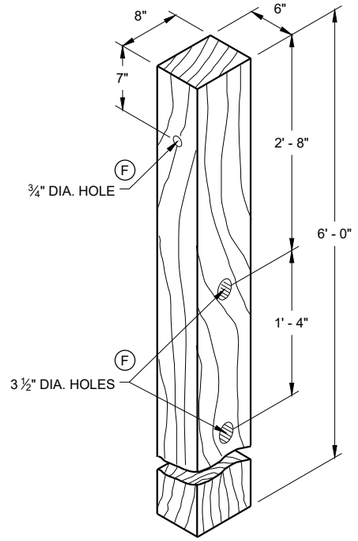
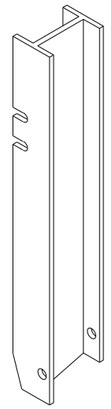


WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



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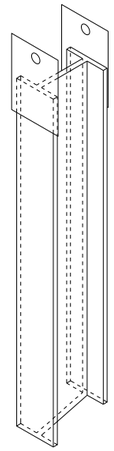
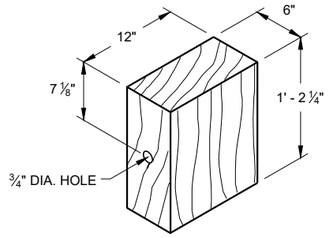
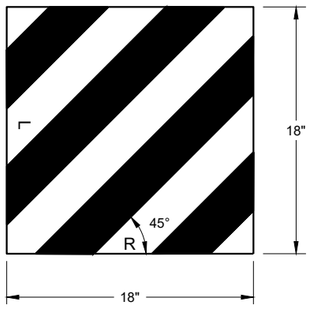


LOWER POST NO. 2 (16) (E)

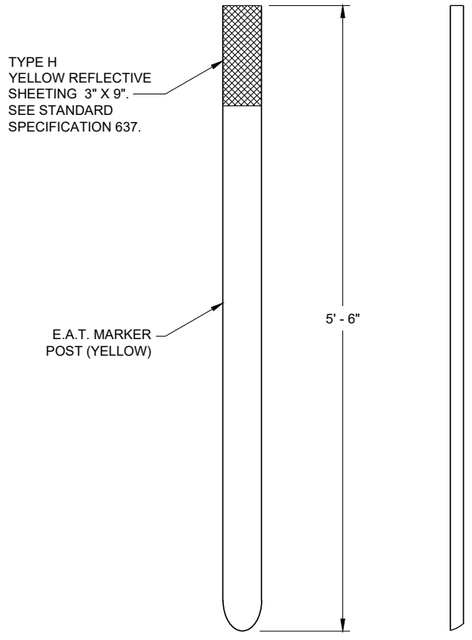


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



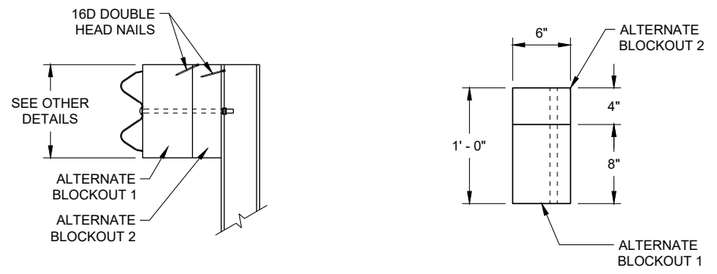
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR

FHWA

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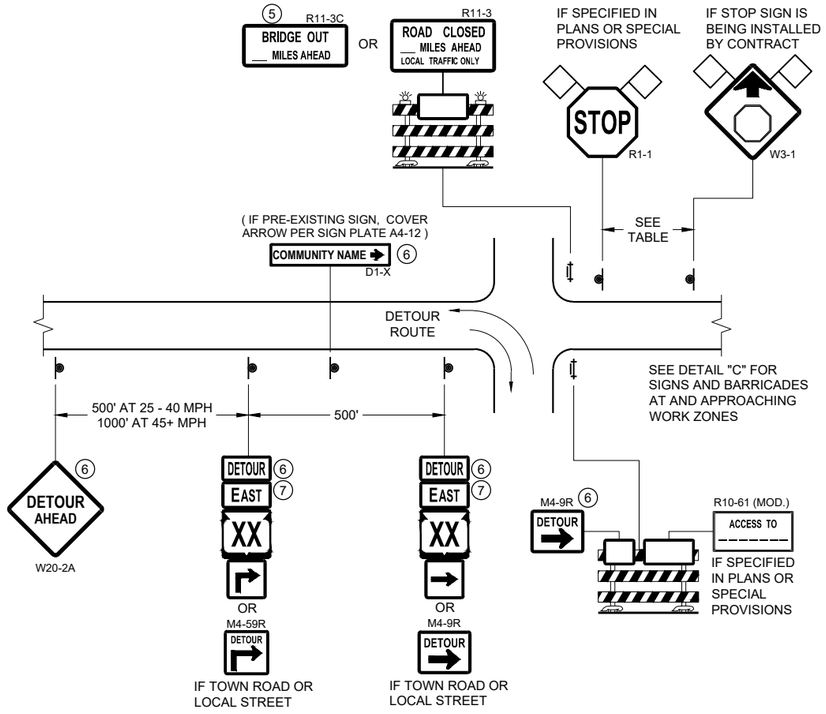
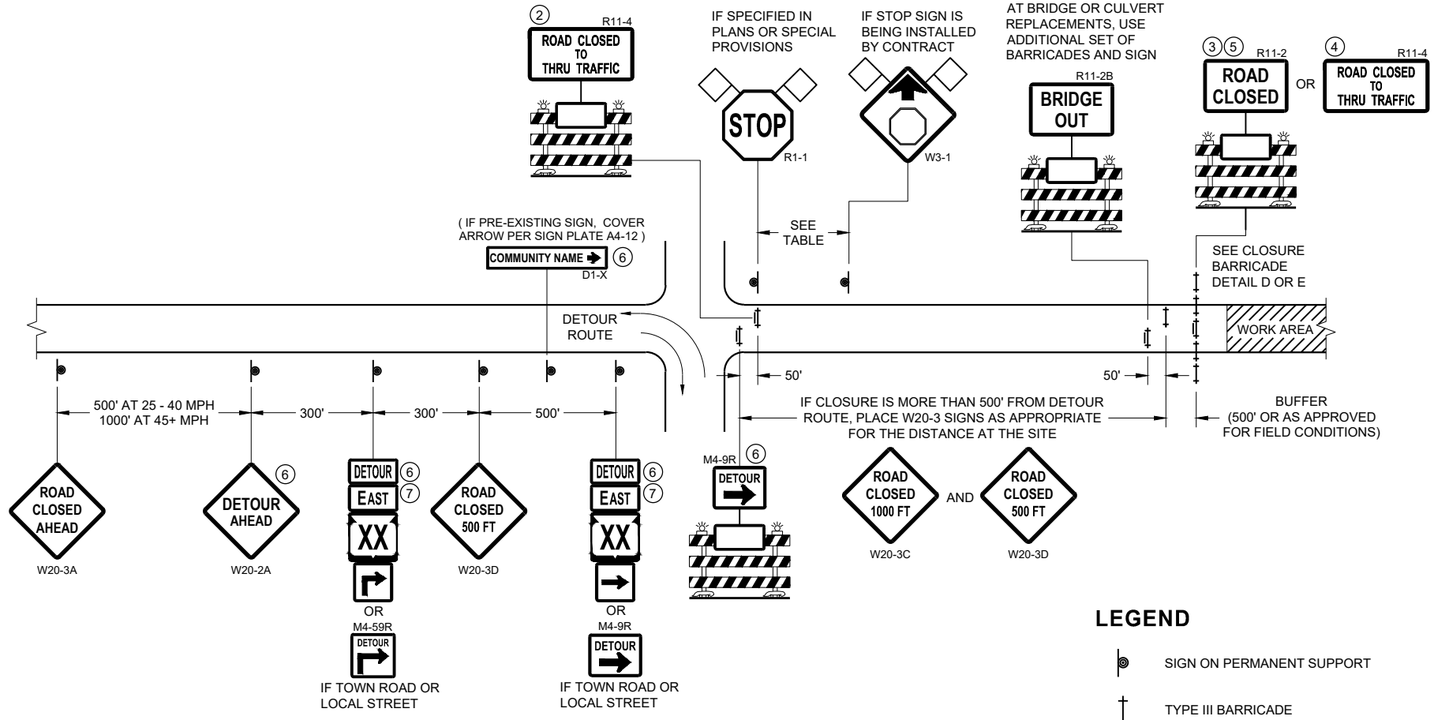
SDD 14B44 - 04c



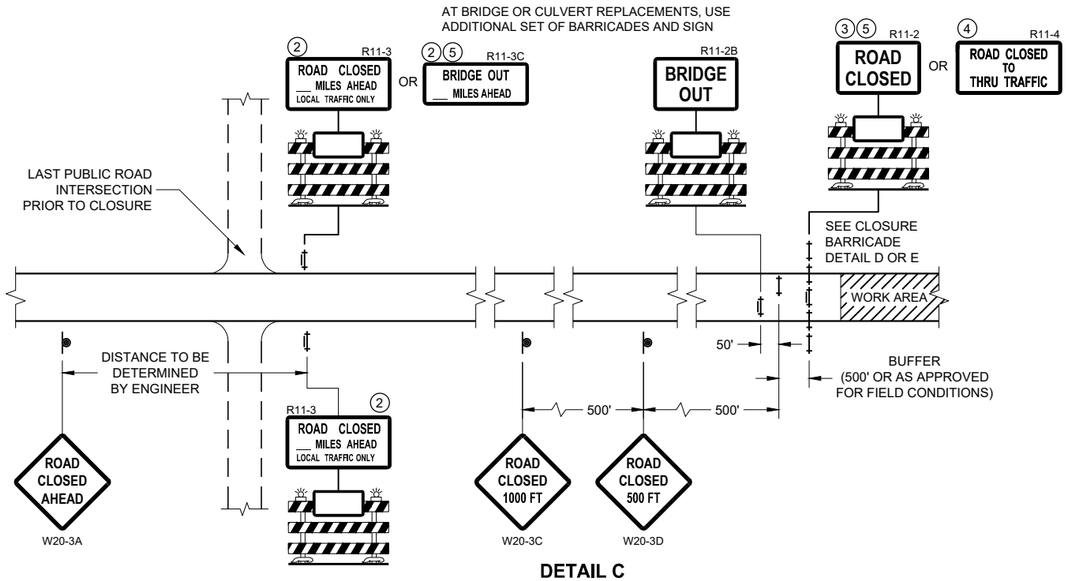


DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-SHEET "b"
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)

DETOUR M4 - 8
EAST M3 - X
XX M1 - 4 OR XX M1 - 6 OR COUNTY X M1 - 5A
M05 - 1 OR M06 - 1

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

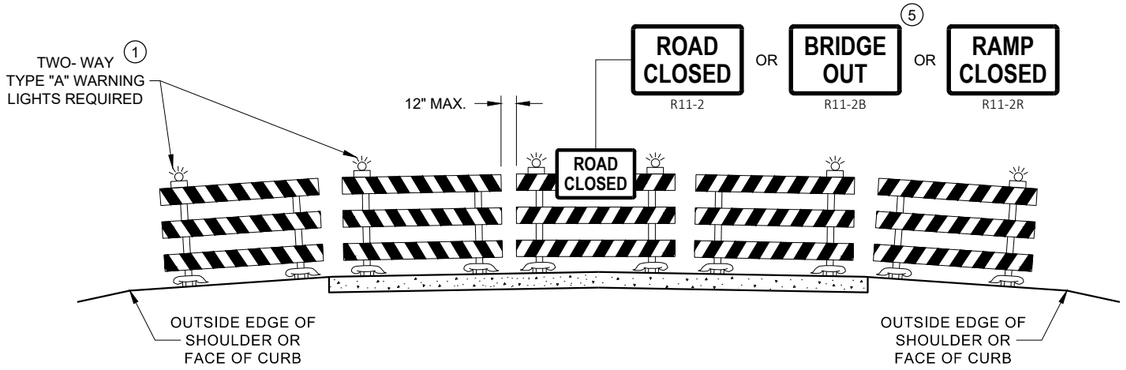
APPROVED
November 2018
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

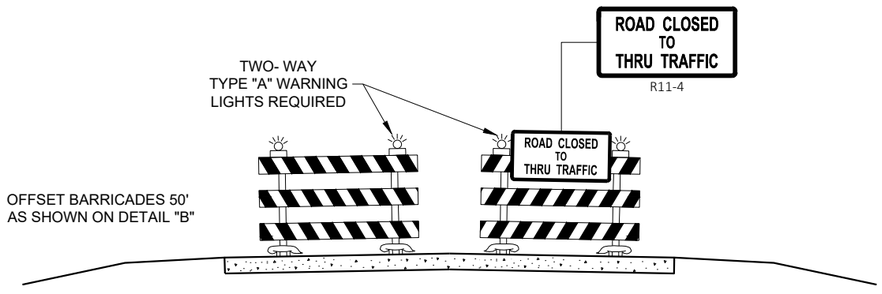
6

SDD 15C02 - 07a

SDD 15C02 - 07a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE", SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW - INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

"WO" AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING.

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER
FHWA

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SDD 15C02 - 07b

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DETOUR — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M06 - 1 OR M06 - 1

GENERAL NOTES

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

THE SPACING BETWEEN TRAFFIC CONTROL AND DETOUR SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-9 AND M4-59 SHALL BE 30" X 24"
- M4-8a SHALL BE 24" X 18"
- G20-51 SHALL BE 60" X 24"
- W20-2A SHALL BE 48" X 48"
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.

M3-X 24" X 12"
M1-X 24" X 24"
DETOUR AHEAD
W20-2A
USE ON STATE TRUNK, U.S. OR INTERSTATE HIGHWAYS, OR AS SPECIFIED IN THE CONTRACT

500' AT 25-40 MPH
1000' AT 45+ MPH

500'

M4-8a *
END DETOUR WEST XX

DETOUR EAST XX *

D1-X *
COMMUNITY NAME
(IF PRE-EXISTING SIGN, COVER ARROW PER SIGN PLATE A4-12)

DETOUR EAST WEST XX XX

DETOUR ROUTE

WORK AREA

DETOUR EAST XX

WEST XX OR M4-9L ** DETOUR
IF TOWN ROAD OR LOCAL STREET

500'

DETOUR NEXT X MILES *
G20-51

DETOUR WEST XX *
OR M4-59L * ** DETOUR
IF TOWN ROAD OR LOCAL STREET

MATCH POINT

* M4-59L ** DETOUR OR DETOUR EAST XX *
IF TOWN ROAD OR LOCAL STREET

D1-X *
COMMUNITY NAME
(IF PRE-EXISTING SIGN, COVER ARROW PER SIGN PLATE A4-12)

M4-9L ** DETOUR OR DETOUR EAST XX
IF TOWN ROAD OR LOCAL STREET

500'

DETOUR WEST XX
OR M4-9R DETOUR **
IF TOWN ROAD OR LOCAL STREET

DETOUR WEST XX *
OR M4-59R * DETOUR **
IF TOWN ROAD OR LOCAL STREET

500'

DETOUR ROUTE

500' AT 25 - 40 MPH
1000' AT 45+ MPH

500'

M3-X 24" X 12"
M1-X 24" X 24"
DETOUR AHEAD
W20-2A
USE ON STATE TRUNK, U.S. OR INTERSTATE HIGHWAYS, OR AS SPECIFIED IN THE CONTRACT

DETOUR EAST XX *

D1-X *
COMMUNITY NAME
(IF PRE-EXISTING SIGN, COVER ARROW PER SIGN PLATE A4-12)

DETOUR EAST XX

500'

DETOUR EAST XX
DETOUR EAST XX
DETOUR EAST XX *

D1-X *
COMMUNITY NAME
(IF PRE-EXISTING SIGN, COVER ARROW PER SIGN PLATE A4-12)

PLACE SIGNS BEYOND INTERSECTIONS WITH STATE OR COUNTY TRUNK HIGHWAYS OR AT 4 MILE MAXIMUM SPACING (4 BLOCKS IF URBAN AREA)

500' AT 25 - 40 MPH
1000' AT 45+ MPH

DETOUR EAST XX *

M3-X 24" X 12"
M1-X 24" X 24"
DETOUR AHEAD
W20-2A
USE ON STATE TRUNK, U.S. OR INTERSTATE HIGHWAYS, OR AS SPECIFIED IN THE CONTRACT

SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

DETAIL F
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

SDD 15C02 - 07c

6

SDD 15C02 - 07c

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

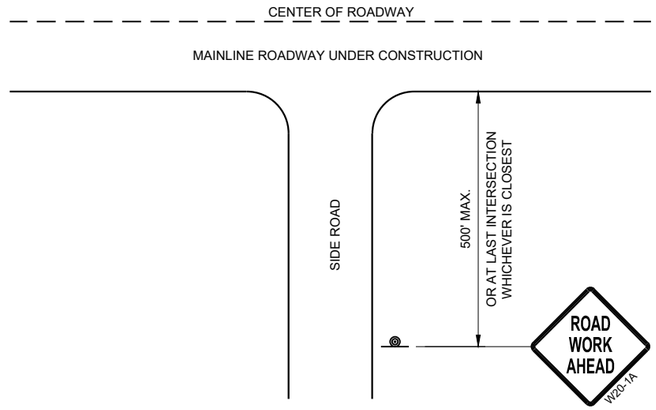
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS

** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



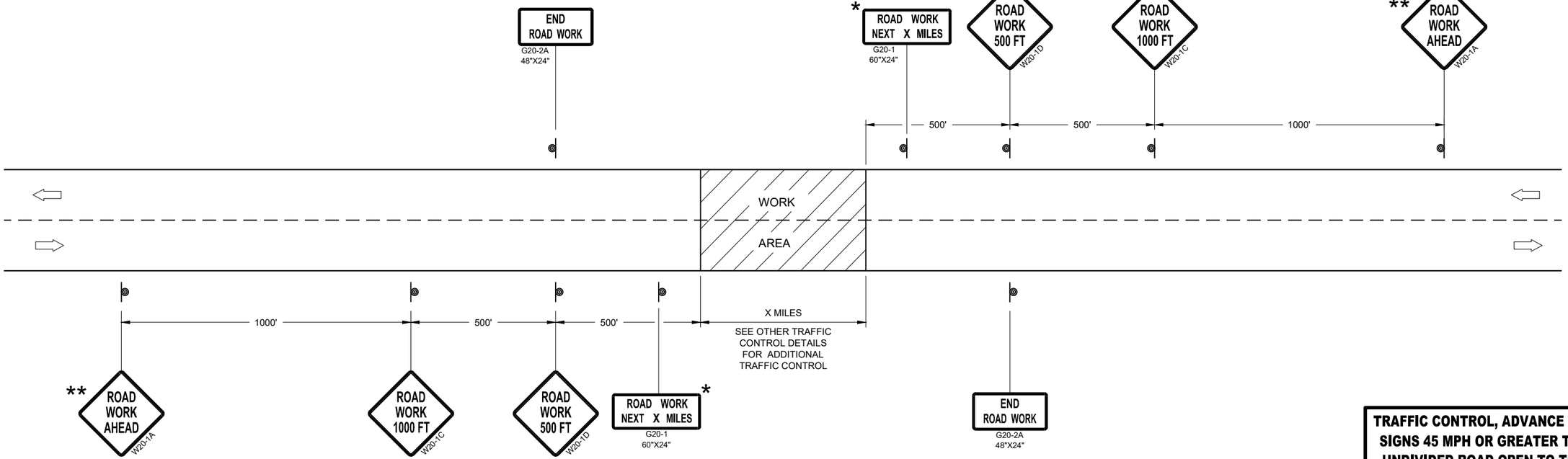
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 MPH OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFICE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

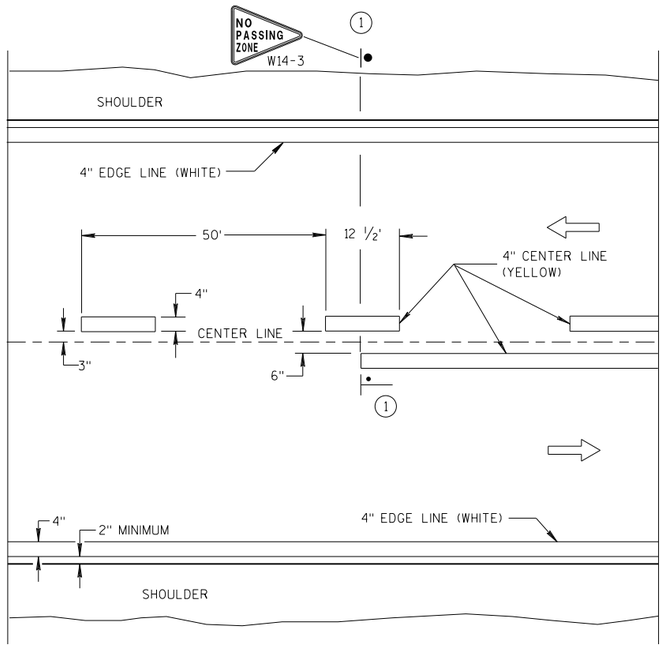
APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

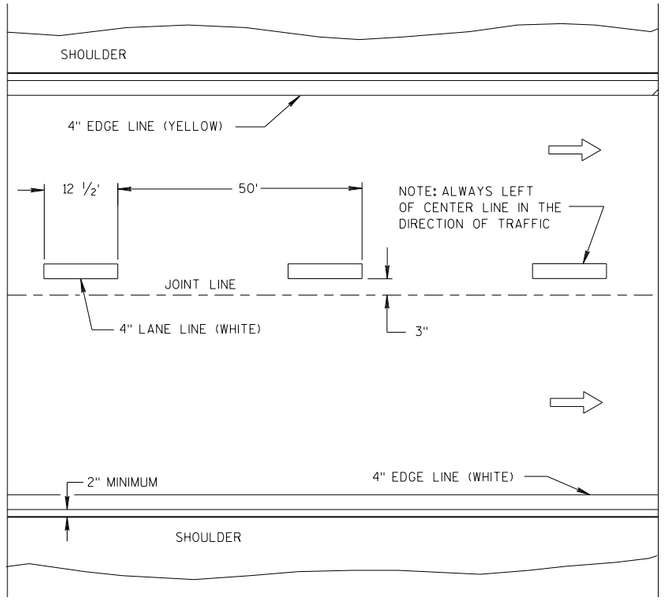
FHWA

6

SDD 15C04 - 05



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

(1) LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING.

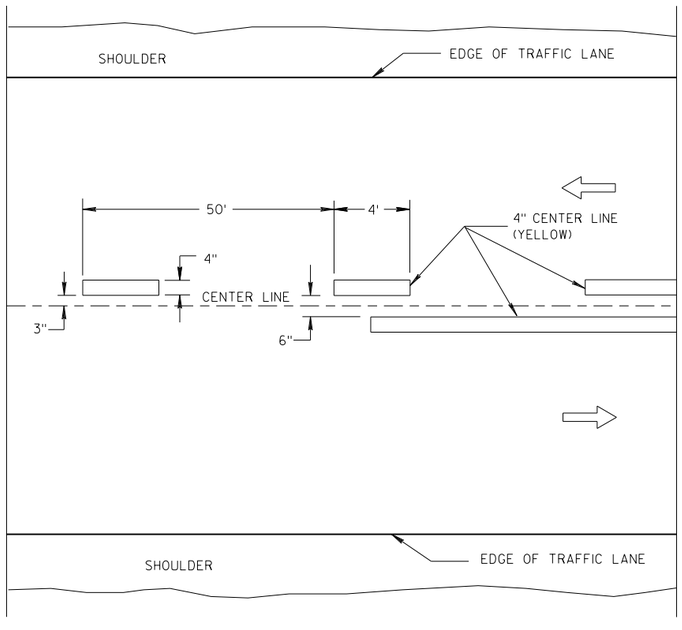
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

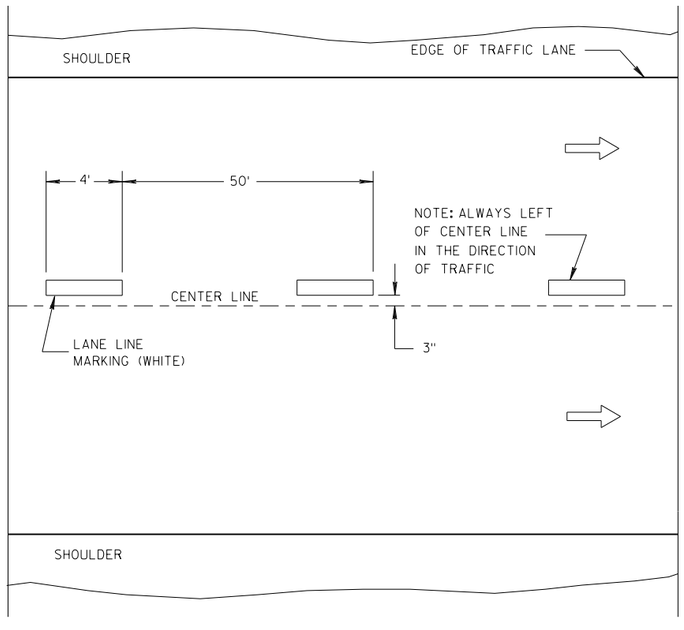
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018 DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MARKING ENGINEER

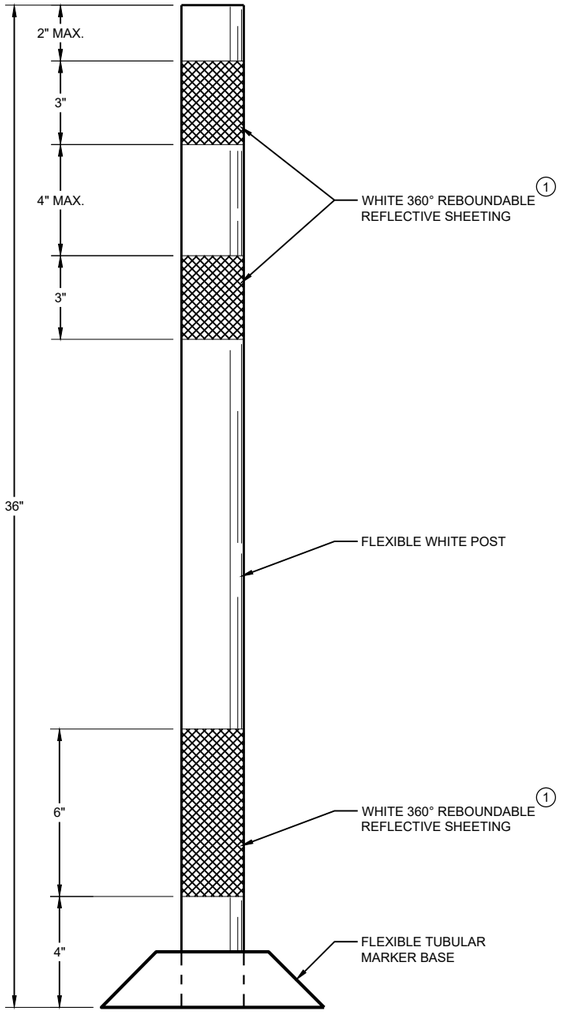
FHWA

6

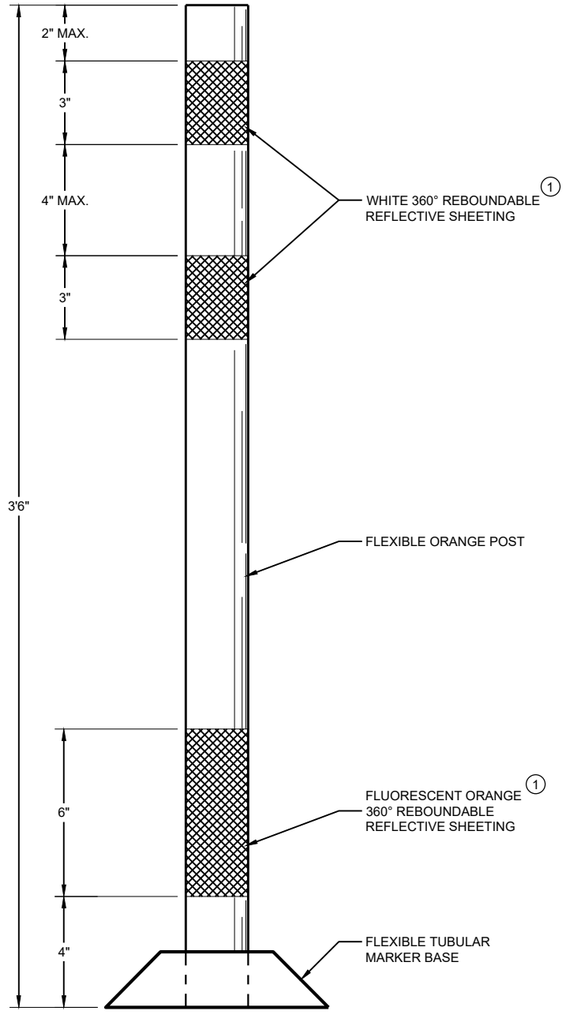
S.D.D. 15 C 8-19a

6

S.D.D. 15 C 8-19a



FLEXIBLE TUBULAR MARKER POST PERMANENT CROSSOVER



FLEXIBLE TUBULAR MARKER POST WORK ZONE

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, UNLESS DIRECTED BY THE ENGINEER TO USE BOLTS.

(1) REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

6

SDD 15C11 - 07a

CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

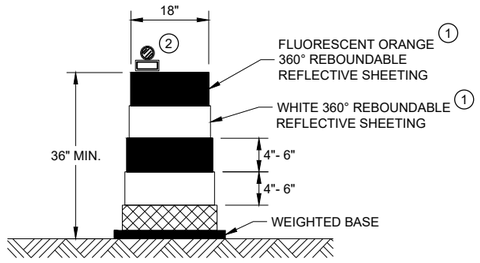
6

SDD 15C11 - 07a

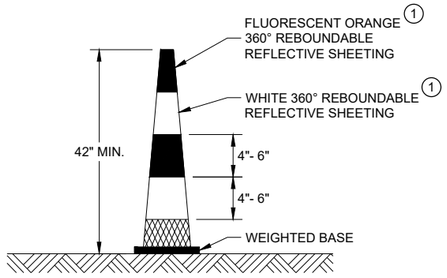
GENERAL NOTES

(1) REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

(2) LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.

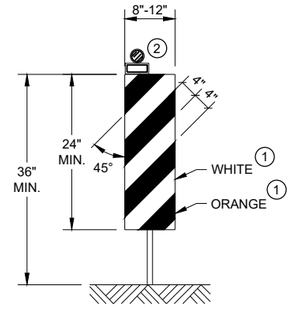


DRUM



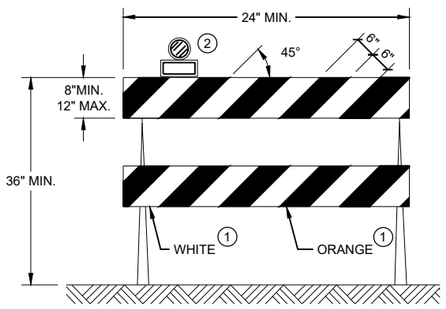
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



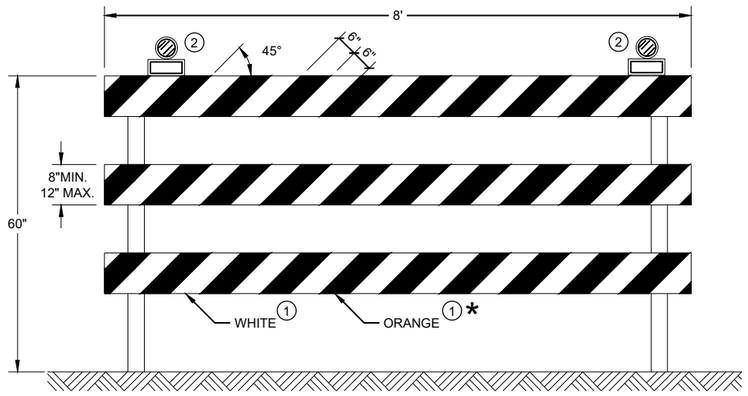
VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO
THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES
MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD
TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C11 - 07b
SDD 15C11 - 07b

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS, DEVICES, AND LOCATION OF ALL FLAGGERS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGING

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

(1) FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

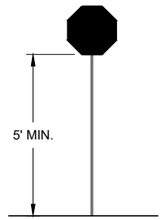
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FOR THE APPROVED PRODUCTS LIST.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.



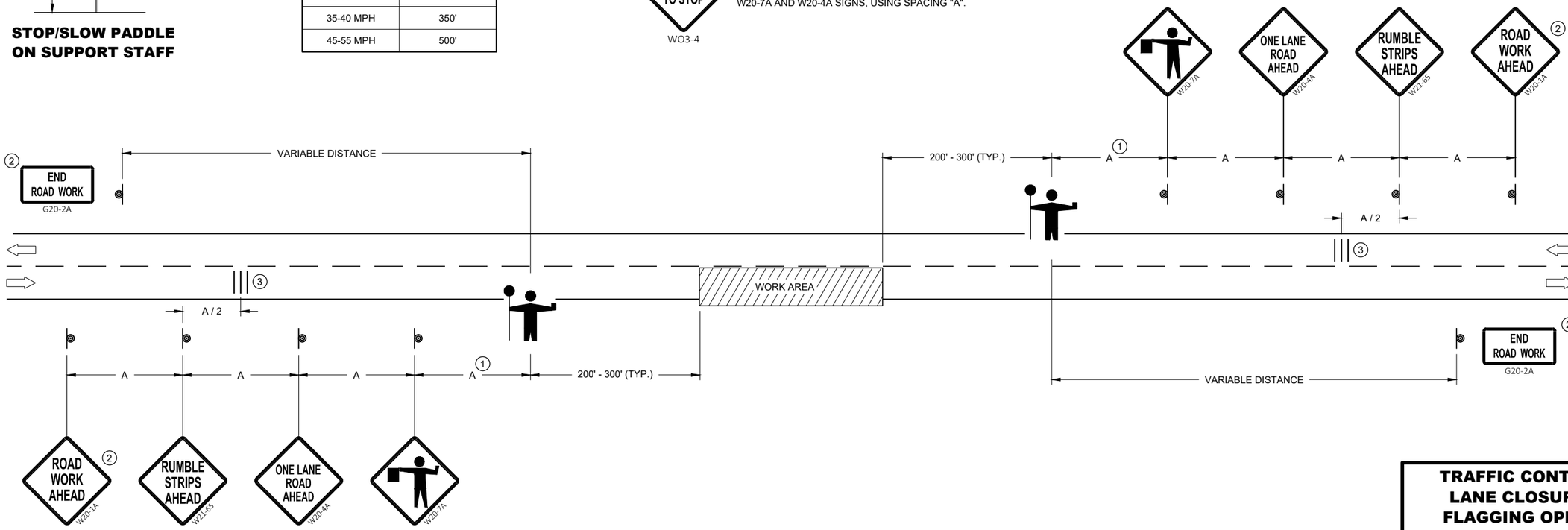
STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'

WO3-4

USE OF WO3-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE

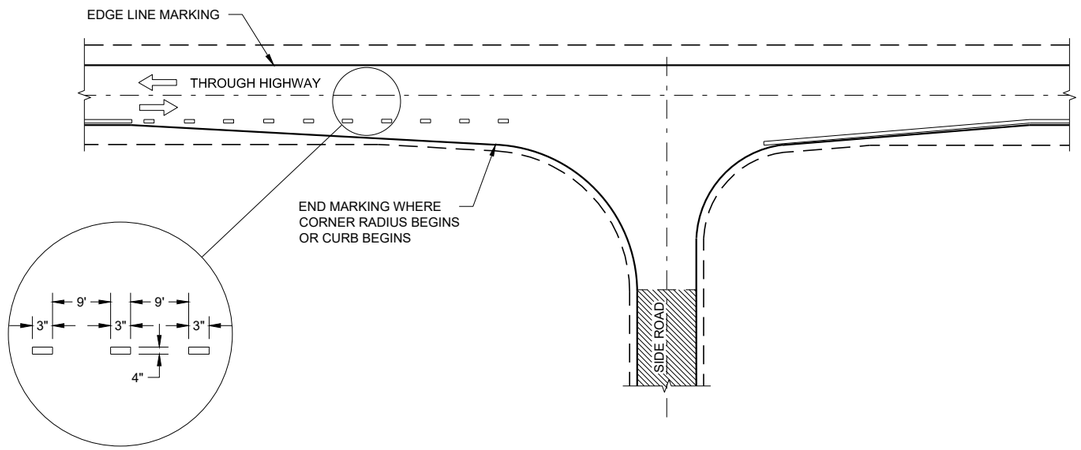
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15C12 - 07

SDD 15C12 - 07



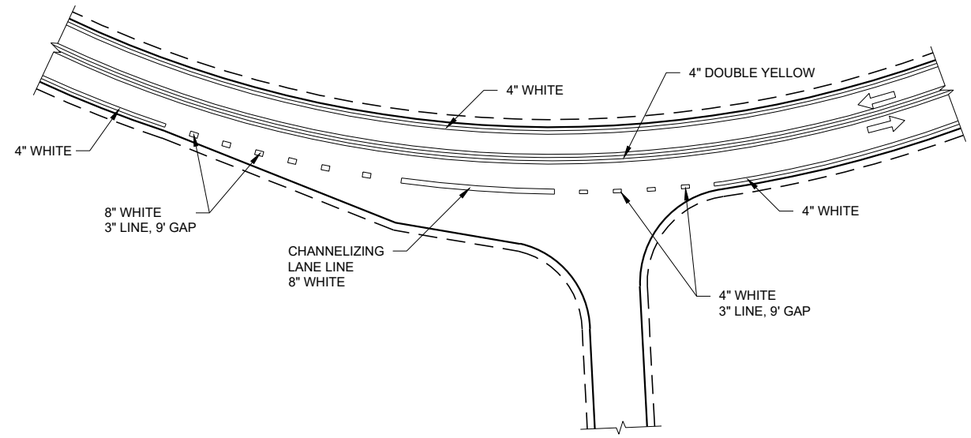
MINOR INTERSECTION

GENERAL NOTES

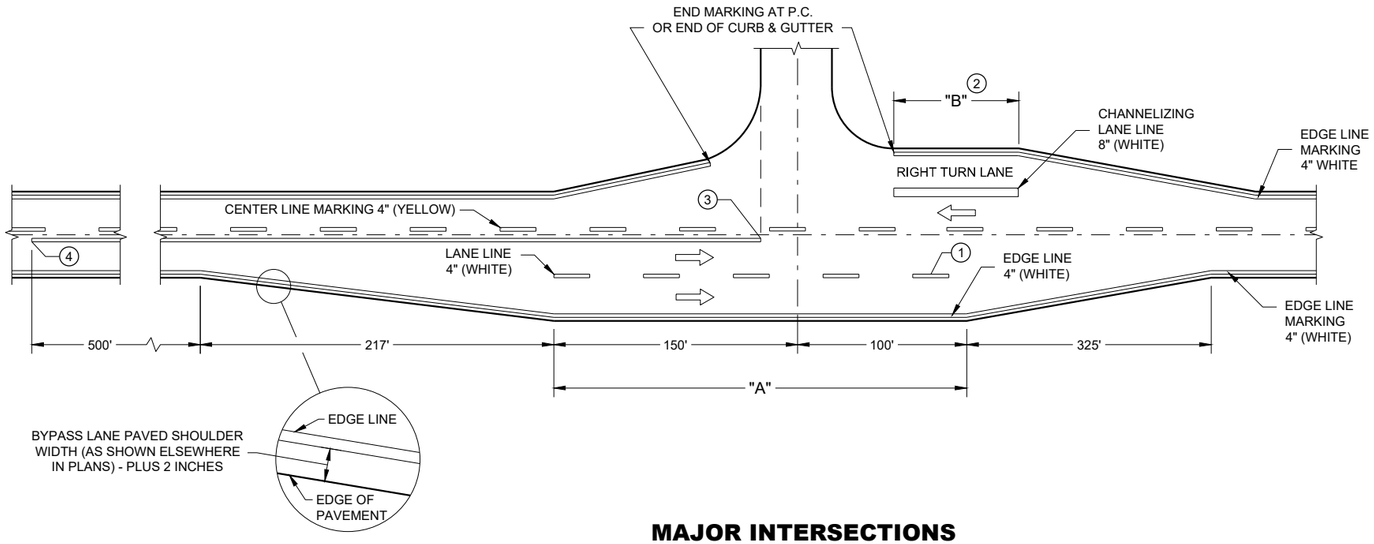
OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

1. WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
2. WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
3. BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
4. BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

PAVEMENT MARKING (INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15C35 - 03a
SDD 15C35 - 03a

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- DIRECTION OF TRAFFIC
- WORK ZONE

TABLE A

S \ W	4	6	8	10	BUFFER SPACE (FEET)
	SHOULDER TAPER LENGTH (FEET)				
30	20	30	40	50	200
35	30	45	55	70	250
40	40	55	75	90	305
45	60	90	120	150	360
50	70	100	135	170	425
55	75	110	150	185	495

W = SHOULDER WIDTH (FEET
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

TAPER LENGTH

L= WS AT 45 MPH OR GREATER
L = WS² / 60 AT 40 MPH OR LESS

SHOULDER TAPER LENGTH = 1/3L

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

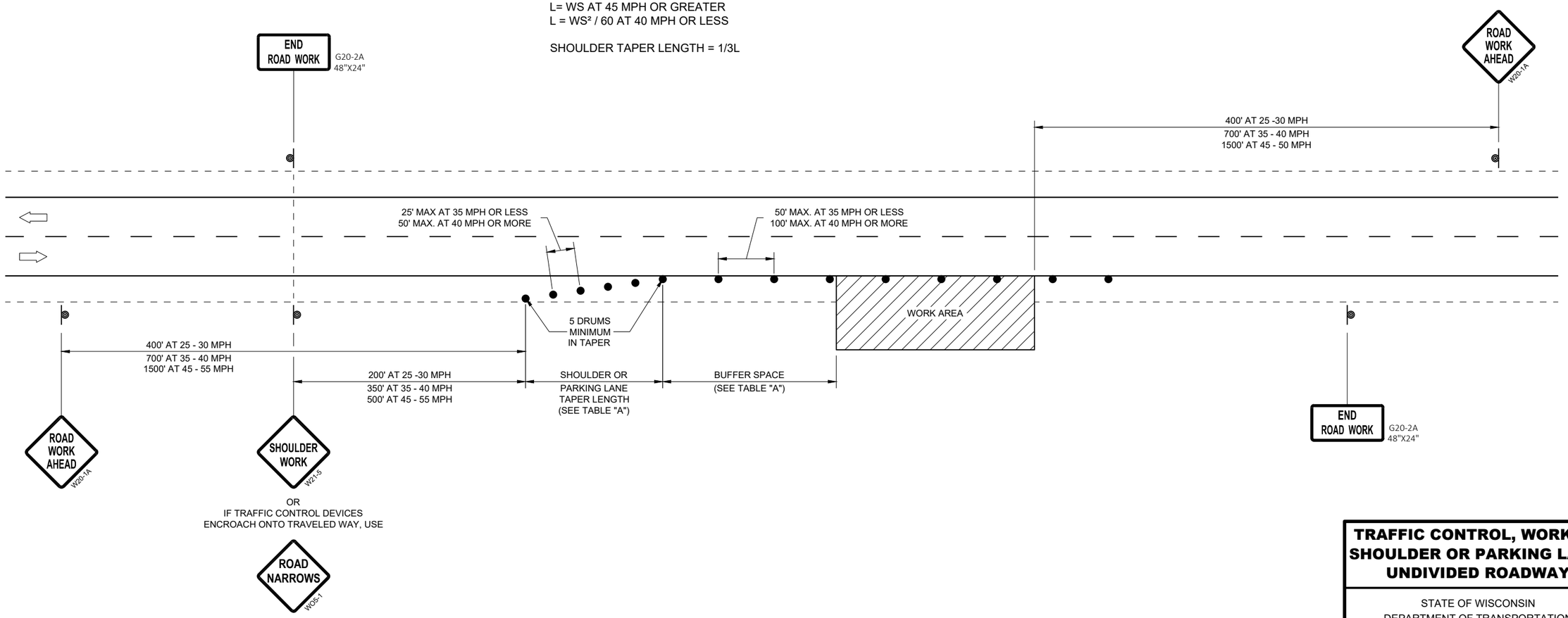
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY RESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

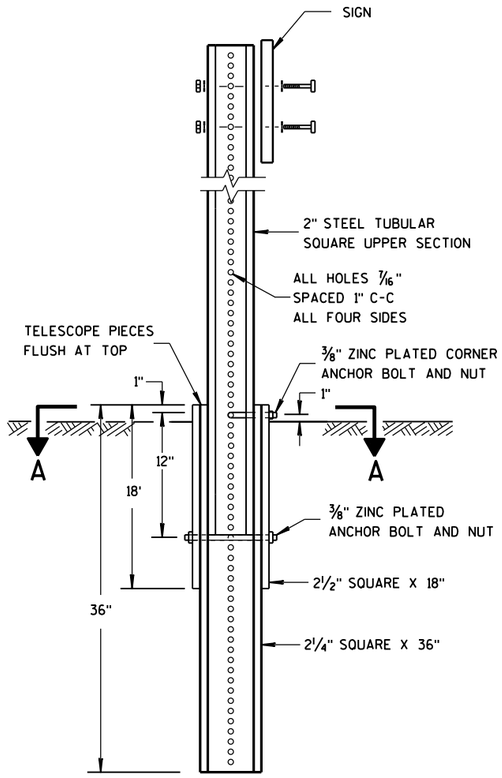


TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

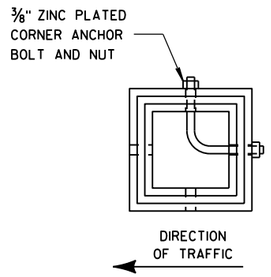
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2019 — DATE
/S/ Andrew Heidtke — STATEWIDE WORK ZONE T SAFETY ENGINEER
FHWA

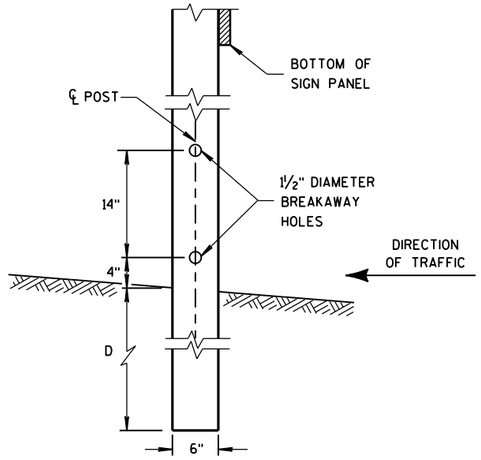
6
SDD 15D28 - 03



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



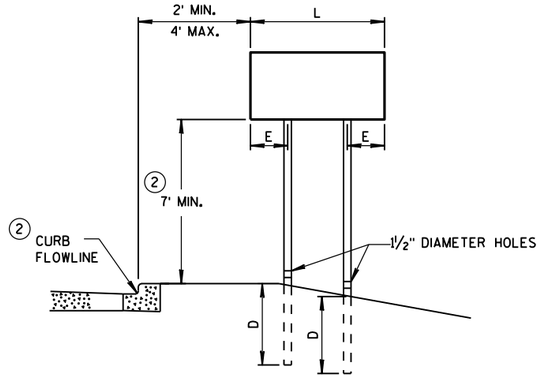
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

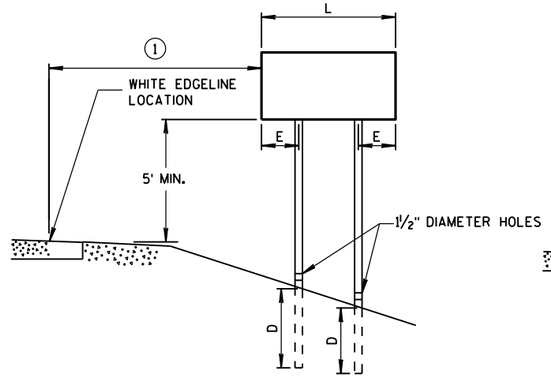
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

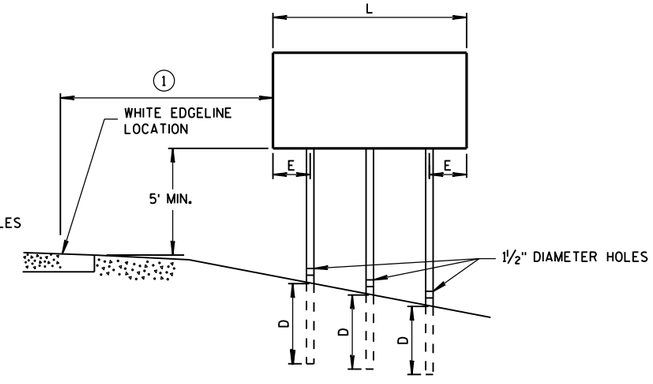
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'

4" X 6" WOOD POST

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

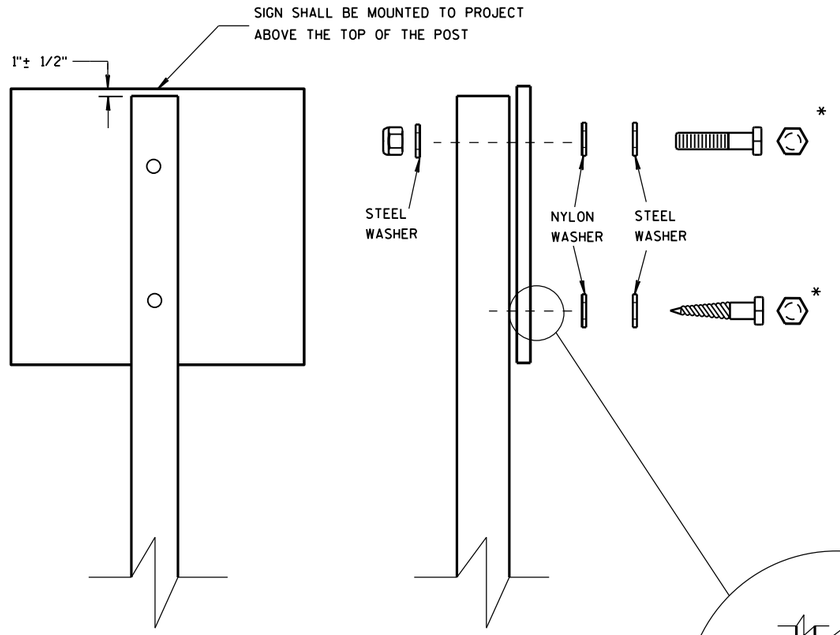
SEE NOTE (3)

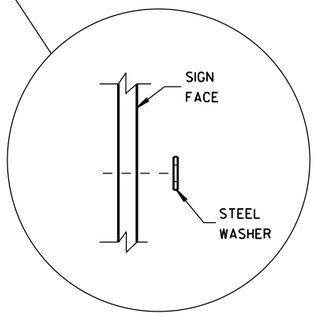
TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 15 D 38-2a





WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3

B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3"

MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON FOR ALL TYPE H SIGNS

* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

6

6

S.D.D. 15 D 38-2b

S.D.D. 15 D 38-2b

ATTACHMENT OF SIGNS TO POSTS

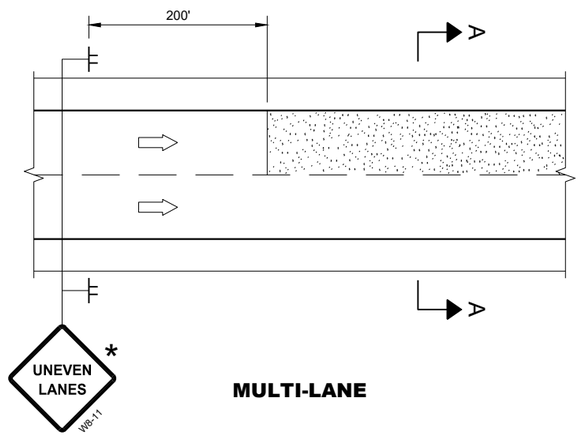
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

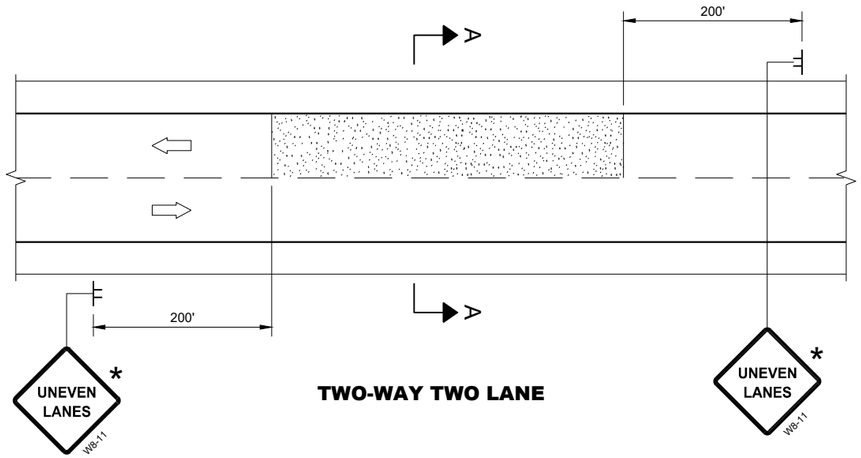
June 2017
DATE

/S/ Andrew Heldtke
WORK ZONE ENG

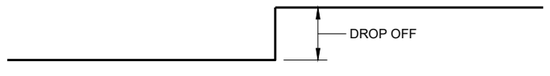
FHWA



MULTI-LANE

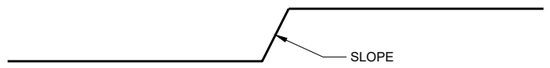


TWO-WAY TWO LANE

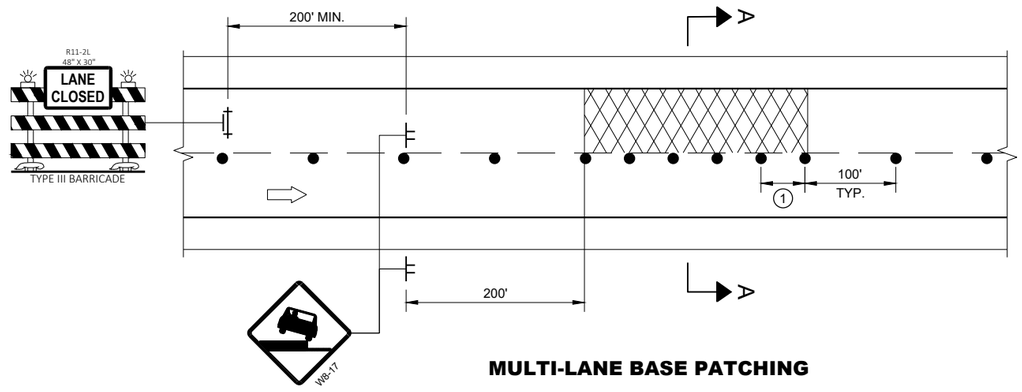


SECTION A - A

OR



SECTION A - A



MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS

GENERAL NOTES

FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

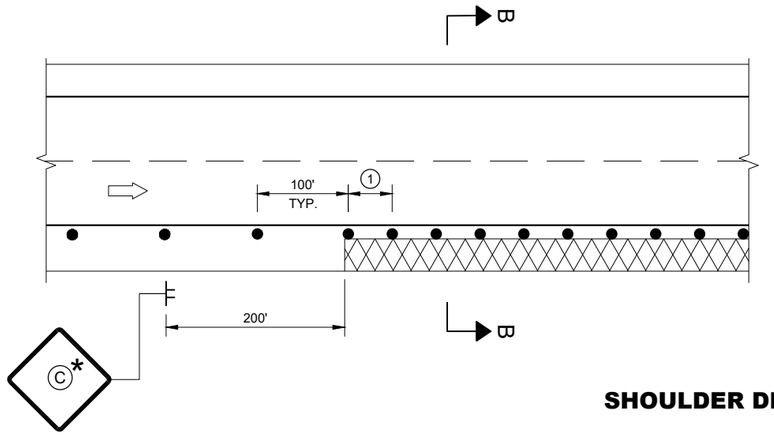
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

* IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.

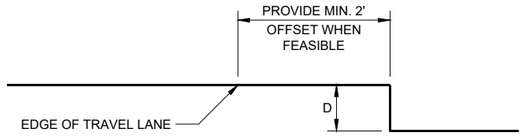
(1) USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE



SHOULDER DROP-OFFS



SECTION B - B

D	SIGN (C)
< 2" WITH A SLOPE STEEPER THAN 3:1	LOW SHOULDER WO8-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	SHOULDER DROP - OFF W8-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT

TRAFFIC CONTROL, DROP-OFF SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

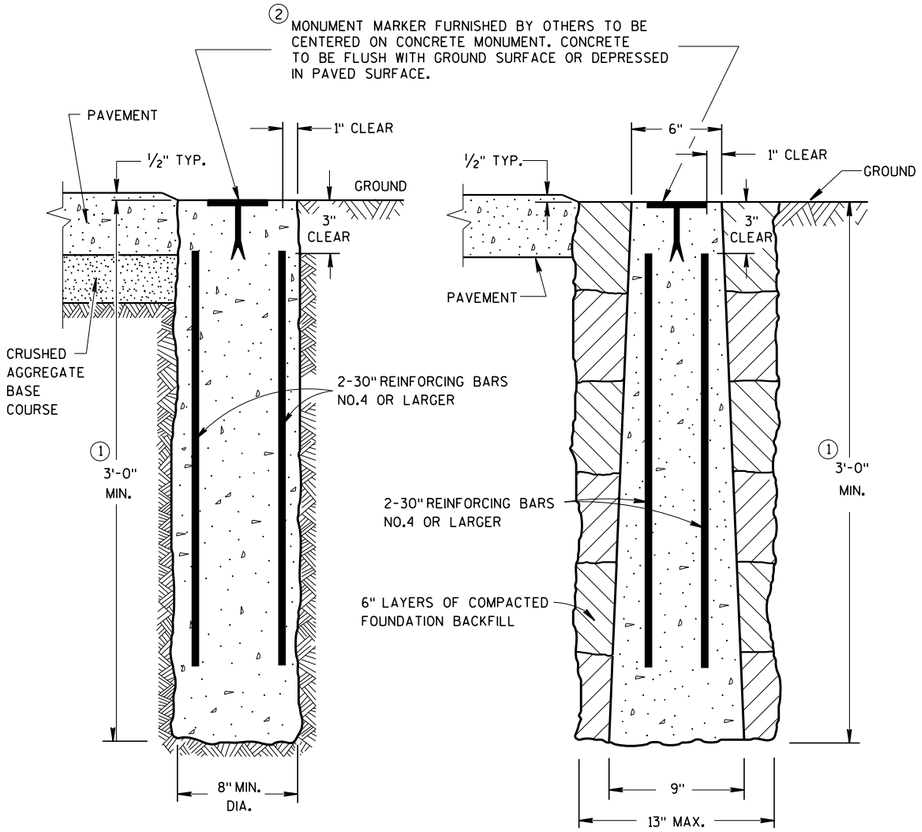
APPROVED
March 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D39 - 02

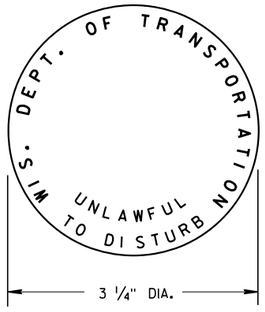


CAST-IN-PLACE

PRECAST

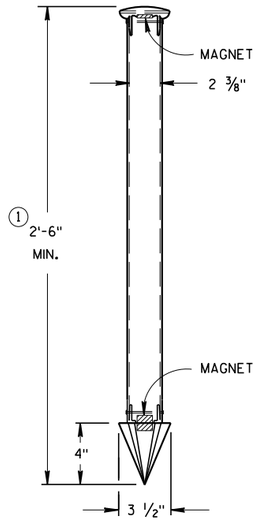
CONCRETE MONUMENTS

TYPE A



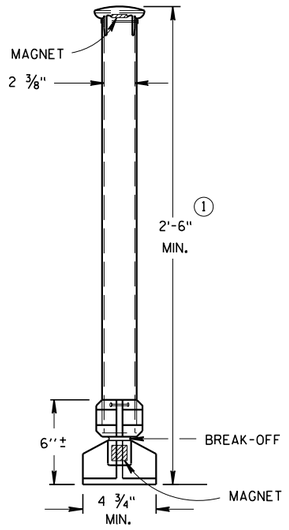
② **WIS DOT MONUMENT MARKER LOGO**

FOR TYPES "A", "C", & "D"



TYPE C

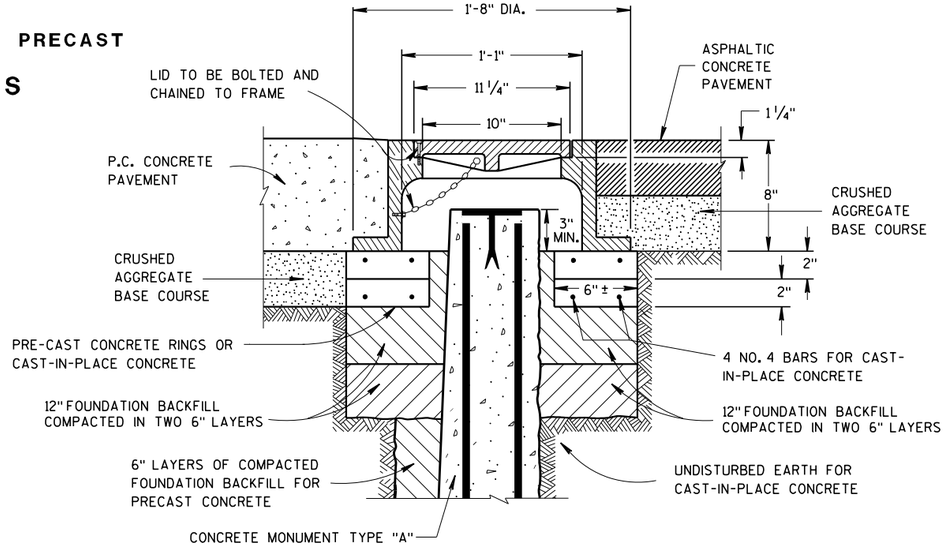
DRIVE-IN MONUMENT



TYPE D
NON-DRIVEN
BREAK-OFF MONUMENT

ALUMINUM MONUMENTS

(INCLUDES MARKER)



CAST IRON MONUMENT COVER

(APPROXIMATE WEIGHT 95 LBS)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAILED DRAWINGS OF PROPOSED ALTERNATE DESIGNS FOR METAL MONUMENTS OR MONUMENT COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

PERMANENT MAGNETS SHALL BE INSERTED NEAR THE TOP AND BOTTOM OF ALL ALUMINUM MONUMENTS SO THE MONUMENT CAN EASILY BE DETECTED BY A METAL DETECTOR.

THE CAST IRON MONUMENT COVER SHALL BE A "NON-ROCKING" TYPE. ADJUSTMENT OF THE COVER TO GRADE MAY BE ACCOMPLISHED BY THE USE OF MORTAR AND BRICK, OR BY EITHER PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE GRADE RINGS.

MONUMENTS SHALL BE LOCATED AND PLACED AT THE DIRECTION OF THE ENGINEER.

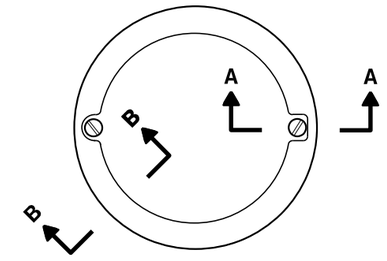
ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.

THE MONUMENT COVERS DETAILED ON THIS DRAWING ARE NOT EQUAL ALTERNATES. MONUMENT COVERS SHALL BE CAST IRON UNLESS ALUMINUM IS SPECIFIED ELSEWHERE IN THE CONTRACT.

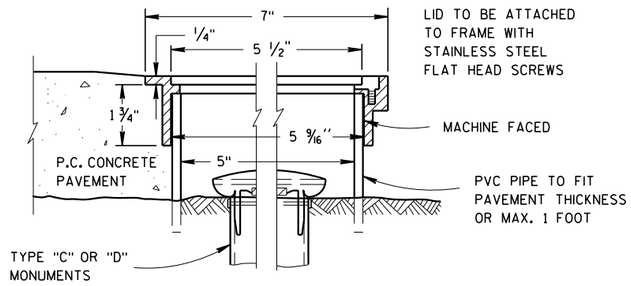
MONUMENT SHALL BE CAST-IN-PLACE CONCRETE UNLESS PRECAST CONCRETE OR ALUMINUM MONUMENTS ARE SPECIFIED IN THE CONTRACT OR PERMITTED BY THE ENGINEER

① MINIMUM LENGTH SHALL BE 4'-0" FOR MONUMENTS INSTALLED IN PAVED AREAS.

② AN OFFICIAL COUNTY MONUMENT MARKER SUPPLIED BY A COUNTY MAY BE REQUIRED FOR SOME SECTION CORNERS AND WITNESS MONUMENTS INSTEAD OF THIS WIS DOT MARKER.



TOP VIEW



SECTION B-B SECTION A-A

ALUMINUM MONUMENT COVER

(APPROXIMATE WEIGHT 2 LBS)
(FOR CONCRETE PAVEMENT ONLY)

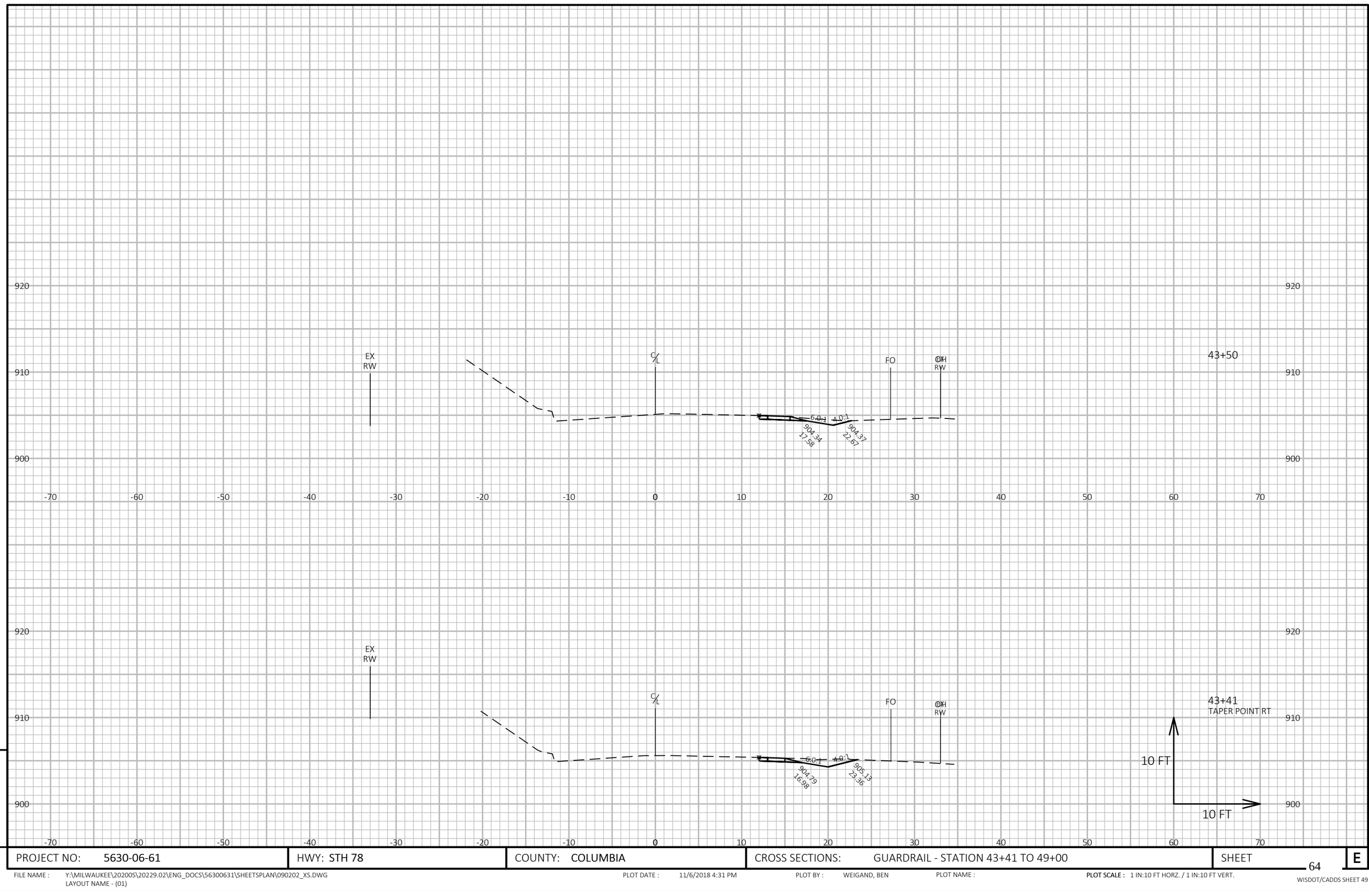
LANDMARK REFERENCE MONUMENTS AND COVERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Raymond A. Kumagai — CHIEF SURVEYING AND MAPPING ENGINEER
FHWA

6

S.D.D. 16 A 1-7



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PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	CROSS SECTIONS: GUARDRAIL - STATION 43+41 TO 49+00	SHEET 64	E

FILE NAME : Y:\MILWAUKEE\20200S\20229.02\ENG_DOCS\56300631\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - (01)

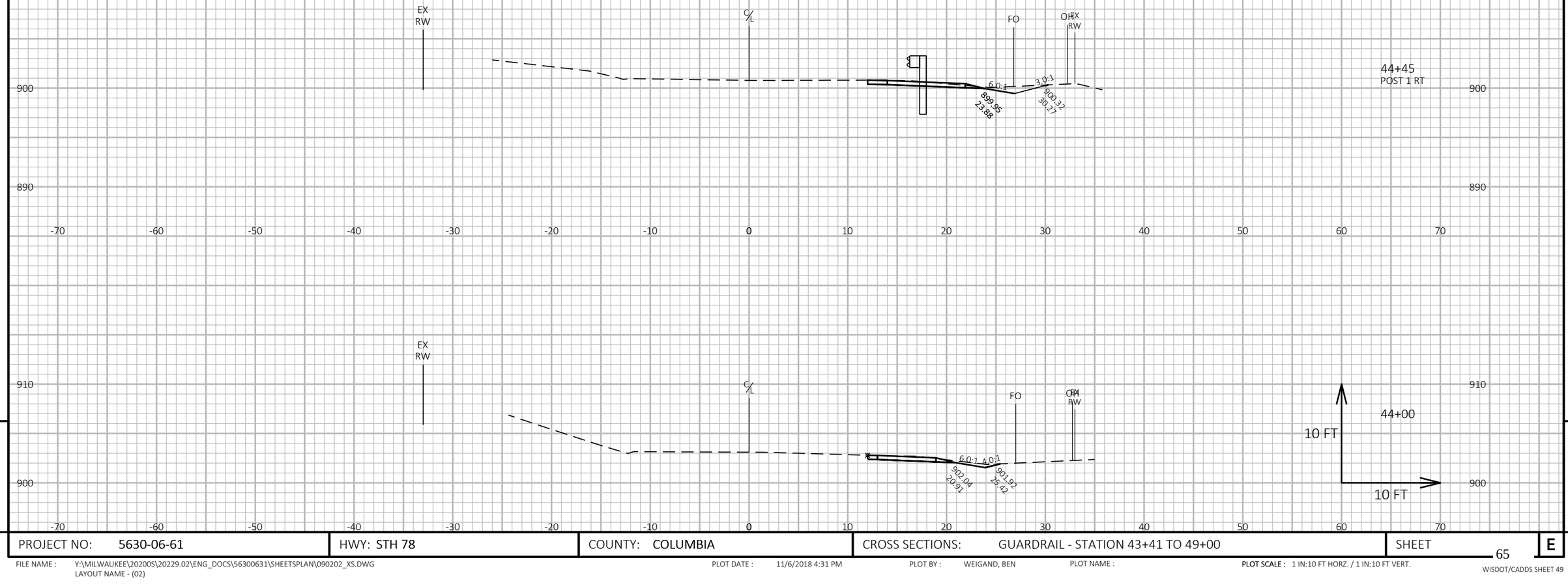
PLOT DATE : 11/6/2018 4:31 PM

PLOT BY : WEIGAND, BEN

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

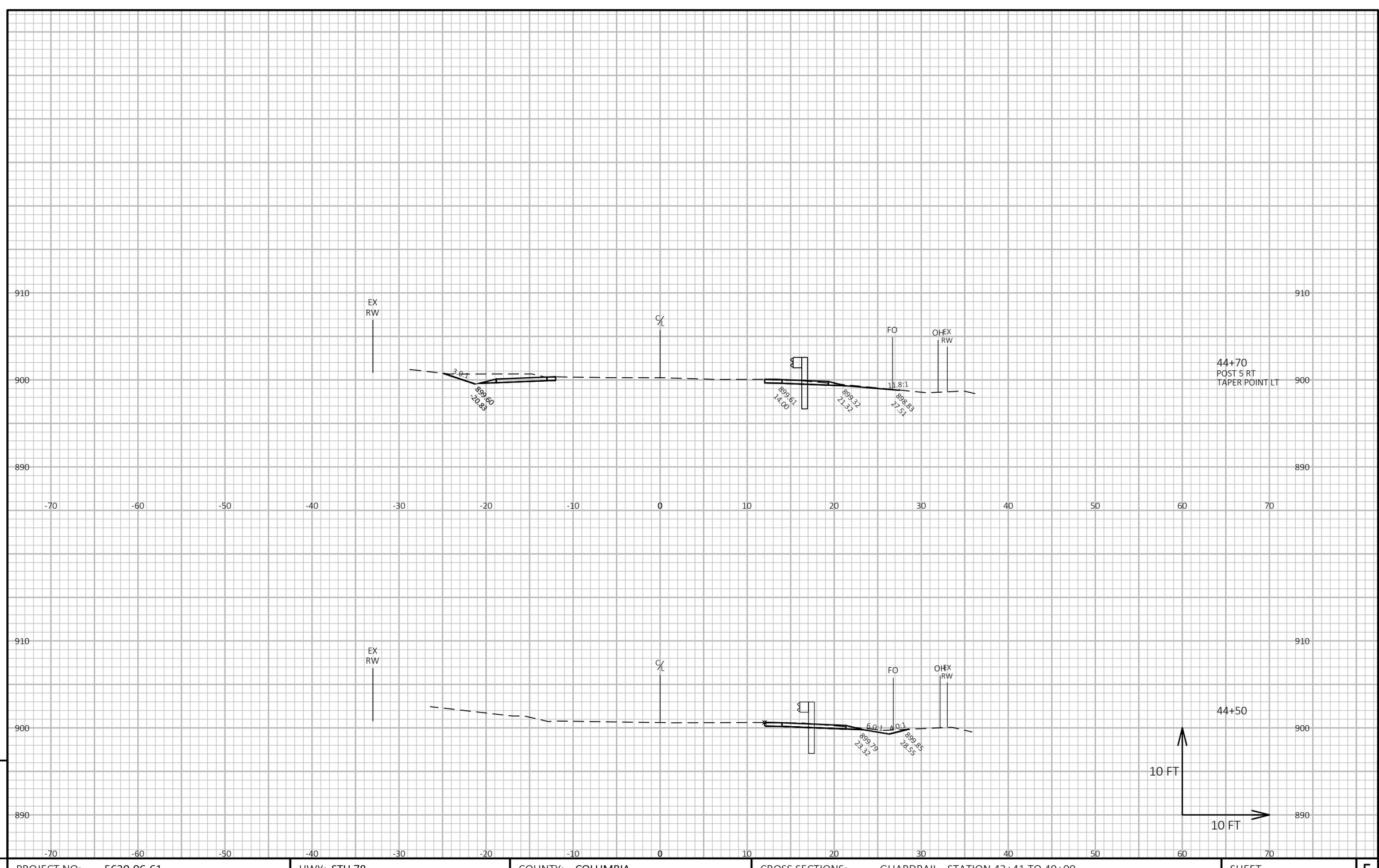


PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	CROSS SECTIONS: GUARDRAIL - STATION 43+41 TO 49+00	SHEET 65	E

FILE NAME : Y:\MILWAUKEE\20200S\20229.02\ENG_DOCS\56300631\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - (02)

PLOT DATE : 11/6/2018 4:31 PM PLOT BY : WEIGAND, BEN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	CROSS SECTIONS: GUARDRAIL - STATION 43+41 TO 49+00	SHEET	E

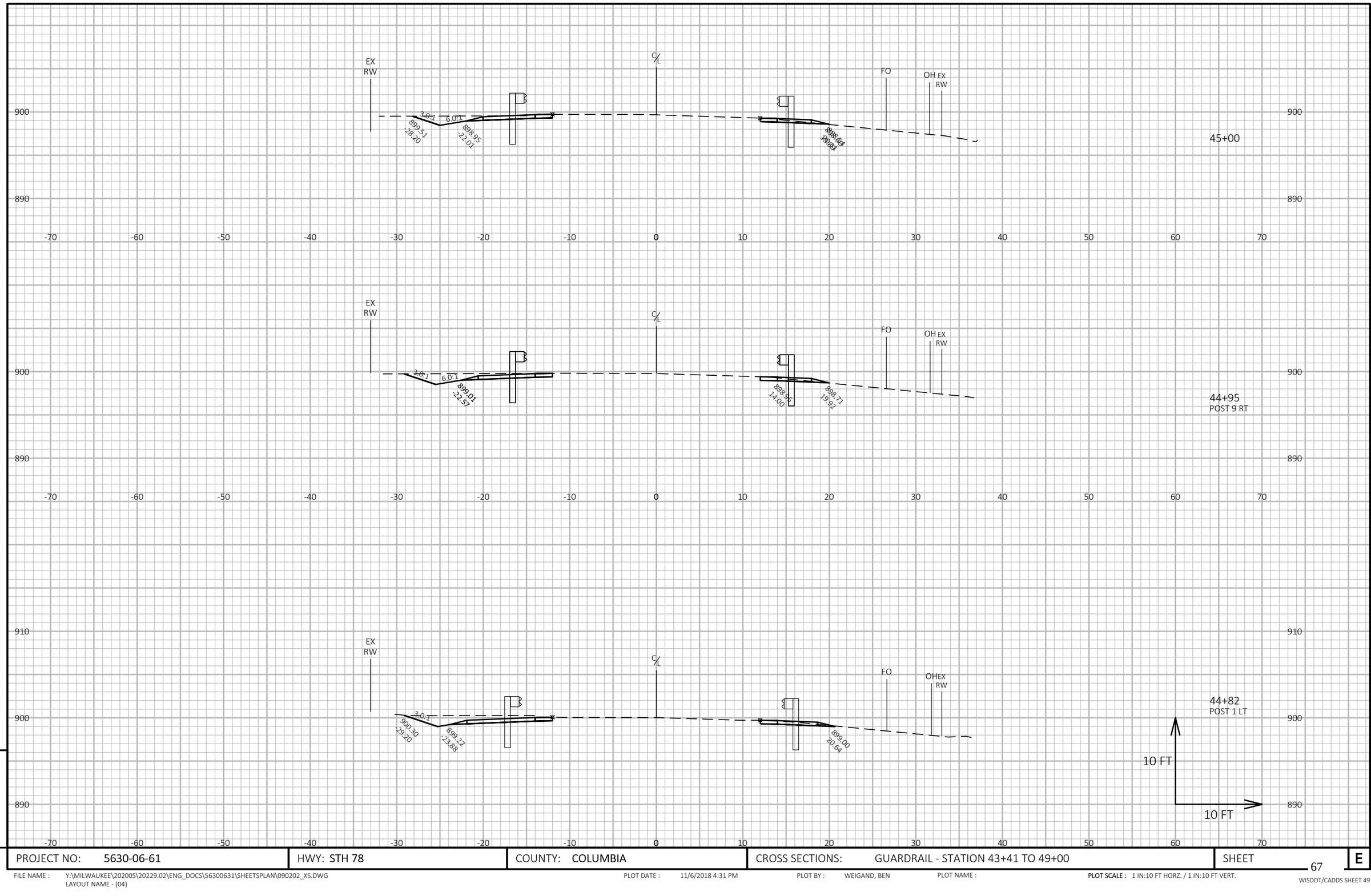
FILE NAME : Y:\MILWAUKEE\20200S\20229.02\ENG_DOCS\56300631\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - (03)

PLOT DATE : 11/6/2018 4:31 PM

PLOT BY : WEIGAND, BEN

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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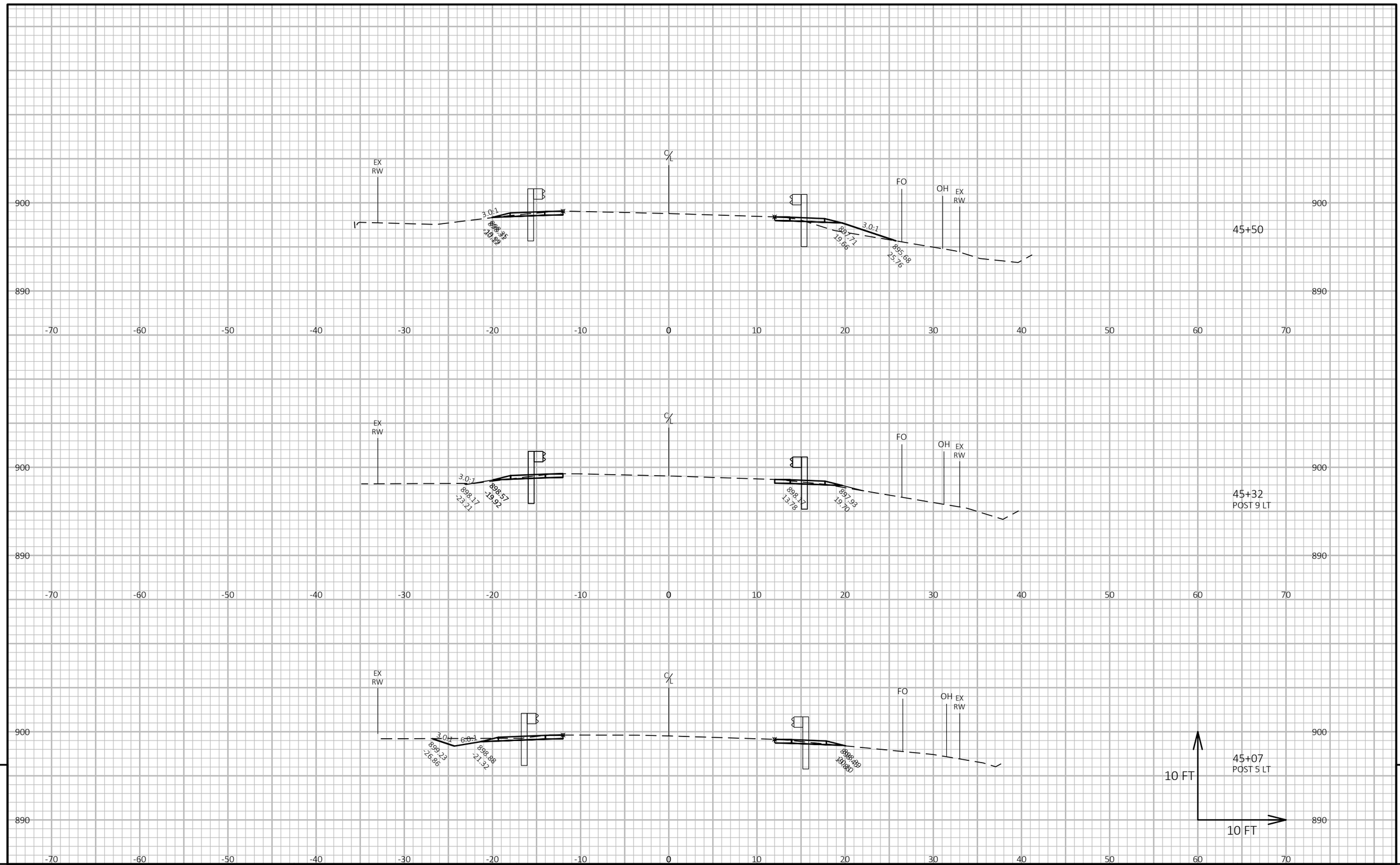
PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	CROSS SECTIONS: GUARDRAIL - STATION 43+41 TO 49+00	SHEET 67	E

FILE NAME : Y:\MILWAUKEE\20200S\20229.02\ENG_DOCS\56300631\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - (04)

PLOT DATE : 11/6/2018 4:31 PM PLOT BY : WEIGAND, BEN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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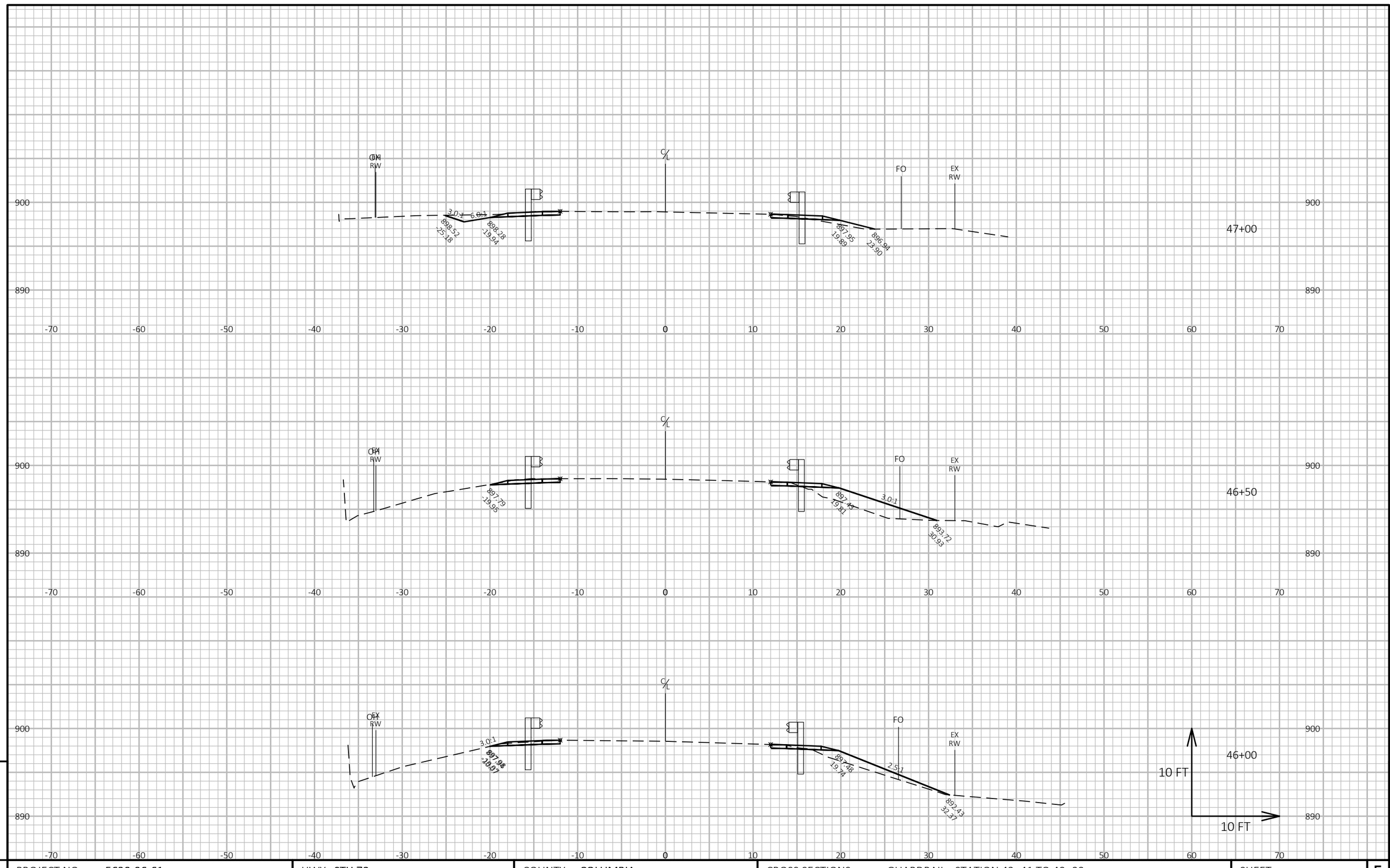
PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	CROSS SECTIONS: GUARDRAIL - STATION 43+41 TO 49+00	SHEET 68	E

FILE NAME : Y:\MILWAUKEE\20200S\20229.02\ENG_DOCS\56300631\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - (05)
PLOT DATE : 11/6/2018 4:31 PM
PLOT BY : WEIGAND, BEN
PLOT NAME :
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.
WISDOT/CADDS SHEET 49



PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	CROSS SECTIONS: GUARDRAIL - STATION 43+41 TO 49+00	SHEET 69 E

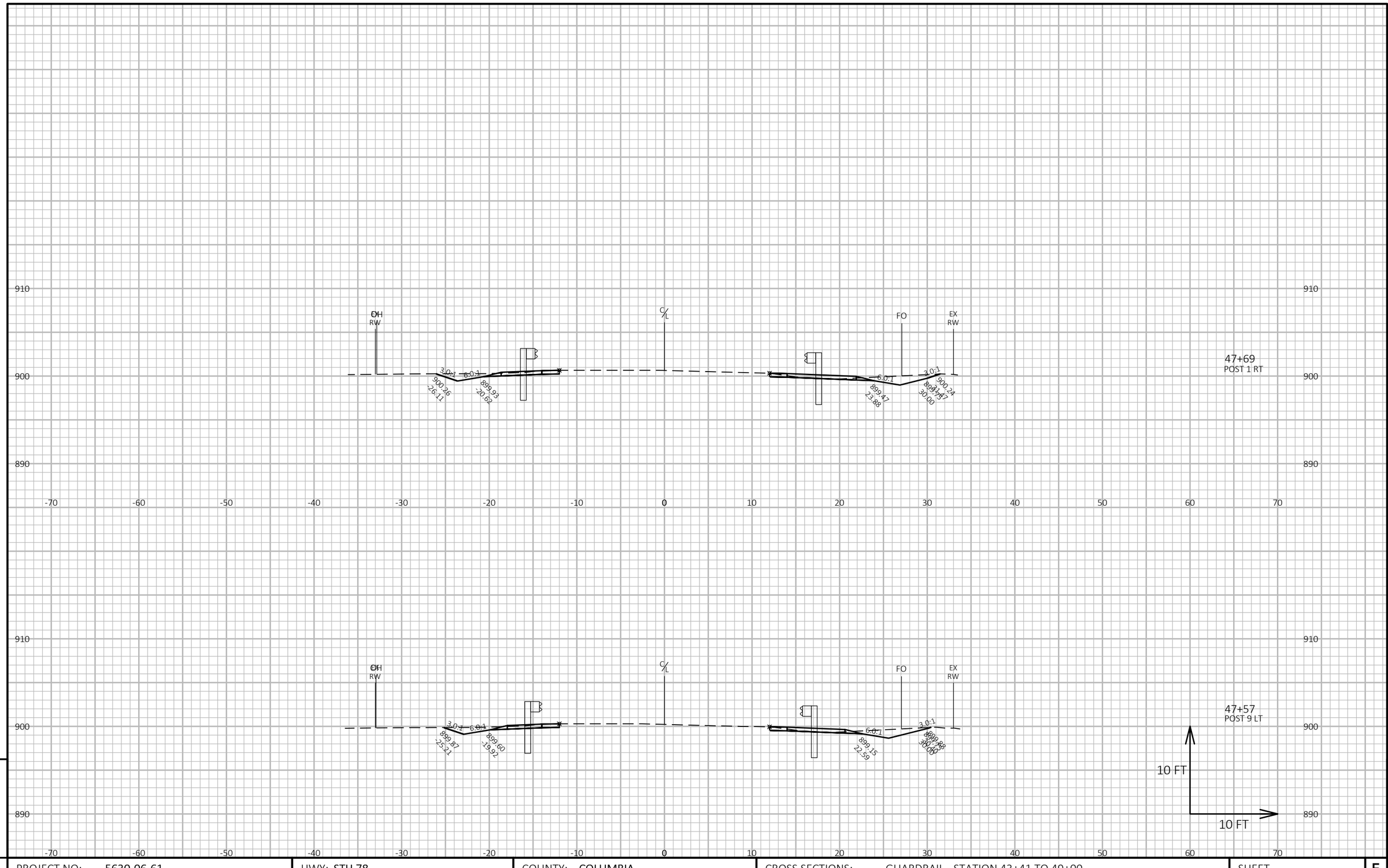
FILE NAME : Y:\MILWAUKEE\20200S\20229.02\ENG_DOCS\56300631\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - (06)

PLOT DATE : 11/6/2018 4:31 PM PLOT BY : WEIGAND, BEN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	CROSS SECTIONS: GUARDRAIL - STATION 43+41 TO 49+00	SHEET 70	E

FILE NAME : Y:\MILWAUKEE\20200S\20229.02\ENG_DOCS\56300631\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - (07)
PLOT DATE : 11/6/2018 4:31 PM
PLOT BY : WEIGAND, BEN
PLOT NAME :
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.
WISDOT/CADDS SHEET 49



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PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	CROSS SECTIONS: GUARDRAIL - STATION 43+41 TO 49+00	SHEET 71	E

FILE NAME : Y:\MILWAUKEE\20200S\20229.02\ENG_DOCS\56300631\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - (08)

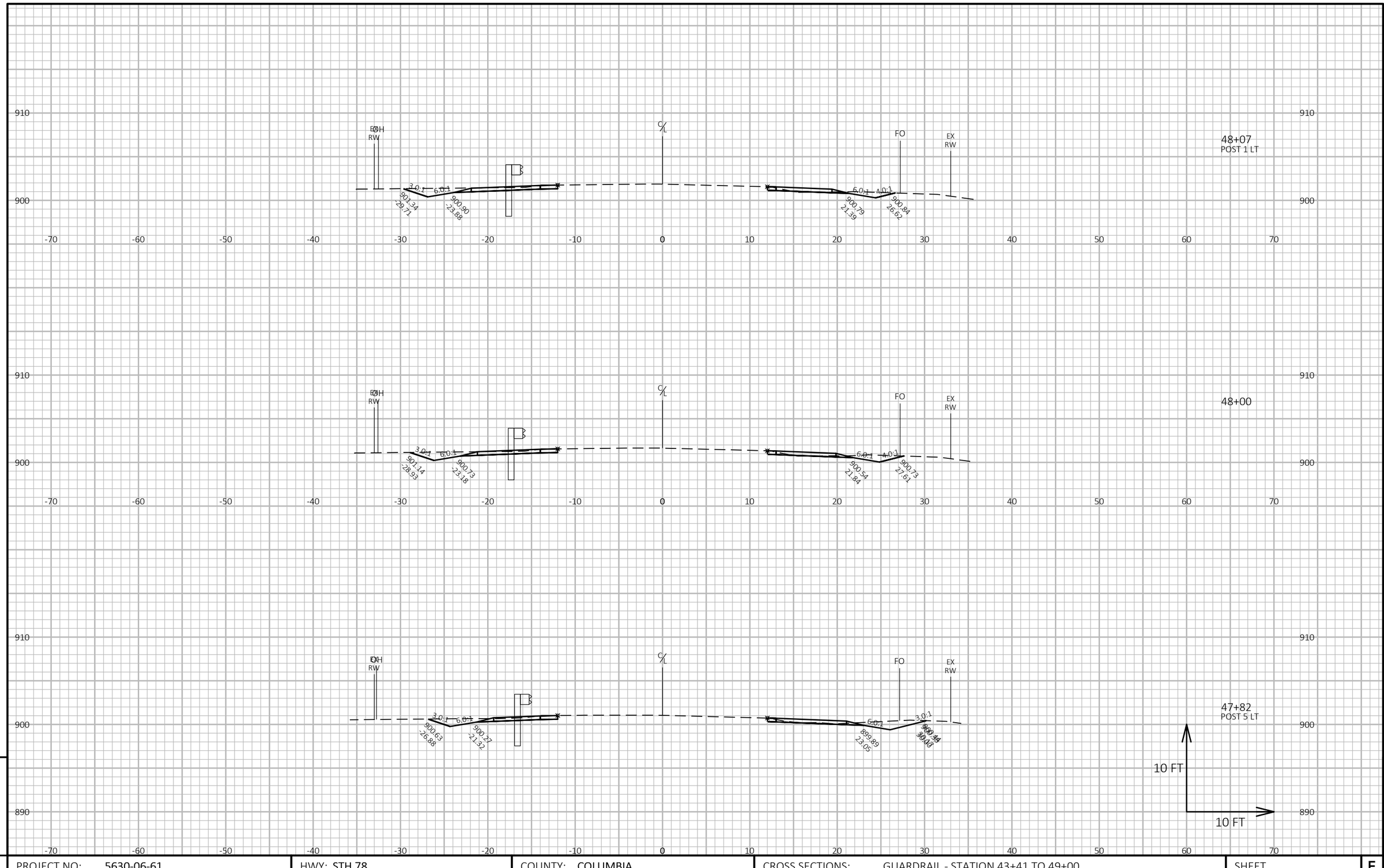
PLOT DATE : 11/6/2018 4:31 PM

PLOT BY : WEIGAND, BEN

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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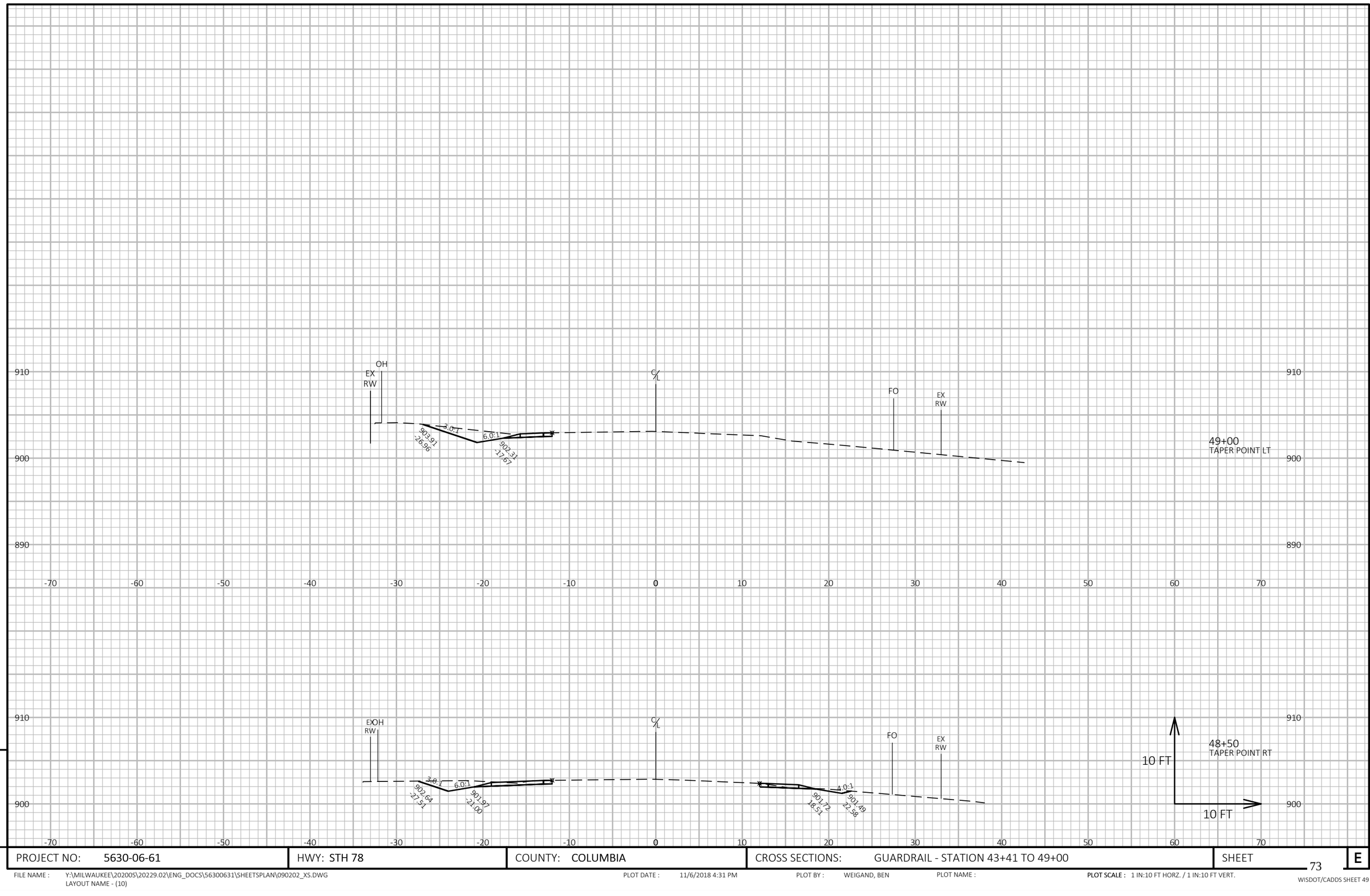
PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	CROSS SECTIONS: GUARDRAIL - STATION 43+41 TO 49+00	SHEET 72	E



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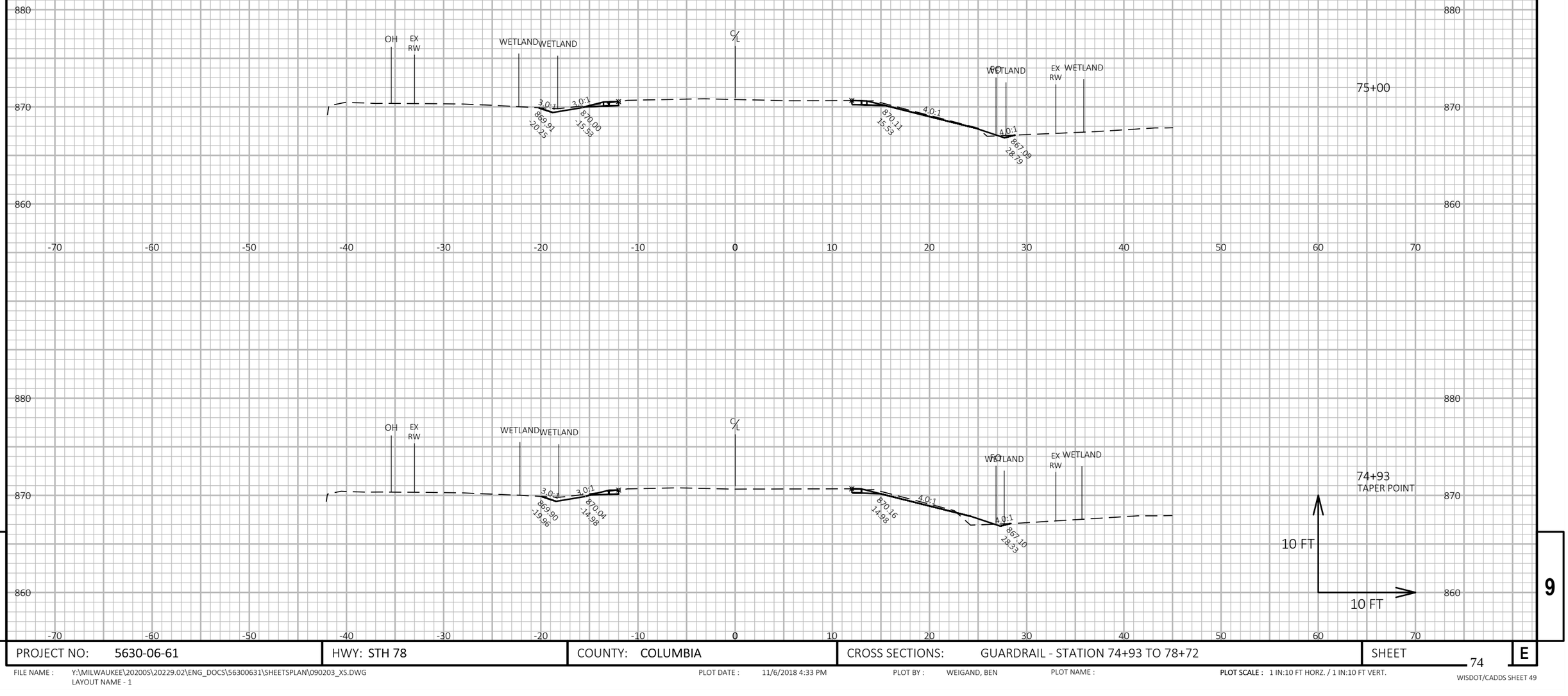
PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	CROSS SECTIONS: GUARDRAIL - STATION 43+41 TO 49+00	SHEET 73	E

FILE NAME : Y:\MILWAUKEE\20200S\20229.02\ENG_DOCS\56300631\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - (10)

PLOT DATE : 11/6/2018 4:31 PM PLOT BY : WEIGAND, BEN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	CROSS SECTIONS: GUARDRAIL - STATION 74+93 TO 78+72	SHEET 74	E

FILE NAME : Y:\MILWAUKEE\20200S\20229.02\ENG_DOCS\56300631\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 1

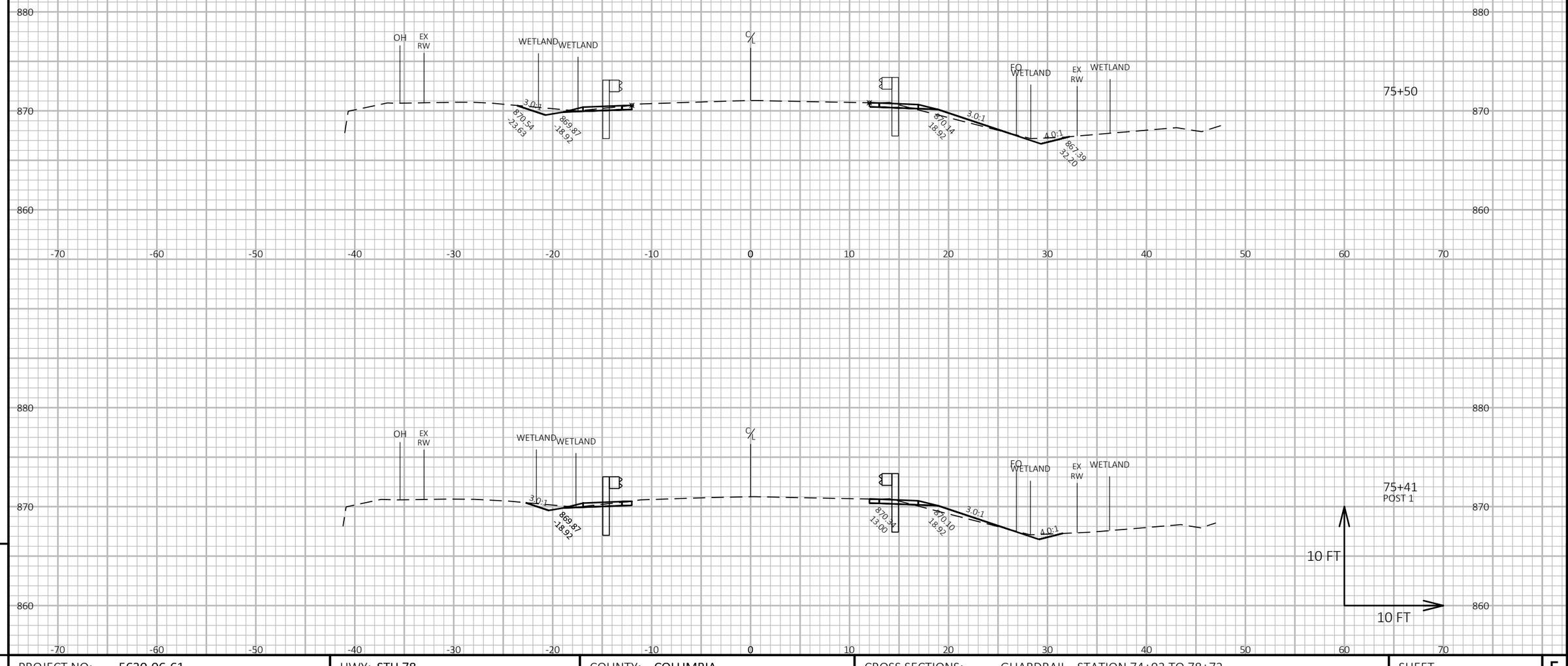
PLOT DATE : 11/6/2018 4:33 PM

PLOT BY : WEIGAND, BEN

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	CROSS SECTIONS: GUARDRAIL - STATION 74+93 TO 78+72	SHEET 75	E

FILE NAME : Y:\MILWAUKEE\20200S\20229.02\ENG_DOCS\56300631\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 2

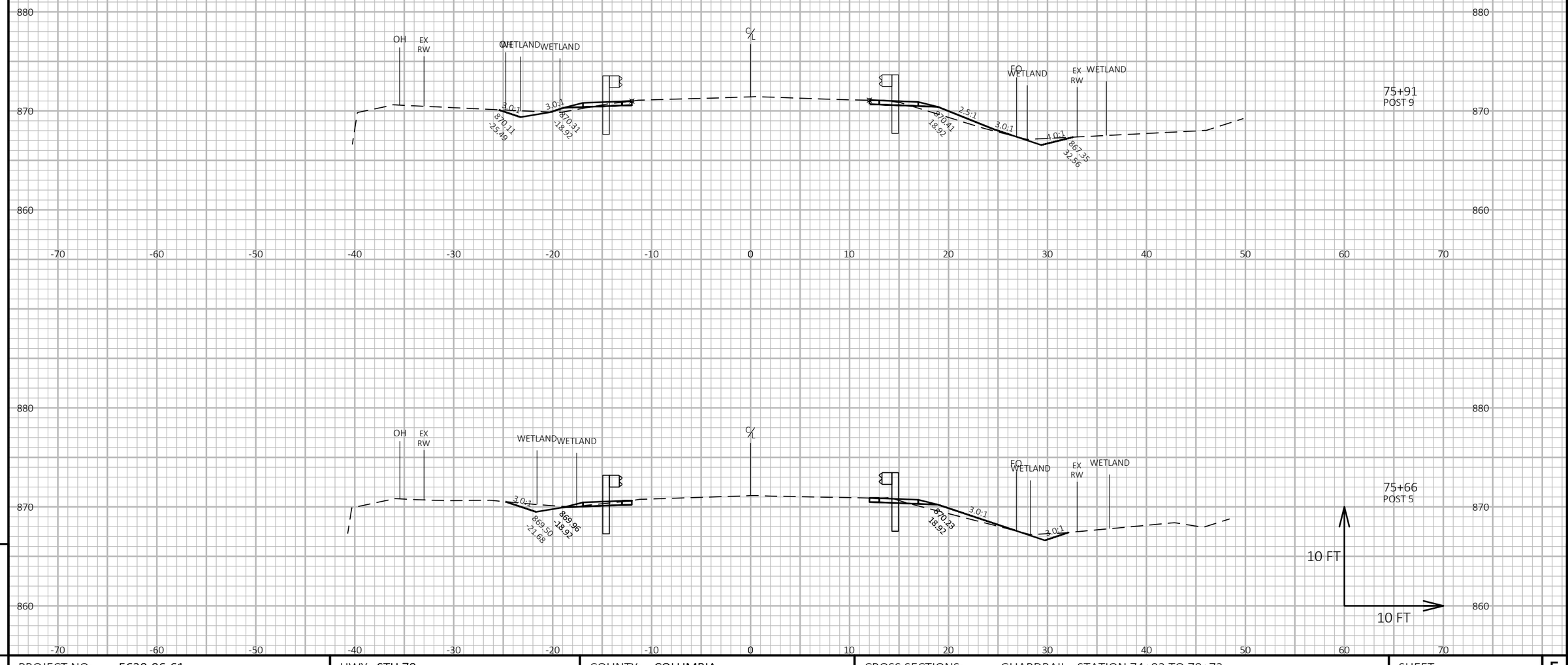
PLOT DATE : 11/6/2018 4:33 PM

PLOT BY : WEIGAND, BEN

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	CROSS SECTIONS: GUARDRAIL - STATION 74+93 TO 78+72	SHEET 76	E

FILE NAME : Y:\MILWAUKEE\20200S\20229.02\ENG_DOCS\56300631\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 3

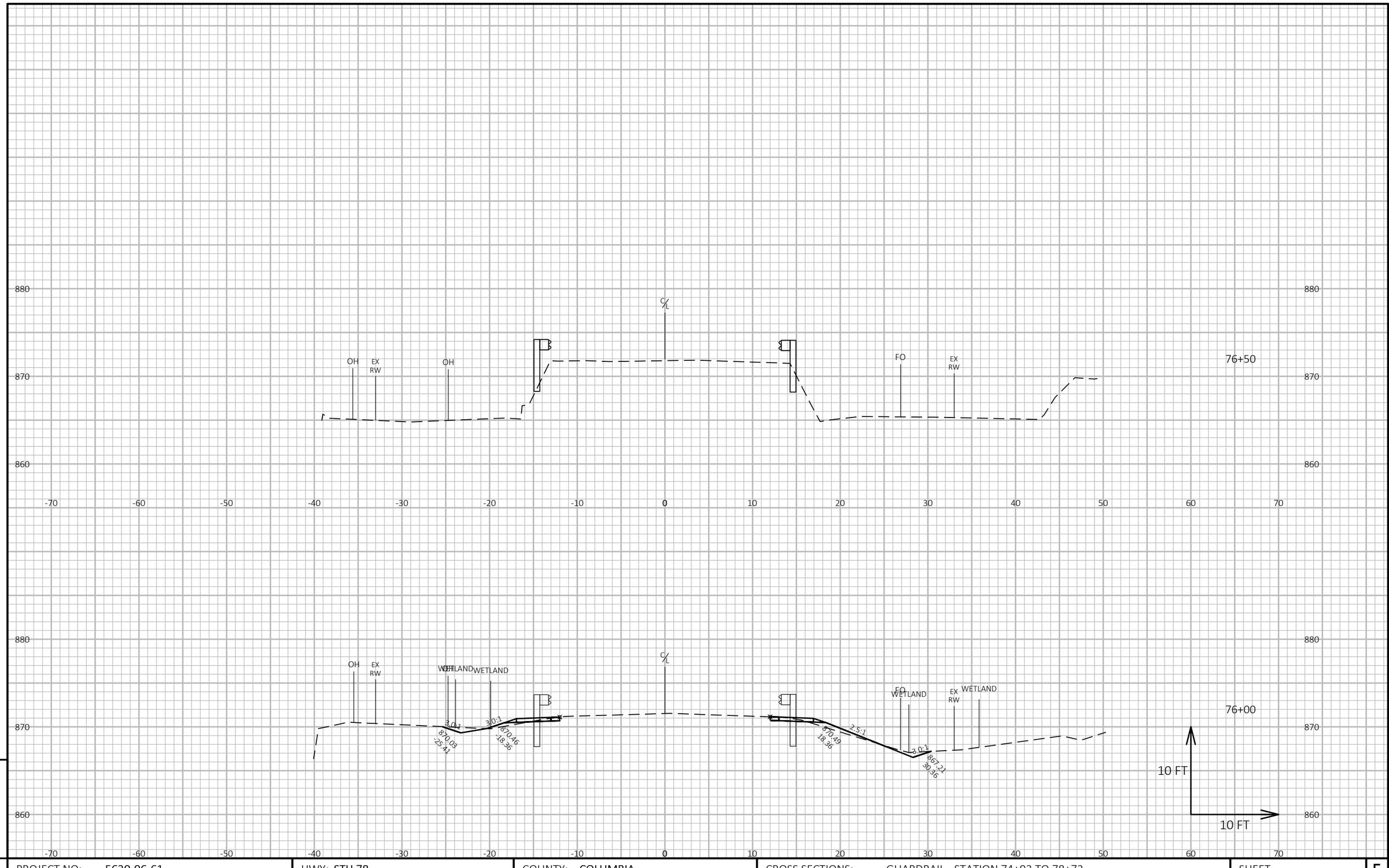
PLOT DATE : 11/6/2018 4:33 PM

PLOT BY : WEIGAND, BEN

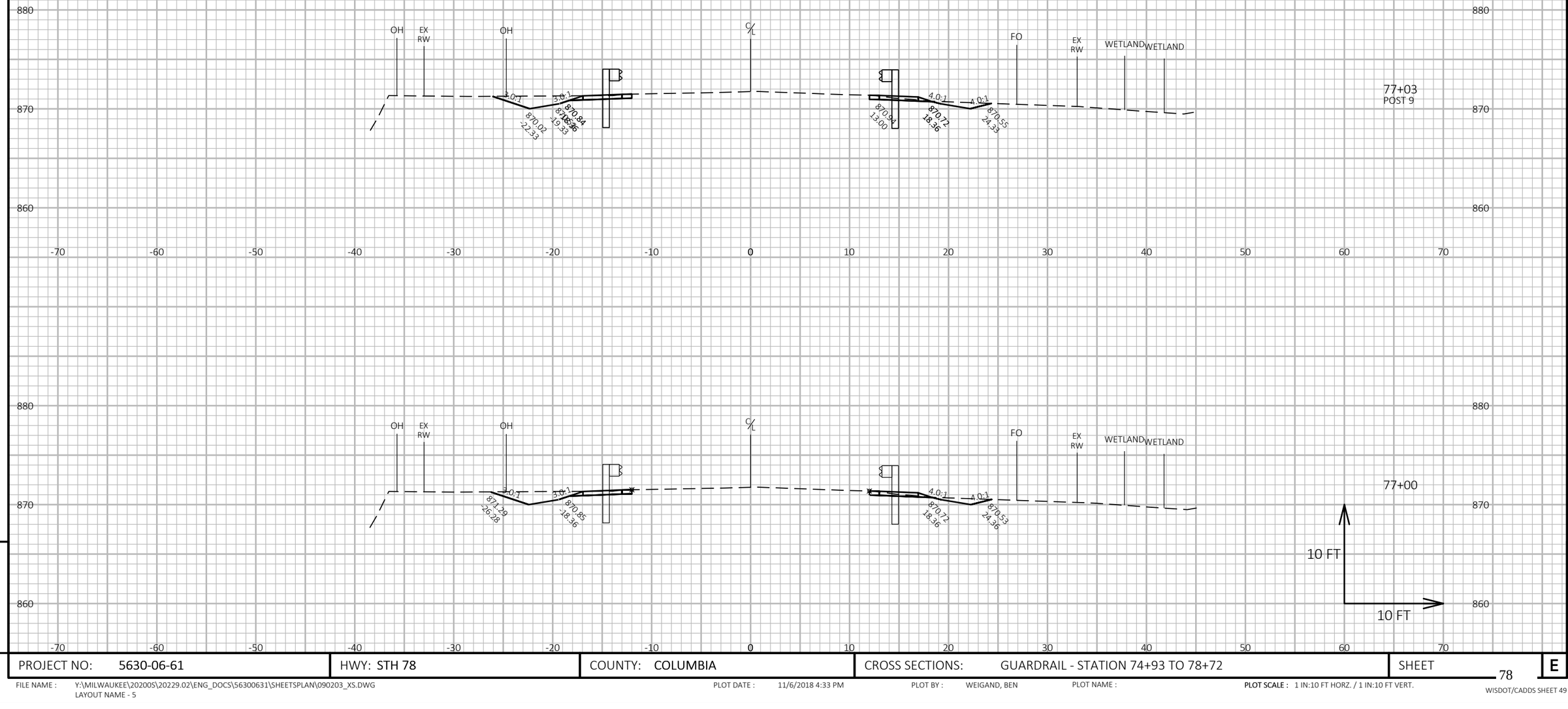
PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	CROSS SECTIONS: GUARDRAIL - STATION 74+93 TO 78+72	SHEET 77



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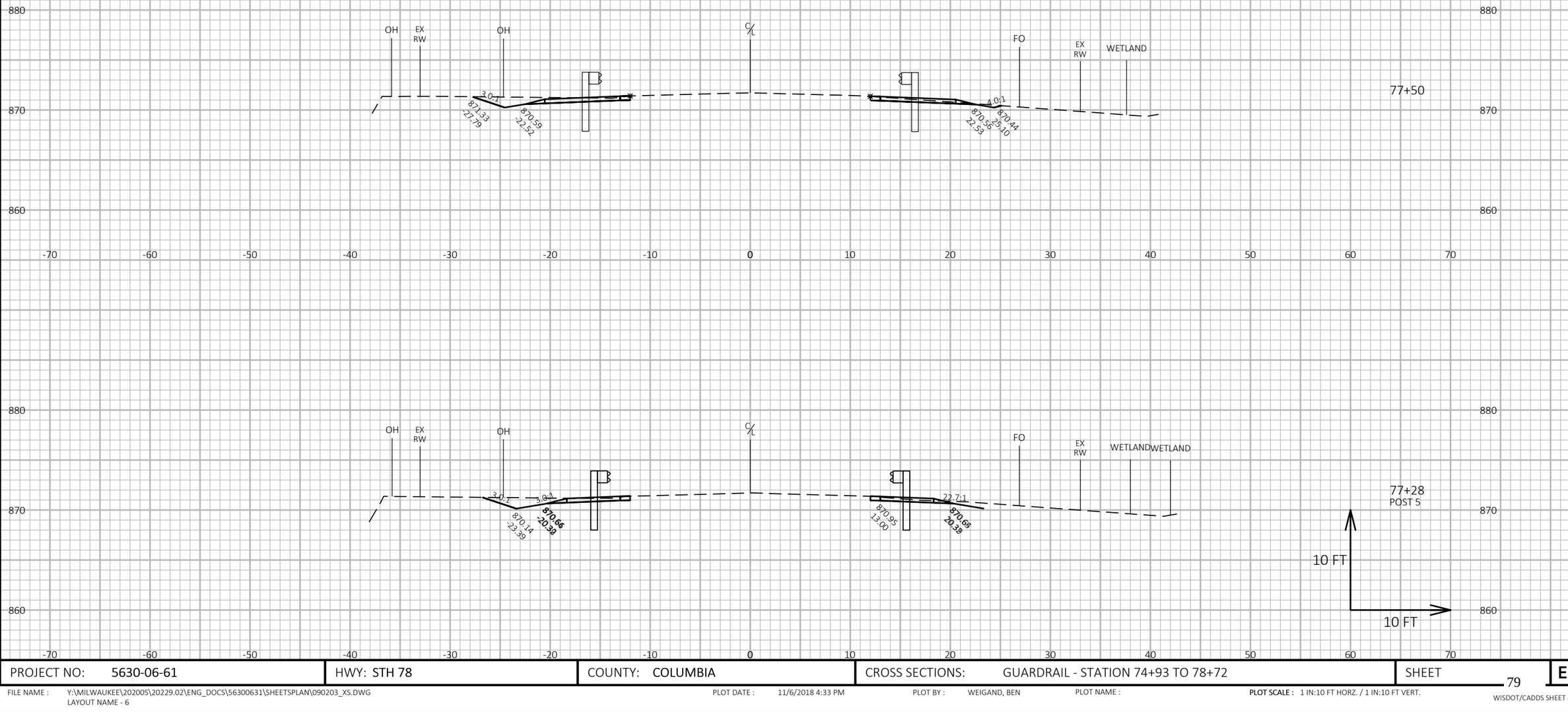
PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	CROSS SECTIONS: GUARDRAIL - STATION 74+93 TO 78+72	SHEET 78	E

FILE NAME : Y:\MILWAUKEE\20200S\20229.02\ENG_DOCS\56300631\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 5
PLOT DATE : 11/6/2018 4:33 PM
PLOT BY : WEIGAND, BEN
PLOT NAME :
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.
WISDOT/CADDS SHEET 49

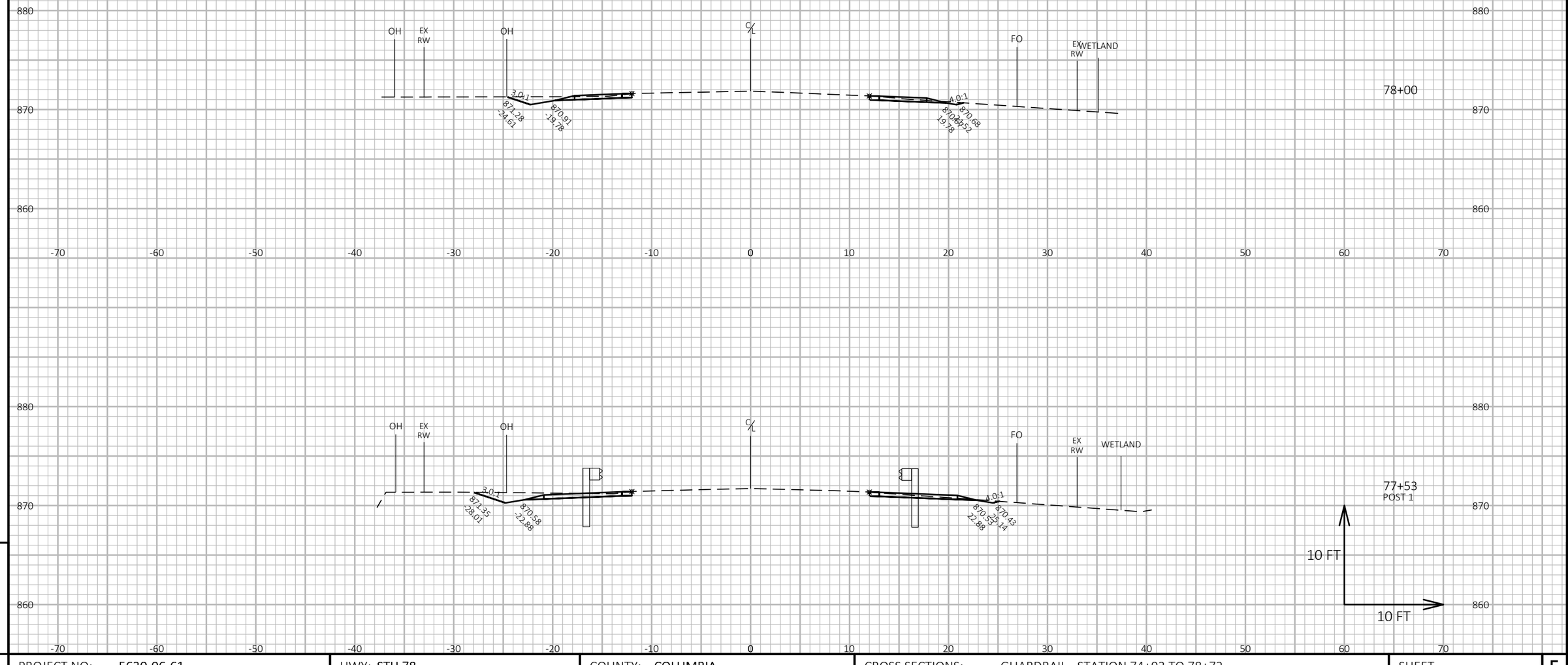


PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	CROSS SECTIONS: GUARDRAIL - STATION 74+93 TO 78+72	SHEET 79	E

FILE NAME : Y:\MILWAUKEE\20200S\20229.02\ENG_DOCS\56300631\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 6

PLOT DATE : 11/6/2018 4:33 PM PLOT BY : WEIGAND, BEN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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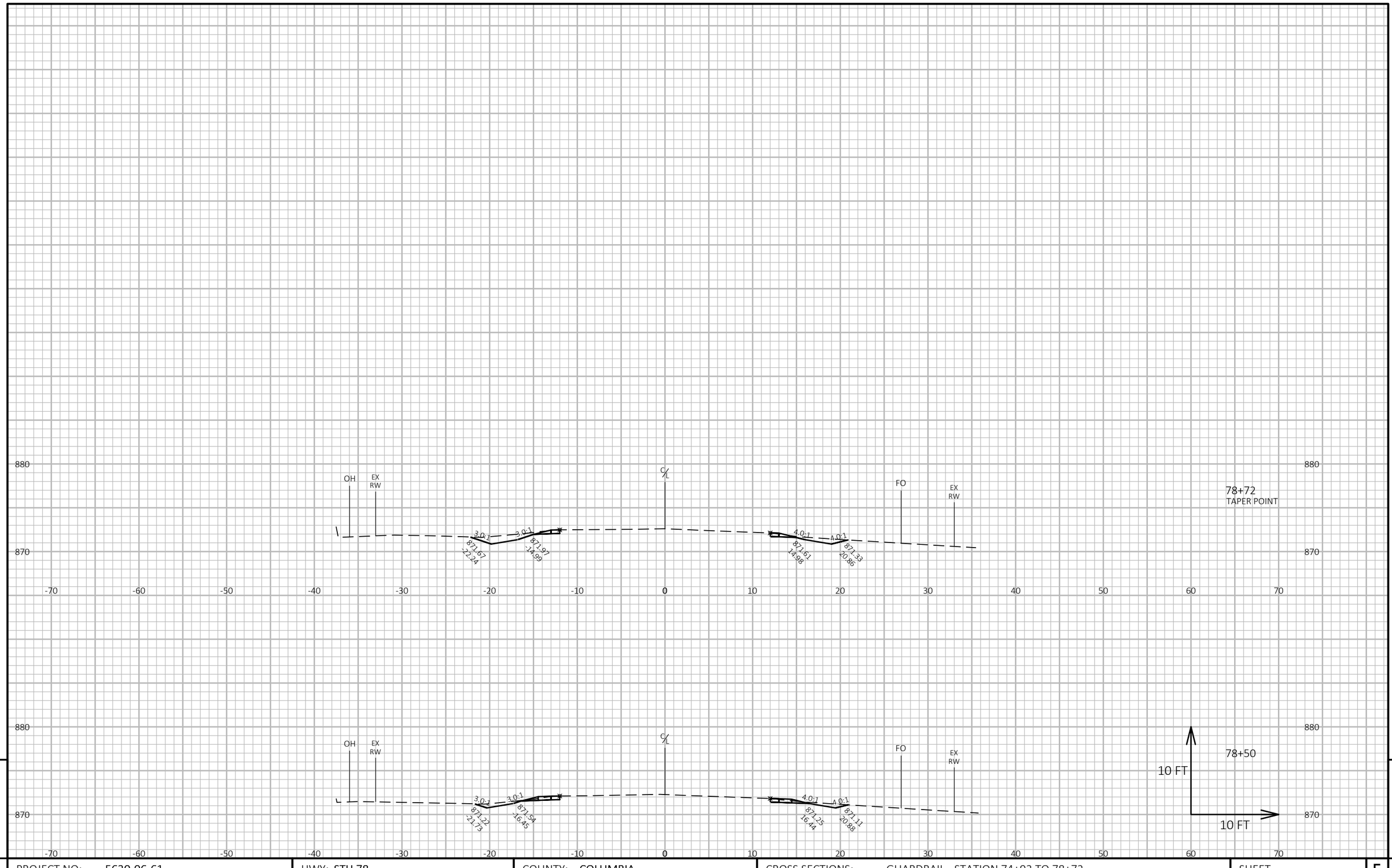
PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	CROSS SECTIONS: GUARDRAIL - STATION 74+93 TO 78+72	SHEET 80	E



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PROJECT NO: 5630-06-61	HWY: STH 78	COUNTY: COLUMBIA	CROSS SECTIONS: GUARDRAIL - STATION 74+93 TO 78+72	SHEET	E

FILE NAME : Y:\MILWAUKEE\20200S\20229.02\ENG_DOCS\56300631\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 8

PLOT DATE : 11/6/2018 4:33 PM

PLOT BY : WEIGAND, BEN

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
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